Calendar

Calendar 2009-10

2009

June
19  Friday: Clinic orientation for new third-year students.
22  Monday: Academic year begins for third- and fourth-year classes.
26  Friday: Deadline for registration and initial payment of tuition for the third- and fourth-year classes.

July
  2  Thursday: Independence Day holiday begins at 5 p.m.
  3  Friday: Independence Day observance.

August
11  Tuesday: Orientation, matriculation and initial fee payment for the first-year class.
17  Monday: Academic year begins for the first- and second-year classes.
21  Friday: Deadline for registration and initial payment of tuition for the second-year class.

September
  6  Sunday: Labor Day holiday begins at 5 p.m.
  7  Monday: Labor Day observance.

November
  25  Wednesday: Thanksgiving Day holiday begins at 5 p.m.
  26  Thursday: Thanksgiving Day observance.
  27  Friday: Holiday for all classes.

December
  18  Friday: Winter recess begins at 5 p.m. for all classes.

2010

January
  4  Monday: Classes resume for all students.
  8  Friday: Deadline for payment of the balance of tuition for all classes.
 17  Sunday: Martin Luther King Jr. Day holiday begins at 5 p.m.
 18  Monday: Martin Luther King Jr. Day observance.

March
 18  Thursday: Senior Match Day.
 26  Friday: Spring break begins at 5 p.m. for first- and second-year classes.

April
  1  Thursday: Spring break begins at 5 p.m. for the third- and fourth-year classes.
  5  Monday: Classes resume for all students.

May
  9  Sunday: Academic year ends at 5 p.m. for graduating students.
 14  Friday: Academic year ends at 5 p.m. for the second-year class.
 21  Friday: Commencement.
Friday: Academic year ends at 5 p.m. for the first-year class.
Sunday: Memorial Day holiday begins at 5 p.m.
Monday: Memorial Day observance.

**June 4**  
Friday: Academic year and clinical clerkships end at 5 p.m. for students in clinical clerkships.

*Please note: Beginning and ending dates of each academic term will be published with individual class schedules.*

**Schedule of Clerkship and Elective Intervals 2009-10**

Final examinations for clinical clerkships are administered at the end of each clerkship. POM III follows the clerkship exams administered at the end of week 12 of each block. Exact date, time and location are announced by the coursemaster.

**Weeks/Dates**

1-4: June 22, 2009 – July 19, 2009  
5-8: July 20, 2009 – August 16, 2009  
9-12: August 17, 2009 – September 13, 2009  
13-16: September 14, 2009 – October 11, 2009  
17-20: October 12, 2009 – November 8, 2009  
21-24: November 9, 2009 – December 6, 2009  
29-32: January 18, 2010 – February 14, 2010  
33-36: February 15, 2010 – March 14, 2010  
37-40: March 15, 2010 – April 11, 2010  
41-44: April 12, 2010 – May 9, 2010  
45-48: May 10, 2010 – *June 4, 2010 (*clerkships only)

*Clinical clerkships end June 4, 2010, after Practice of Medicine III.
Admissions and Educational Program

Mission Statement for Washington University

The mission of Washington University is the promotion of learning — learning by students and by faculty. Teaching, the transmission of knowledge, is central to our mission, as is research, the creation of new knowledge. Faculty composed of scholars, scientists, artists, and members of the learned professions serve society by teaching; by adding to the store of human art, understanding, and wisdom; and by providing direct services, such as health care.

Our goals are:
• to foster excellence in our teaching, research, scholarship, and service;
• to prepare students with the attitudes, skills, and habits of lifelong learning and with leadership skills, enabling them to be useful members of a global society; and
• to be an exemplary institution in our home community, St. Louis, as well as in the nation and in the world.

To this end we intend:
• to judge ourselves by the most demanding standards;
• to attract people of great ability from all types of backgrounds;
• to encourage faculty and students to be bold, independent, and creative thinkers;
• to provide the infrastructure to support teaching, research, scholarship, and service for the present and for future generations.

School of Medicine Mission and Vision Statements

Our Mission

Washington University School of Medicine will lead in advancing human health through outstanding clinical care, innovative research and the education of tomorrow’s leaders in biomedicine.

Our Vision

In leading the advancement of human health, Washington University School of Medicine will:

• Cultivate excellence, collegiality, and diversity
• Attract the most talented people and enable their development
• Lead the evolution of change in biomedicine
• Enhance our intellectual and technological environment to foster exceptionally creative science and education
• Develop and maintain excellent clinical programs to provide outstanding care
• Observe the highest standards of ethics and integrity
• Apply advances in science and medicine to the betterment of humanity

Approved June 24, 2008 by the Executive Faculty

Objectives of the Educational Program for Medical Students

Washington University School of Medicine provides students with a supportive, stimulating and challenging environment in which to acquire a thorough foundation in scientific medicine and develop
skills, professional attitudes and personal commitments necessary for the practice of medicine at the highest possible level of excellence. In addition, the medical school fosters a commitment to collegiality, respect of individuality, community involvement and leadership through many extracurricular organizations and activities supported by the school. The educational program is designed to ensure that each graduating student will demonstrate the following:

- Knowledge of core concepts and principles of human biology.
- Knowledge of the scientific foundations of medicine and medical practice including disease pathogenesis and treatment, illness prevention and health maintenance.
- Proficiency in applying the scientific method to the practice of medicine including the processes of problem identification, data collection, hypothesis formulation and the application of deductive reasoning to clinical problem-solving.
- Knowledge of human behavior and an understanding of the impact of ethnic and cultural characteristics, socioeconomic factors, and other social factors on the practice of medicine.
- Proficiency in obtaining an appropriate medical history, performing a physical examination, and performing basic procedures necessary for the practice of medicine.
- Cognitive skills essential to the formulation of clinical questions, critical evaluation of scientific and clinical data, and effective application of this data to clinical problem-solving.
- Efficient and effective utilization of educational resources and proficiency in acquisition and assimilation of new information and practices.
- Recognition that there is uncertainty in clinical decision-making.
- Recognition that information and practices in clinical medicine can become obsolete and should be modified and refined based on new (evidence-based) information.
- Effective oral and written communication skills with patients and their families, members of the academic and medical communities and other members of the community at large.
- Commitment to provide compassionate care for all people.
- Dedication to inquiry and to life-long learning through self-education and self-assessment and active participation as teachers of patients, colleagues and members of the community.
- Appreciation of the essential role of biomedical research in the advancement of medicine and a commitment to the spirit of collaboration and support of basic science and clinical research efforts.
- Dedication to high standards of professional integrity and ethical behavior in clinical practice and biomedical research.

**Description of Undergraduate Medical Education Program by Year**

**First Year**
The first-year curriculum focuses on the acquisition of a core knowledge of human biology, as well as on an introduction to the essentials of good patient care. Diversity among matriculants in undergraduate background and in approaches to learning is recognized and fostered. The courses are graded Pass/Fail, and a variety of didactic means are made available including lectures, small groups, extensive course syllabi, clinical correlations and a Lotus Notes computerized curriculum database. The Practice of Medicine I uses regular patient interactions and integrative cases to teach students to skillfully interview and examine patients, as well as the fundamentals of bioethics, health promotion/disease prevention, biostatistics and epidemiology. An optional summer research program between the first and second year provides an opportunity for students to explore various areas of basic science or clinical research.

**Second Year**
The second-year curriculum is focused on human pathophysiology and pathology. Through lectures, small group discussions, laboratory exercises and independent study, students acquire broad, detailed knowledge of mechanisms of disease pathogenesis, clinopathological relationships and fundamental principles of therapy. The Practice of Medicine II course continues students’ introduction to the fundamentals of patient care and emphasizes organizing and interpreting clinical information to form a problem list, differential diagnosis and treatment plan. Students also learn how to accurately document and concisely present clinical information. Supervised clinical experiences and small group discussions further engender development of the professional attitudes and high ethical standards
required for the third-year clinical clerkships.

**Third Year**
The overall goal of the third year is implementation of fundamental interactive clinical skills necessary for the practice of medicine at the highest possible level of excellence. Students achieve this goal by participating in intensive, closely supervised training experiences in the core clinical clerkships involving inpatient and ambulatory settings and interactions with patients who present a spectrum of emergent, urgent, routine and chronic clinical problems. Through these experiences, students exhibit growth and maturation in their abilities to take medical histories, perform complete physical examinations, synthesize findings into a diagnosis, formulate treatment plans and document and present information in a concise, logical and organized fashion. During the clinical clerkships, students learn to use the biomedical literature and other educational resources in the service of their patients and in self-directed learning. Students also use their personal experiences and rapidly expanding knowledge of human behavior and ethnic, cultural, socioeconomic and other social factors to develop their own personal standards of compassionate, respectful and ethical behavior in the practice of medicine.

**Fourth Year**
The overall goals of the fourth year are to consolidate, enhance and refine the basic clinical skills developed during the clinical clerkships and to explore specialty areas within the field of medicine. This is accomplished by providing each student with optimal preparation for selecting and pursuing graduate medical education opportunities in his/her chosen field of medical practice and/or research. Students may select from a broad array of clinical rotations and research experiences and may arrange extramural experiences.

**History**
The education of physicians at Washington University began in 1891. Under an ordinance enacted April 14, 1891, establishing a Medical Department of Washington University, the St. Louis Medical College (an independent medical college in St. Louis) was brought under the wing of the well-established University. The faculty of the college eagerly agreed to the union, stating "Most of the great medical schools of the world have always been integrant departments of universities, and the examples which America furnishes give added testimony to the fructifying influence of the contact of students and teachers of professional schools with the workers in universities." Eight years later, the Missouri Medical College (another independent college in the city) also joined Washington University, and thus the two most famous medical colleges in the city were merged with the University.

In 1909, Abraham Flexner began a survey of 155 medical schools in the United States and Canada for the Carnegie Foundation for the Advancement of Teaching. The survey created a national sensation. Some schools collapsed, others pooled their resources, while still others reorganized. The Medical School of Washington University did not escape criticism. In the report Flexner made to Henry Smith Pritchett, Ph.D., president of the Carnegie Foundation for the Advancement of Teaching and former professor of astronomy at Washington University, he said that one of two courses must be adopted: "The department must be either abolished or reorganized."

Dr. Pritchett mailed the report to Robert S. Brookings, a St. Louis merchant who was president of the Board of Directors of Washington University. Brookings was shocked and immediately went to New York to see Flexner, demanding proof that the conditions were as bad as described. Both returned to St. Louis and the two men went through the School. In less than two hours, Brookings was convinced that drastic action was necessary if the School was to be one of the foremost institutions of medical education and research. The meeting in 1909 of Brookings and Flexner was of unsurpassed significance in the history of the Washington University School of Medicine, for it led to the complete reorganization of the School and the establishment of the present Medical Center. Abraham Flexner inspired the dream of a model medical school; Robert Brookings accepted the challenge, and with the energy and vision which characterized all his enterprises, made the dream a reality.

No time was lost in making changes. The Bulletin of the Medical School for July 1910 made the
following statement: "The Corporation of the University, becoming convinced that in no other direction could greater service be rendered than through a great, modern medical school, determined to reorganize the School and to place it in the front rank of American medical institutions. It has called to the heads of a number of leading departments the ablest men it could secure."

When Robert A. Barnes died in 1892, he left a will which directed the trustees of his estate to use $840,000 for the erection and equipment of a hospital "for sick and injured persons, without distinction of creed, under the auspices of the Methodist Episcopal Church, South." Investigation by the trustees into the cost of building a modern hospital convinced them that the sum was not large enough to build an efficient, fireproof building, and they therefore invested the trust. By 1912 the value had increased to $2 million, a sum which permitted the building of a hospital and left an endowment greater than the original fund.

At the same time the trustees were studying hospital construction, Robert Brookings was studying medical schools. It was apparent to everyone concerned that the two projects, the building of a medical school and the construction of a modern hospital, were so interrelated that the purpose of each would be more successfully fulfilled by an affiliation. A medical school would provide a highly trained staff and would assure the most modern methods and superior laboratory facilities for the hospital. A teaching hospital would give patients superior care and, at the same time, provide the essential clinical experience consistent with modern medical teaching methods.

In the spring of 1912, construction was begun on the medical school and hospital buildings which today form the nucleus of the present center. The laboratories were moved from their old quarters in downtown St. Louis into the new buildings on Euclid Avenue and Kingshighway Boulevard during the summer of 1914, and late in the fall of the same year the activities of the Washington University Hospital were transferred to Barnes Hospital. Concomitantly, the St. Louis Children’s Hospital, then located on Jefferson Avenue, became affiliated with the School of Medicine and moved to its new quarters in the Medical Center.

On April 28, 29 and 30, 1915, exercises were held to celebrate the completion of this group of buildings designed to promote the practice, the teaching and the progress of medicine. The dedication ceremonies marked what Dr. William H. Welch of The Johns Hopkins University called "one of the most significant events in the history of medical education in America." Robert S. Brookings, the one man most responsible for the reorganization, voiced the hope that "our efforts will contribute, in some measure, to raising the standard of medical education in the West, and that we will add, through research activities, our fair quota to the sum of the world’s knowledge of medicine." These prophetic words have been realized.

In the ensuing years, the Medical Center has continued to grow, and now its facilities are among the best in the world. With the increase in size of the physical plant there has come a substantial increase in the number of the faculty; the expansion has been made without compromise to the standards that marked the early development of the Medical Center. As a result, significant achievements in both research and clinical areas have been steadily recorded.

Faculty

The Washington University School of Medicine has one of the finest faculties of any medical school in the nation. Recognized for their distinguished achievements in original research, 14 faculty members are among the fellows of the prestigious National Academy of Sciences. Seventeen Nobel laureates have been associated with the School of Medicine.

During fiscal year 2008, 141 members of the faculty held individual or career development awards: 100 from the National Institutes of Health, two from Abbott Laboratories, two from the American Association of Plastic Surgeons, one from the American College of Gastroenterology, three from the American Diabetes Association, one from the American Geriatrics Society, nine from the American Heart Association, one from the American Society for Nutrition, one from the American Society of Clinical Oncology, one from the American Society of Colon and Rectal Surgery, two from the American Society of Hematology, one from the American Vascular Association, two from Arthritis Foundation,
one from the Arthritis National Research Foundation, one from Brown University, ten from the Burroughs Wellcome Fund, one from the Crohn’s and Colitis Foundation, two from the Damon Runyon Cancer Research Foundation, one from the Dermatology Foundation, one from the Doris Duke Charitable Foundation, one from the Foundation for Anesthesia Education and Research, one from The Francis Families Foundation, one from Hope Street Kids, one from the Howard Hughes Medical Institute, two from the Juvenile Diabetes Research Foundation International, two from the Robert Wood Johnson Foundation, two from the W.M. Keck Foundation, one from the Neurosurgery Research and Education Foundation, two from the Orthopaedic Research and Education Foundation, two from Research to Prevent Blindness, Inc., two from the Thoracic Surgery Foundation, and one from an anonymous foundation.

The School of Medicine has 20 faculty members with Method to Extend Research in Time (MERIT) status, a special recognition given to only a few NIH grantees, which provides long-term, uninterrupted financial support to investigators who have demonstrated superior achievement during previous research projects.

In 2008-09, the School employed 1,563 full-time, salaried faculty members in its 20 preclinical and clinical departments. The clinical departments are further strengthened by 1,315 part-time faculty members, a group of physicians who practice their medical specialties in St. Louis and are members of one or more of the staffs of the hospitals in the Washington University Medical Center.

**Students**

The School of Medicine attracts a student body of exceptional quality. The 2008 entering class of 122 students was selected from a pool of 4,058 applicants. The School is a national institution with 45 states plus the District of Columbia and 26 countries represented in the current enrollment.

In 2009, the School conferred the MD degree upon 80 individuals. In addition, four students received the MS/MO degree, 13 students received the MA/MD degrees and 16 students graduated with the MD and the PhD degrees. Graduating students who participated in the 2009 National Residency Matching Program matched in programs recognized for high quality and selectivity. In the Alphabetical List of Students area of the Register of Students section, the graduates are listed by name, hometown, undergraduate and graduate schools attended and year of degree, type of postgraduate residency program, name of hospital and the city in which it is located.

The student body of the School of Medicine numbers 594 medical students. Programs also are conducted for 638 students who are pursuing graduate degrees in communication sciences, clinical investigation, health administration, occupational therapy, physical therapy, psychiatric epidemiology or genetic epidemiology. The Division of Biology and Biomedical Sciences has extensive graduate training programs for 576 students seeking the Doctor of Philosophy degree in areas of Biochemistry, Computational and Systems Biology, Developmental Biology, Evolution Ecology and Population Biology, Human and Statistical Genetics, Immunology, Computational and Molecular Biophysics, Molecular Cell Biology, Biochemistry, Molecular Genetics and Genomics, Molecular Microbiology and Microbial Pathogenesis, Neurosciences, and Plant Biology.

**Teaching Facilities**

The 155-acre Washington University Medical Center, spread over portions of 15 city blocks, is located along the eastern edge of Forest Park in St. Louis. Along the western edge of the park is the 169-acre Danforth Campus of the University. All campuses (North, West, Danforth and Medical) are connected by the MetroLink light rail system. The Danforth and Medical School campuses are also connected by the Washington University Gold MetroBus. Students, faculty and staff can access both of these modes of transport with a free U-Pass, obtained from the Transportation Office, along with their Washington University identification badge.

The Medical Center was incorporated in 1962. It now consists of Washington University School of Medicine, Barnes-Jewish Hospital, St. Louis Children’s Hospital, Barnard Hospital and Central Institute for the Deaf, and is affiliated with BJC HealthCare. Two integral units of the Medical Center are the
The Medical Center generates an annual financial impact of more than $2.6 billion for the St. Louis area, according to an economic model maintained by the St. Louis Regional Commerce and Growth Association. With more than 20,000 employees, the combined Medical Center institutions are among the largest employers in the metropolitan area.

Unprecedented growth has occurred at the Medical Center over the past 13 years. At the School of Medicine alone during the past five years, more than $162 million has been expended on renovation and new construction. Capital improvements and strategic purchases have added approximately 1 million square feet of space to the medical school during this same period. In the most recent fiscal year, more than $12 million of capital improvements were made at the School. Presently under construction is the BJC Institute of Health at Washington University, which will add approximately 245,000 square feet of lab, vivarium and support space and more than $130 million of capital improvements.

In the last 10 years, School of Medicine expansion has included the GSC Data Center, the Northwest Tower, the school’s first dedicated teaching facility — the Farrell Learning and Teaching Center, the Specialized Research Facility — East, the Southwest Tower/Charles F. Knight Emergency Center, the Center for Advanced Medicine, the McDonnell Pediatric Research Building, two parking garages and the acquisition of the Central Institute for the Deaf buildings.

The GSC Data Center (2008) is a state-of-the-art data center located across Newstead Avenue from its parent department in the 4444 Forest Park Building. A 14,000-square-foot building houses a 3,000-square-foot data room capable of populating 120 high-speed blade center racks and disk racks. This new facility will allow the GSC Department to expand their research capability in the demanding world of sequencing grants and projects for years to come.

The eight-story Northwest Tower (2006) resides above the seven-level Children’s Hospital Garage. This new 190,000-square-foot building provides faculty office space.

The Farrell Learning and Teaching Center (2005), an 110,000-square-foot, six-story facility at the corner of Scott and Euclid avenues is the home for all of the medical school teaching labs; ER, patient room and OR simulation training rooms; small-group and seminar rooms; and all individual student study areas. A lecture hall, case-study hall and café are on the first floor of the building, which opened in August 2005.

The Specialized Research Facility — East (2004) is a 56,000-square-foot barrier facility supporting several research study programs.

The Center for Advanced Medicine (2001) at the corner of Euclid and Forest Park avenues is a shared facility between the school and BJC HealthCare. This building brings all of the Medical Center’s clinics together under one roof. The School of Medicine occupies 243,400 square feet in the Center for Advanced Medicine and 75,000 square feet on three floors in the new Southwest Tower. Located in the heart of the Center for Advanced Medicine is the 66,150-square-foot Alvin J. Siteman Cancer Center. The Siteman Cancer Center is the only NCI-designated comprehensive cancer center in the region.

The McDonnell Pediatric Research Building (2000) added 230,000 square feet of state-of-the-art research facilities — four and a half floors for the Department of Pediatrics, three floors for the Department of Molecular Microbiology, and one-half floor for the Department of Medicine — on the corner of Euclid Avenue and Children’s Place. This building includes a Barnes & Noble bookstore with a coffee shop on the ground level.

In addition, major renovations to existing buildings continue, with emphasis on research facilities. The Department of Genetics, together with the Department of Developmental Biology, recently started the Center for Genomics and Human Genetics, with a wet lab renovation of 30,000 square feet on the fifth floor of 4444 Forest Park. The Department of Biochemistry added a Nuclear Magnetic Resonance (NMR) Spectrometer in a small addition to the Cancer Research Building. The Department of Ophthalmology remodeled their wet labs and offices on the 1st, 10th, 11th and 12th floors of the
The department of Biochemistry and Molecular Biophysics renovated research labs on half of the second floor and the Department of Medicine renovated research labs on half of the seventh floor of the McDonnell Medical Sciences Building. A major renovation of the Maternity Hospital was recently completed for the Department of Obstetrics. Floors two through six are completely renovated into new office space for Obstetrics faculty and administration. The recently acquired building at 4533 Clayton Avenue has been renovated into office space for the departments of Anesthesiology, Radiology, and Obstetrics and Gynecology.

Ongoing improvements to the campus infrastructure are being made through the Public Realm Project, which is focused on landscape, street lighting and streetscape enhancements.

The School of Medicine is divided into two segments. Clinical departments are predominantly located on the west side of the Medical Center, adjacent to hospital and patient areas. Preclinical departments are to the east. Research and instructional endeavors occupy the greater portion of the facilities, with more than 1.8 million gross square feet devoted to these activities. In the aggregate, the medical school occupies nearly 6 million gross square feet of space on this campus.

The focal point of the preclinical teaching activities is the McDonnell Medical Sciences Building, the center of activity for entering medical students. The McDonnell Building, with 300,000 square feet of research laboratories, was made possible by James Smith McDonnell III, a generous benefactor of Washington University. Rising nine floors above ground, it contains administrative offices and two lecture halls on the first floor. Three floors of wet lab space were completely renovated in the last five years. Offices and research laboratories for the seven basic science departments are located on the upper floors. Modern centralized animal quarters are housed in the basement.

The North and South Buildings, in which the work of several Nobel laureates has centered, have been renovated extensively. Along with the Cancer Research Building, they continue to provide space for laboratories, offices and some departmental facilities.

The East Building houses an MRI facility, a cyclotron, computer installations and other components of the Mallinckrodt Institute of Radiology. The East Building also houses several administrative office suites.

A network of pedestrian bridges provides the ability to move freely among the major facilities, enhancing the interaction of all Medical Center institutions and benefiting research and patient care.

Other facilities owned or operated by Washington University include:

The 45,160-gross-square-foot Eric P. Newman Education Center accommodates nondegree professional education for the Medical Center. The education center provides auditoriums, classrooms, meeting space and lecture halls to support and enhance a comprehensive education program.

The five-story Biotechnology Center supports laboratories for the departments of Psychiatry, Medicine, Neurology and Pathology and Immunology.

McMillan Hospital Building houses offices and research laboratories for the departments of Neurological Surgery, Neurology, Ophthalmology and Visual Sciences and Otolaryngology.

The Edward Mallinckrodt Institute of Radiology (MIR) is internationally recognized for excellence in teaching, research and clinical services. Housed in its own 13-story building, MIR has satellite facilities in Barnes-Jewish and St. Louis Children's hospitals; the Clinical Sciences Research and East buildings; the Scott Avenue Imaging Center; the Center for Advanced Medicine; and the Charles F. Knight Emergency Center. Services also are provided at Barnes-Jewish West County and Barnes-Jewish St. Peters hospitals and at the Washington University Orthopedics and Barnes-Jewish Hospital Outpatient Orthopedic Center.

With consolidation of psychiatric patient care services in the West Pavilion, the eight-story Renard Hospital provides additional office and laboratory space for the Department of Psychiatry.
Maternity Hospital provides offices for the departments of Obstetrics and Gynecology and Ophthalmology and Visual Sciences. A Perinatal Center and some Psychiatry clinical research are located in this building.

The West Building contains administrative offices and research laboratories for the Department of Pathology and Immunology and research labs for the Department of Medicine.

Wohl Hospital Building provides offices and laboratories for the Departments of Medicine and Surgery.

The resident clinics in Wohl Clinic are administered by Barnes-Jewish Hospital. The lower five floors contain clinical space and space for translational research. The first floor is home for the Chromalloy American Kidney Dialysis Center. The upper five floors are devoted to research facilities for several departments of the School of Medicine.

The 294,302-gross-square-foot building at 4444 Forest Park houses administrative offices of various medical school departments plus the Program in Physical Therapy, the Program in Occupational Therapy and a major research facility for the Department of Genetics and the Genome Sequencing Center, including the new Center for Genomics and Human Genetics.

The 4511 Forest Park Medical Building houses administrative offices and research labs for the Department of Radiation Oncology. The third-floor clinic and office area has recently been renovated into wet lab research space.

The 136,977-gross-square-foot, seven-story East McDonnell Specialized Research Facility is a maximum-barrier research facility to accommodate higher brain function research and transgenic studies.

The 10-story Clinical Sciences Research Building (CSRB) and North Tower Research Addition, 201,349 gross square feet, consolidates medical school specialized research into one structure. The top three floors of the addition house wet lab research space.

The major project now under construction is the BJC Institute of Health at Washington University.

The BJC Institute of Health at Washington University is being built to support the Washington University Biomed 21 Initiative. Phase 1 is under construction and will consist of approximately 675,000 square feet. It is an eleven and six-story building in the heart of the Medical Center. Phase 2 is scheduled to build an additional ten stories above the six-story portion of the building. Four of the top five floors are being fitted with wet labs to support the five research centers associated with the Washington University Biomed 21 Initiative along with lab space for Pathology and Immunology, Obstetrics and Gynecology, and Pediatric Surgery. The total lab fit out will be 215,000 square feet. There is also a 30,000-square-foot vivarium in the lower level. BJC will eventually occupy the first five floors, which are programmed for dietary services, cafeteria, pharmacy and clinical labs. This building is scheduled for occupancy in December 2009.

Founded in 1911, the Bernard Becker Medical Library is one of the oldest and most comprehensive medical libraries west of the Mississippi. The library serves as an information services hub for the Medical Center and extends its services and resources to the global health science community.

The facility, completed in 1989, integrates biomedical information resources and information technology. The eight-level, 114,000-square-foot structure has capacity for more than 300,000 volumes. The biomedical resource collection includes 33 databases, over 4,600 full-text e-journals, 3,235 e-books and numerous selected web sites. The library also holds 4,500 print journals, 114,000 print books and 1,500 audiovisual items.

The library’s Translational Research Support Division addresses the broader goals of translational biomedicine by providing information resources and expertise that contribute to basic research, health
information outreach to consumers and the community, and the publication and dissemination of scientific information. The Division includes two bioinformaticists who provide instruction, consultation services, and support for specialized software and databases for the bioinformatics, genomic and basic science research community. The Division’s public health librarian develops programs to foster consumer health literacy, seeking opportunities to partner with the School of Medicine, Medical Center groups, and local organizations to improve health literacy. The Division also includes a Scholarly Communications Specialist to increase awareness among faculty of the issues and options for disseminating and storing scientific information as the digital age redefines standard publishing models.

The Health Information Resources Division provides a broad range of biomedical information resources and training services covering clinical point of care, evidence-based medicine and information management. Through this division the library focuses on integrating information management into the curricula of the various educational programs and promoting the effective use of information resources in the school’s clinical mission. Librarians in this division focus on each of the school’s divisions, departments or programs to meet their specific information needs. Circulation services, interlibrary lending and document delivery also fall within the scope of services managed by the Health Information Resources Division.

Special Collections (Archives and Rare Books) is a unique and important unit of the library’s resources. The Archives preserve and make accessible 811 archival collections, composed of institutional records, manuscripts, visual items and oral histories that document the Medical Center’s institutional history, ongoing progress and many significant contributions of its faculty. Among the manuscript collections are papers of William Beaumont, Joseph Erlanger, E.V. Cowdry, Evarts Graham and Carl Cori. There are nine distinct rare book collections containing over 26,000 volumes available for scholarly use. These acclaimed collections include the Bernard Becker Collection in Ophthalmology, the CID-Max Goldstein Collection in Speech and Hearing, the H. Richard Tyler Collection in Neurology and the Paracelsus Collection of the St. Louis Medical Society.

The Bernard Becker Medical Library takes pride in providing the latest biomedical information and services to the Medical Center. For detailed information about the library’s programs and services, visit becker.wustl.edu/.

The library is open to the general public Monday through Friday 7:30 a.m. to 6 p.m. Library hours for affiliated users are:

Monday-Thursday: 7:30 a.m. – midnight
Friday: 7:30 a.m. – 10 p.m.
Saturday: 8:30 a.m. – 6 p.m.
Sunday: noon – midnight

Telephone numbers:
Circulation Services: (314) 362-7080
Information Services: (314) 362-7085
Interlibrary Loan: (314) 747-0029
Archives and Rare Books: (314) 362-4236

**Barnes-Jewish Hospital** has a premier reputation in patient care, medical education, research and community service and is the only adult teaching hospital of Washington University School of Medicine, ranked among the top five medical schools in the country. The Barnes-Jewish staff includes professional nurses, technicians, service and support personnel, plus more than 1,700 physicians and 822 residents, interns and fellows. Barnes-Jewish is licensed for 1,252 beds and in 2008 had 53,831 inpatient admissions, along with 81,895 emergency department visits. Barnes-Jewish Hospital is the first adult hospital in Missouri to receive Magnet recognition, the highest award given by the American Nurses Credentialing Center, and was recertified as a Magnet hospital in 2008. Barnes-Jewish Hospital is consistently ranked on the "Honor Roll" of America's best hospitals by **U.S. News & World Report**.

Since 1879, **St. Louis Children's Hospital** has been at the forefront of pediatric medicine, with physicians, nurses and staff who dedicate their lives to the care of children. The hospital provides a
full range of health services to children and their families throughout its 300-mile service area, as well as nationally and internationally. Its spectrum of pediatric specialty services includes newborn medicine, cardiology, neurosurgery and the world’s leading pediatric lung transplant program. Both Parents magazine and U.S. News & World Report rank St. Louis Children’s Hospital among the best children’s hospitals in America. The hospital has also received the Magnet designation from the American Nurses Credentialing Center (ANCC), the nation’s highest honor for nursing excellence.

St. Louis Children’s Hospital provides an array of community outreach services, including pediatric mobile health vans, injury prevention programs, educational classes on parenting and child development, as well as patient and parent support groups. The hospital also operates the 454-KIDS Answer Line, a free child health information service and physician referral line staffed by pediatric registered nurses and referral specialists.

BJC HealthCare is one of the largest nonprofit health care organizations in the United States, delivering services to residents primarily in the greater St. Louis, southern Illinois and mid-Missouri regions. With net revenue of $3.2 billion, BJC serves urban, suburban and rural communities and includes 13 hospitals and multiple community health locations. Services include inpatient and outpatient care, primary care, community health and wellness, workplace health, home health, community mental health, rehabilitation, long-term care and hospice.

Through a collaboration among the Barnard Cancer Institute, Barnes-Jewish Hospital and Washington University, medically indigent patients with cancer or diseases of the skin receive care at no cost to them from Washington University physicians at the Alvin J. Siteman Cancer Center and Barnes-Jewish Hospital. The Barnard Cancer Institute also houses the Washington University General Research Unit, part of the Institute for Clinical and Translational Sciences (ICTS) Center for Applied Research Sciences (CARS), a support center for Washington University clinical investigators.

Founded in 1914 as a place where teachers, hearing and speech professionals, and parents work together to help children who are deaf and hard of hearing, Central Institute for the Deaf (CID) is an internationally recognized center for deaf education, preparing its students to participate and succeed in mainstream educational settings. CID teachers use the auditory-oral method, helping deaf children learn to speak, listen and read with proficiency without the use of sign language. CID’s acoustically enhanced “quiet school” features the Joanne Parrish Knight Family Center, serving children and their families from birth to 3. CID pre-K and primary school programs serve students ages 3 to 12. CID school children have come from 48 U.S. states and 27 other countries.

CID services include mainstream transitional assistance for students and families, in-service training for teachers, continuing education workshops for professionals and books, evaluations and curricula used to help children in all U.S. states and at least 33 countries throughout the world.

CID is financially independent from, but closely affiliated with, CID at Washington University School of Medicine, which continues to operate CID-developed adult clinic, research and academic programs that benefit children and adults with hearing loss. The University acquired these programs in September 2003 along with state-of-the-art facilities at the CID campus, 4560 Clayton Ave. CID continues to provide faculty and practicum sites for the University’s graduate degree programs in deaf education and audiology. CID teachers and pediatric audiologists continue to work closely with its speech and hearing scientists in studies involving children who are deaf and hard of hearing.

The Alvin J. Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine is world-renowned for its basic science, translational research, patient care and outreach. The Siteman Cancer Center, which holds more than $135 million in extramural funding for cancer research, is organized into nine research programs (Cancer and Developmental Biology, Tumor Immunology, Hematopoietic Development and Malignancy, Cellular Proliferation, Oncologic Imaging, Prevention and Control, Translational and Clinical Research, Breast Cancer Research, and DNA Metabolism and Repair). The Siteman Cancer Center also provides 15 shared resource facilities (with one in development) to its more than 270 research members. Shared resource facilities include: Bioinformatics Core, Biostatistics Core, Clinical Trials Core, Embryonic Stem Cell Core, Hereditary Cancer Core, High-Speed Cell Sorter Core, Molecular Core Laboratory, Multiplexed Gene Analysis Core, Proteomics Core, Small Animal Cancer Imaging Core, Health Behavior and Outreach Core, Good
Manufacturing Practice Facility, Tissue Procurement Core, Imaging Response Assessment Team (IRAT) Core, and a High Through-put Core. A Dissemination to Practice Core shared resource is in development. The Siteman Program for the Elimination of Cancer Disparities (PECaD), in partnership with the community, addresses racial, ethnic, socioeconomic and other disparities in cancer-related education, care and research.

Other hospitals. The following hospitals and facilities also are associated with the School of Medicine, and Washington University physicians treat patients at these locations:
- Barnes-Jewish West County Hospital
- Barnes-Jewish St. Peters Hospital
- Christian Hospital Northeast
- Missouri Baptist Medical Center
- Veterans Administration Medical Center
- Shriners Hospital for Children
- Parkland Health Center
- Progress West HealthCare Center
- Phelps County Regional Medical Center
- Southeast Missouri Hospital

Research Activities

Grants and contracts totaling more than $471.9* million supported faculty research efforts at the School of Medicine during the fiscal year ending June 30, 2008. Substantial additional support was provided directly to faculty investigators by the Howard Hughes Medical Institute. Gifts and grants from private sources, including alumni, individuals, foundations, corporations and other organizations totaled nearly $99 million from 10,536 entities.

* Number includes federal work study.

During the federal fiscal year ending Sept. 30, 2007, the School of Medicine received $346 million from the National Institutes of Health, coming in 715 separate grants.

The many medical firsts at the School of Medicine include:
- Developed the first safe way to monitor production and clearance of the substance that forms brain plaques in Alzheimer’s disease patients.
- Served as a major contributor on the international team that produced the finished human genome sequence.
- Generated cells that, when injected into the spinal cords of rats, reinsulate nerve axons and improve mobility.
- Developed a genetic test that detects whether an individual will develop a form of thyroid cancer and would benefit from thyroid removal — the first surgical prevention of cancer based on genetic test results.
- Developed a rating scale used worldwide to diagnose Alzheimer's disease.
- Created the first positron emission tomography (PET) scanner, a device that images the brain at work.
- Helped pioneer the use of insulin to treat diabetes.
- Helped develop a blood test for early diagnosis of prostate cancer.
- Proposed the now-common practice of taking aspirin to help prevent heart attacks.
- Performed the first non-surgical procedure in the United States that restricts the size of the stomach to treat obesity.
- Assembled a novel online atlas of the folds of the human cerebral cortex and the role they play in brain function.
- Developed a cure for hepatitis B in cases diagnosed early.
- Created a surgical cure for atrial fibrillation.
- Performed the world’s first nerve transplant using nerve tissue from a cadaver donor.
- Developed a blood test that quickly and safely identifies whether a heart attack patient will require invasive treatment.
- Performed innovative larynx restoration surgery for the first time in the United States.
• Helped pioneer cochlear implant technology.
• Performed the world’s first double-lung transplant.
• Pioneered the use of surgery and medication to lower eye pressure in glaucoma patients to prevent further vision loss.
• Grew embryonic animal tissue transplants into fully functional kidneys in an animal host.

**Ongoing research includes:**
• Leading a regional consortium in translating basic science discoveries into treatments for patients more quickly.
• Participating in the National Children’s Study, the largest U.S. study of child and human health ever conducted.
• Identifying genetic variants that modify a person’s cancer risk and response to cancer therapies.
• Leading efforts to identify the role of infectious agents on many conditions prevalent in women.
• Addressing how the metabolic changes of diabetes lead to heart disease.
• Studying the link between protein misfolding and neurodegenerative disorders.
• Leading an international research collaboration to study inherited forms of Alzheimer’s disease.
• Developing and using nanoparticles for molecular imaging and targeted drug delivery for cancer and clogged arteries.
• Imaging language areas in adult and pediatric brains during recovery from stroke to observe natural rehabilitation patterns.
• Studying the genetics of smoking and alcohol addiction.
• Developing and using new imaging tools to study how nervous system cells form connections.
• Determining the mechanism by which antidepressant medications work in the brain.
• Exploring potential links between the tendency to be thin or overweight and the composition of microbes in the gut.
• Identifying anatomical and genetic markers of schizophrenia.
• Developing treatments to compensate for individual genetic traits that interfere with drug performance.

**BioMed 21**
To meet the challenge posed by advances in biomedical sciences, the School of Medicine has devised a strategy called BioMed 21 to spur multidisciplinary and translational research. Three units — the Center for Genome Sciences, the Institute of Clinical and Translational Sciences and the Center for Biological Imaging — will catalyze and support emerging forms of bioresearch and rapidly convert the knowledge of the genetic blueprint into individualized medical treatments. BioMed 21 developments include expansion of the Center for Genome Sciences and construction of a data center to accommodate next-generation DNA sequencing technology; construction of a 9,000-square-foot Center for Clinical Imaging Research; and the creation of five interdisciplinary research centers to be housed in the BJC Institute of Health at Washington University, currently under construction. Additionally, the School will lead a regional group of institutions under a $50 million, five-year grant from the NIH Clinical and Translational Science Awards program. See [biomed21.wustl.edu](http://biomed21.wustl.edu) to learn more.

**Curriculum**

*Table of Courses/Course Masters 2009-10*

*Liability Insurance*

*Lectureships and Visiting Professorships*

*Course Evaluations*

*Adviser System*
The curriculum is an evolving product of prolonged and continuing study, by both faculty and students, of the present and probable future course of medical science and medical practice, and of the ways in which medical education can be kept abreast of this course. Our students enter medical school with diverse backgrounds and interests and upon graduation undertake a wide variety of careers. The curriculum provides the basic knowledge and skills essential for their further professional development. Modern medical education can no longer hope to be comprehensive; it must be selective. Yet students must develop facility in the understanding and use of several related technical languages: those of anatomy, chemistry, physiology and clinical medicine. They must share responsibility for the care of the patient. They also must learn how these areas of endeavor are interrelated, how the organization and needs of society influence the methods of providing medical care, and how new knowledge is acquired and old knowledge re-evaluated.

The curriculum includes a core experience based upon a sequence of courses that introduces students to the many domains and disciplines of medicine. The principles, methods of investigation, problems and opportunities in each of the major disciplines of medical science and medical practice are presented in such a way as to help students select the career best suited to their abilities and goals.

In the final year of the medical school curriculum, the required elective program helps students to decide where major interests lie. It also enables them to benefit from the wide range of specialized knowledge and skills found in the faculty and lays the foundation for lifelong learning and application of principles. The elective program permits students to select, according to their desires, the areas they wish to explore or to study in depth.

**Table of Courses/Course Masters 2009-10**

**First Year**

First-year courses are taught during the 38-week academic year.

Course No./Course Title

M75 503 Cell and Organ Systems Biology  
Paul C. Bridgman, PhD, 362-3449 (Histology)  
Robert S. Wilkinson, PhD, 362-2300 (Physiology)

M05 501A Human Anatomy and Development  
Glenn C. Conroy, PhD, 362-3397

M30 523 Immunology  
Andrey S. Shaw, MD, 362-4614

M30 511 Medical Genetics  
Alison J. Whelan, MD, 362-7800

M30 526 Microbes and Pathogenesis  
Henry V. Huang, PhD, 362-7059  
Scott J. Hultgren, PhD, 362-7059

M15 502 Molecular Foundations of Medicine  
Linda J. Pike, PhD, 362-9502

M35 554 Neural Sciences  
David C. Van Essen, PhD, 362-7043  
Timothy E. Holy, PhD, 362-0086  
W. Thomas Thach, Jr., MD, 362-3538
M25 507 The Practice of Medicine I  
Robert J. Rothbaum, MD, 362-3480
• Clinical Skills  
Alan Glass, MD, 935-9626
• Ethics and Health Policy  
Rebecca Dresser, JD, 454-7116
• Health Promotion/Disease Prevention  
Julie McManemy, MD, MPH, 454-2341
• Interpreting Illness  
Stephen S. Lefrak, MD, 454-7116
• Patient-Physician Communication  
Anne Glowinski, MD, 286-2217
• Scientific Method of Clinical Medicine and Research  
Jay F. Piccirillo, MD, 362-3480

2009-10 Selectives

M04  
• General Selectives  
Koong-Nah Chung, PhD, 362-6844

M04  
• Medical Humanities  
Stephen S. Lefrak, MD, 454-7116

A selective is 10 clock hours in duration. Examples of selective offerings from last year include:

559A  Adolescent Obesity and Diabetes
582  Alzheimer’s Disease
5881  Analysis of Clinical Data
520H  Art and Medicine
537  Cardiovascular Control Mechanism
5017  Clinical Correlations in Neuroscience
5351  Complementary and Alternative Medicine
500C  Developmental Biology and Disease
522H  Dealing with Sick Folks
587K  Discussions in Medical Economics and Public Policy
538H  Doctors on Film
5861  Ethics, Caring and Communication
5302  Frontiers in Leukemia
5068  Fundamentals of Molecular Cell Biology
586H  Health and Human Rights
5885  Health Street: Hands-On Community Based Research
5001  History of Medicine
899  Independent Study
587L  International Health
5878  Introduction to Clinical Neurosurgery
587  Introduction to Clinical Radiology
5013  Introduction to Emergency Medicine
5016  Introduction to Emergency Medicine II
581H  Introduction to Medical Anthropology
587S  Introduction to Newborn Medicine
500A  Journal Clubs
5882  Longitudinal Patient Assessment
524H  Major Religious Traditions
5009  Medical Spanish
5061  Medicine of Laughter
5667  Microcirculation
587R  Mobility Issues
Second Year

Second-year courses are taught during the 36-week academic year.

Course No/Course Title

M25 611B Cardiovascular Disease
Dana R. Abendschein, PhD, 362-8909

M25 614 Dermatology
David Sheinbein, MD, 454-8622

M35 632 Diseases of the Nervous System
Allyson Zazulia, MD, 362-7177

M55 660B Clinical Topics in Otolaryngology
Brian Nussenbaum, MD, 362-6599

M25 615A Endocrinology and Metabolism
William E. Clutter, MD, 362-8094

M25 620A Gastrointestinal and Liver Diseases/Nutrition
Deborah C. Rubin, MD, 362-9039

M25 625A Hematology and Oncology
Scot G. Hickman, MD, 289-6308

M25 605A Infectious Diseases
Nigar Kirmani, MD, 454-8214

M45 635B Obstetrics/Gynecology
D. Michael Nelson, MD, PhD, 362-1016

M60 665 Pathology
Erika C. Crouch, PhD, MD, 454-8462

M65 640 Pediatrics
Amanda Emke, MD, 454-6299

M25 607 The Practice of Medicine II
Megan Wren, MD, 286-2546
• Clinical Skills
Robb R. Whinney, MD, 362-5388
• Ethics and Health Policy
Rebecca S. Dresser, JD, 454-7116
• Health Promotion/Disease Prevention
Julie McManemy, MD, MPH, 454-2341
• Interpreting Illness
Stephen S. Lefrak, MD, 454-7116
• Medicine Patient Sessions
Alan Glass, MD, 935-9626
• Neurology Patient Sessions
Allyson Zazulia, MD, 362-6378
• Ophthalmology
Morton E. Smith, MD, 362-3480
• Patient-Physician Communication
Anne Glowinski, MD, 286-2217
• Radiology
Sanjeev Bhalla, MD, 362-3480
• Scientific Method of Clinical Medicine and Research
Jay F. Piccirillo, MD, 362-7394

M70 670A Principles of Pharmacology
Enrico Di Cera, MD, 362-4185
Tom Ellenberger, DVM, PhD, 362-0287

M85 676A Diseases of the Nervous System: Psychiatry
Melissa Harbit, MD, 362-2440

M25 612B Pulmonary Diseases
Michael B. Lippmann, MD, 289-6306

M25 613B Renal and Genitourinary Diseases
Stanley Misler, PhD, MD, 454-7719
David Windus, MD, 362-7261

M25 606A Rheumatology
Leslie E. Kahl, MD, 454-7279

**Third Year**

Clinical Clerkship (Third) Year is a 48-week academic year.

Course No./Course Title

**Required Clerkships:**

M95 790 Integrated Surgical Disciplines Clerkship (12 Weeks)
John Kirby, MD, 362-8029

M25 710 Medicine Clerkship (12 Weeks)
Thomas M. De Fer, MD, 362-8050

M35 720 Neurology Clerkship (4 weeks)
Robert Naismith, MD, 362-7177

M45 730 Obstetrics/Gynecology Clerkship (6 weeks)
Andrea P. Stephens, MD, 362-3126
M65 760 • Pediatrics Clerkship (6 weeks)
Douglas W. Carlson, MD, 454-6299
Michele Marie Estabrook, MD, 454-6299

M25 707 The Practice of Medicine III
Robert J. Rothbaum, MD, 454-2134
Megan E. Wren, MD, 362-8050

M85 770 Psychiatry Clerkship (4 weeks)
Kevin J. Black, MD, 362-2469

Selective Clerkships: (choice of one block)

M25 714 Ambulatory: Emergency Medicine Clerkship (4 weeks)
Mark Levine, MD, 362-6743

M26 713 Ambulatory: Family Medicine Clerkship (4 weeks)
Walton Sumner II, MD, 454-8164

M85 771 Ambulatory: Psychiatry for Generalists Clerkship (4 weeks)
Kevin J. Black, MD, 362-2469

M90 701 General Radiology Clerkship (4 weeks)
Matthew Parsons, MD, 362-5950
Michele Miller-Thomas, MD, 362-5950

M25 740 Dermatology Clerkship (4 weeks)
Lynn Cornelius, MD, 454-8622

M25 750 Geriatrics Clerkship (4 weeks)
David B. Carr, MD, 286-2706

M60 702 Laboratory Medicine Clerkship (4 weeks)
Charles S. Eby, MD, 362-3186

M25 730 Physical Medicine and Rehabilitation Clerkship (4 weeks)
Neringa Juknis, MD, 454-7757

M90 740 Radiation Oncology Clerkship (4 weeks)
Joseph R. Simpson, MD, PhD, 362-8567

M65 750 Surgical Pathology Clerkship (4 weeks)
Phyllis Huettner, MD, 362-0118

Fourth Year

Elective (Fourth) Year is a 44-week academic year.

To qualify for the Doctor of Medicine degree at Washington University School of Medicine, fourth-year students are required to participate in a minimum of 36 weeks of electives (full-time clinical or research courses). Two-thirds of the minimum required time for the Elective Year must be taken exclusively in residence in the Washington University School of Medicine elective course program. A complete listing of fourth-year elective offerings at Washington University School of Medicine is available through the Office of the Associate Dean for Medical Student Education. Students may participate in clinical electives of four weeks’ duration. If a student takes a research elective, that
elective must be of at least six weeks' duration.

A maximum of 12 weeks of credit is allowed for full-time elective coursework taken at other academic institutions. These may be clinical or research electives. Students desiring credit for work to be done at other institutions must petition the Associate Dean for Medical Student Education. Absolutely no credit will be granted for electives undertaken prior to approval from the appropriate administrative committees.

Credit may be given for elective work done at any point in the standard four-year Doctor of Medicine degree program as long as participation conforms to current elective guidelines, and a) the student is a duly registered, full-time student for a minimum of three years and nine months, including scheduled vacation time, and tuition is paid for four complete academic years; or b) if transferring into the third-year class, the student is a duly registered, full-time student for a minimum of 22 months and tuition is paid for two complete academic years.

Students are encouraged to take lecture-seminar elective courses, but such offerings are optional. Clock hours for the year total 1,386 (36 weeks). Remuneration for work done while participating in electives for credit is prohibited.

---

**Liability Insurance**

Washington University provides general liability insurance for all students or practicums while participating in required clinical experiences. In addition, Washington University voluntarily provides a defense and indemnification benefit for matriculated students who are candidates for the MD degree at the School of Medicine (WUSM).

The benefit is provided to WUSM students for defense and indemnification of claims arising out of activities which are part of academic programs and only while a student is acting in his or her capacity as a medical student enrolled in the undergraduate medical program at the School of Medicine. This policy is subject to terms, conditions, limitations and exclusions, and each request for defense/indemnification will be decided on a case-by-case basis at the sole discretion of the University.

Defense/indemnification will not be provided for any criminal acts, acts committed while under the influence, acts in violation of law, or where the injury or damage resulted from intentional malicious conduct or wrongdoing, or in the event that the action or proceeding is brought by or on behalf of Washington University. This indemnification does not cover any liability which is insured elsewhere, but it may be in excess of any amount payable under any other such insurance.

Any incident, either actual or alleged involving patient injury which could lead to a claim, which you have knowledge of must be reported immediately to the Risk Management Office of the School of Medicine, (314) 362-6956.

If you have any questions about Washington University's professional liability program, please feel free to call the Risk Management Office.
Lectureships and Visiting Professorships

Several established lectureships enable the School to bring to the Medical Center each year distinguished guests who contribute significantly to the richness of student life.

**Ben T. Abelson Memorial Lectureship in Pediatric Hematology-Oncology.** Established by Mrs. Ben T. (Ann) Abelson, the first lecture was held on January 8, 1988.

**Harry Alexander Visiting Professorship.** Established in 1964 by former house staff and friends of Dr. Harry Alexander to provide an annual visiting professor in the Department of Medicine.

**Alpha Omega Alpha Lectureship.** Given each year by a faculty member of the students’ selection.

**Daniel R. Biello Memorial Lectureship.** Established in 1986 by friends, students and colleagues of Dr. Daniel R. Biello to provide an annual lectureship devoted to advances in radiology and nuclear medicine.

**George H. Bishop Lectureship.** Supported by funds made available by friends interested in the advancement of neurology.

**Daniel Bisno, MD, Memorial Lecture on Ethics in Ophthalmology.** Established in 2001 by David C. Bisno, MD, in memory of his father.

**Estelle Brodman Lectureship Fund.** Established in 1981 by friends and colleagues of Dr. Brodman in honor of her distinguished contributions to the School of Medicine.

**The James Barrett Brown Visiting Professorship in Plastic and Reconstructive Surgery.** Created in 1969 by patients, friends, colleagues and former students to honor Dr. Brown.


**H. Marvin Camel Lectureship.** Established in 1999 by family, friends and colleagues to honor Dr. H. Marvin Camel’s retirement.

**Glover H. Copher Lectureship in Cancer.** Founded in 1971 with endowment provided by Dr. Copher and friends.

**The Carl F. and Gerty T. Cori Visiting Professorship.** Established in 1985 in honor of Nobel Laureates Carl and Gerty Cori by the Edward Mallinckrodt, Jr. Foundation, colleagues, faculty and former students.

**Philip R. Dodge Lectureship.** Established in 1987 by friends and colleagues to provide an annual lectureship in the Department of Pediatrics.

**Professor and Dean Jay M. Enoch and Rebekah Enoch Endowed Lecture on Vision Science in Ophthalmology.** Established in 2005 in gratitude to Dr. Bernard Becker. The lecture is meant to keep faculty abreast of new and emerging developments in Ophthalmology.

**Joseph Erlanger Lectureship.** Established in 1989 by the Department of Cell Biology and Physiology to honor Dr. Erlanger.

**I. Jerome Flance Visiting Professorship.** Established in 1977 by former students and friends of Dr. Flance to provide annually a visiting professor in the Division of Pulmonary Diseases.

**Julia Hudson Freund Lecture in Oncology.** Established in 1982 by S.E. Freund in memory of his wife to provide a visiting lectureship in clinical oncology in the Division of Oncology. This was endowed in 2002 by the Harry and Flora D. Freund Memorial Foundation.
Harvey A. and Dorismae Hacker Friedman Lecture on Aging. Established in 2001 to honor the Friedmans for their instrumental role in helping to create the Center for Aging and for their ongoing leadership and support.

Edwin F. Gildea, Jr. Lectureship in Psychiatry. Established in 1978 by friends, colleagues and former students of Dr. Gildea.

Joseph J. Gitt Visiting Professorship in Clinical Neurology. Established in 1971 by his family and friends to honor Dr. Gitt.

Graham Colloquium. A gift from Mr. and Mrs. Evarts Graham, Jr., in 1963 to encourage opportunities for students to expand their views on social, philosophical, artistic and political topics.

The Evarts A. Graham Lecture. Established in 1985 by the Washington University Alumni of the Phi Beta Pi medical fraternity to honor the memory of Dr. Evarts A. Graham.

Samuel B. Guze Lectureship. Established in 1990 by friends and colleagues to honor Dr. Guze.

Carl Gayler Harford Lectureship. Established in 1977 by the family of one of Dr. Harford’s patients in gratitude for his contributions to teaching clinical medicine and virology.

Alexis F. Hartmann, Sr. Lectureship. Established in 1960 by friends interested in pediatrics to provide an annual lecture in Dr. Hartmann’s honor.

Alex H. Kaplan Visiting Professorship/Lectureship. Established in 1986 by Dr. and Mrs. Alex H. Kaplan to support a visiting psychoanalyst.

Michael and Irene Karl Lectureship in General Internal Medicine. Created in 1983 by Mr. and Mrs. Meyer Kopolow to provide an annual lectureship in honor of Drs. Michael and Irene Karl.


Charles Kilo, MD Lectureship in Internal Medicine. Established in 1998 by Mrs. Ola H. Blodgett to pay tribute to the expert and compassionate care provided by Dr. Charles Kilo.

David M. Kipnis Lectureship in Molecular Biology and Pharmacology. Established in 1998 to provide an annual lecture in honor of Dr. Kipnis.


Stanley J. Korsmeyer Memorial Lecture. Established by colleagues, family and friends in 2005 in memory of Dr. Stanley J. Korsmeyer, a renowned cancer cell researcher and former Washington University School of Medicine faculty member.


Paul E. Lacy Lectureship in Pathology. Established in 1987 by The Kilo Diabetes and Vascular Research Foundation in honor of Dr. Lacy’s many contributions to pathology and diabetes research, and to recognize his collaboration over the years with the co-founders of The Kilo Foundation.

William M. Landau Lectureship. This lectureship was established in 1995 by friends, family and
colleagues of Dr. Landau.

**Marvin and Barbara Levin Visiting Lectureship.** Established in 1997 by Dr. Marvin & Mrs. Barbara Levin to support an endocrinology lectureship in Medicine.

**Irwin Levy Memorial Fund.** Supports the Dr. Irwin Levy Visiting Lectureship in Neurology, which was established in 1978 by Mr. and Mrs. Meyer Kopolow.

**Oliver H. Lowry Lectureship.** Established in 1978 by friends, colleagues and former students of Dr. Lowry.

**H. Relton McCarroll, Sr. Visiting Professorship in Orthopaedic Surgery.** Created in 1972 by patients, friends, colleagues and former students in honor of Dr. McCarroll.

**Edward Massie Lectureship in Cardiovascular Disease.** Established in 1981 by Edward J. Simon, MD, Bernard Shanker and other grateful colleagues and patients.

**G. Leland Melson II Lectureship.** Established in 1993 in memory of Dr. Melson by his friends and colleagues.

**J. Neal and Lois Middelkamp Lectureship.** Established in 2001 by Dr. J. Neal and Lois Middelkamp to support a pediatric lectureship in infectious diseases and advances in pediatric education for medical students, residents and pediatricians, all life-long interests of Dr. Middelkamp.

**The Dr. and Mrs. William B. Mill, Jr. Lectureship.** Established in 2001 in the Department of Radiation Oncology by Dr. and Mrs. William B. Mill, Jr. This was given in recognition of the career accomplishments of Carlos A. Perez, MD, and the impact he had on the professional development of Dr. Mill.

**Carl V. Moore Lectureship.** Established in 1973 by friends and patients of Dr. Carl V. Moore.

**Carl A. Moyer Visiting Professorship of Surgery.** Established in 1978 by The Harry Freund Memorial Foundation to support an annual lecture in honor of Dr. Moyer’s contribution to surgery.

**National Kidney Foundation — Saulo Klahr, MD Lectureship.** Established in 1991 by the Kidney Foundation to honor Dr. Klahr, past president of the National Kidney Foundation and the John E. and Adaline Simon Professor and Vice Chair of the Department of Medicine at Washington University.

**Joseph H. Ogura Lectureship.** Established in 1977 by friends and colleagues of Dr. Ogura as a tribute to his numerous scientific accomplishments and contributions to the School of Medicine and graduate medical education, and his commitment to patient care.

**Carlos A. Perez Endowed Lectureship in Oncology.** Established in 2002 in the Department of Radiation Oncology by Dr. Perez's friends, colleagues, and current and former trainees in grateful recognition for his inspiration, guidance and leadership.

**Dr. Roy H. Petrie Lectureship.** Established in 2000 with gifts from various donors in memory of Roy H. Petrie, MD.

**Rose and Samuel Pollock Surgical Lectureship.** Established in 1976 by Dr. Joseph H. Pollock in memory of his parents.

**The Probstein Oncology Lectureship.** Established in 1985 by Mr. and Mrs. Norman K. Probstein in appreciation of professional services provided by William Fair, MD, former head of the urology division of the Department of Surgery, and Carlos Perez, MD, professor emeritus of radiology and head of radiation oncology at the Medical Center's Mallinckrodt Institute of Radiology.

**James A. Purdy Endowed Lectureship.** Established by Elekta Oncology Systems, Ltd. in 2002 to honor Dr. James Purdy for his contributions to the field of Radiation Oncology.
**Eli Robins Lectureship in Psychiatry.** Established in 1977 by friends, colleagues and former students of Dr. Robins.

**Peggy Sansone Memorial Lectureship.** Created in 2002 by Anthony F. Sansone, Jr. and the Peggy Sansone Special Angel Foundation to promote the exchange of ideas and scientific information on the topic of depression and the role of spirituality in personality development, happiness and mental health. The lecture is a memorial to Mr. Sansone's wife, Peggy Sansone.

**Julio V. Santiago Leadership.** Established in 1999 by the Department of Pediatrics as a lasting tribute to Julio V. Santiago, MD, for his long-standing contributions to the areas of diabetes, endocrinology and metabolism.

**The Rena Schechter Memorial Lectureship in Cancer Research in the Department of Medicine.** Established in 1996 by Dr. Samuel E. Schechter to create a lectureship in cancer research in memory of his wife, Rena Schechter.

**Dr. Alexander and Helena Schonfeld Lectureship.** This lectureship was established in 1994 by Mrs. Helena Schonfeld, in honor of her son, Gustav Schonfeld, Professor of Medicine at Washington University School of Medicine.

**Henry G. Schwartz Lectureship.** Created in 1983 by former residents and colleagues from the neurosurgery department to honor Dr. Schwartz.

**Wendell G. Scott Memorial Lectureship.** Established in 1972 by friends and colleagues of Dr. Wendell G. Scott.

**Major G. Seelig Lectureship.** Established in 1948 in the field of surgery by friends of Dr. and Mrs. Seelig.

**Philip A. Shaffer Lectureship.** Founded in 1957 by friends of Dr. Shaffer in recognition of his accomplishments in biochemistry.

**Earl E. and Wilma Shephard Orthopaedics/Otolaryngology Memorial Lecture.** Established in 1994 through a bequest by Dr. and Mrs. Shephard.

**Frank O. Shobe Lectureship.** Established in 1986 by friends of Dr. Shobe to honor him as a physician and teacher.

**Donald C. Shreffler Genetic Lectureship.** Established in 1995 by Mrs. Donald C. Shreffler as a memorial to her husband.

**Eduardo Slatopolsky Lectureship.** Established in 1988 by Mr. and Mrs. William Wolff in honor of Dr. Slatopolsky’s 25-year association with the School.

**Carl and Sue Smith Lecture in Pediatrics.** Established in 2007 by Dr. Carl Smith, WUSM Professor of Pediatrics, with a focus on pediatric lab medicine.

**C. R. Stephen, MD, FFARCS, Fund for Lecture and Clinical Research in Anesthesiology.** Established in 1986 by former students, residents, faculty and friends in honor of Dr. Stephen, first Head of the Department of Anesthesiology.

**Sterling Drug Visiting Professorship in Pharmacology.** Established in 1986 to honor Ernst Zander, MD, former medical director of Sterling Drug, Inc.

**Arthur W. Stickle Lectureship in Pediatric Ophthalmology.** Established by Arthur and Emily Stickle in 1995 with their generous gift in recognition of Dr. Stickle’s medical training in the Department of Ophthalmology and Visual Sciences and his special professional contribution to the field of pediatric ophthalmology.
Strunk Family Lectureship in Asthma. Established in 2005 by Dr. Robert C. Strunk and his family to provide lectures in the area of pediatric asthma.

The Richard A. and Betty H. Sutter Visiting Professorship in Occupational and Industrial Medicine. Established in 1985 by Dr. and Mrs. Sutter to encourage opportunities for students, faculty, other physicians and the St. Louis community to expand the understanding and practice of occupational medicine.

Jessie L. Ternberg Pediatric Surgery Visiting Lectureship. Made possible from a fund established in 1977 by Mr. Meyer Kopolow to honor Dr. Ternberg.

Robert J. Terry Lectureship (1939) and Visiting Professorship (1982). Established by alumni and Charles S. Terry, his son, respectively, "for the purpose of fostering greater appreciation of the study of anatomy."

Donald L. Thurston Memorial Lectureship. Established in 1988 by his wife, Dr. Jean Holowach Thurston, and his colleagues and friends, the lecture-ship is devoted to the history of biomedical advances.

Leonard J. Tolmach Lectureship. Established in 1995, this lectureship was endowed by friends and colleagues to honor the legacy of Dr. Tolmach. The lecture theme is radiation biology in clinical radiation oncology.

Mildred Trotter Lectureship. Established in 1975 by friends and former students of Mildred Trotter to bring a distinguished woman scientist to the School of Medicine each year.

Rudolph A. Tuteur Pulmonary Lectureship. This lectureship is endowed by family, friends, patients and colleagues of the Tuteur family to memorialize Rudolph A. Tuteur. The goal of this annual fall event is to promote further understanding of problems associated with chronic pulmonary disease from which he suffered.

Dr. Todd Wasserman Visiting Lectureship in Radiation Oncology. Established in 2004 by Dr. Wasserman and funded by MedImmune, Inc. and friends and colleagues of Dr. Wasserman’s.

Course Evaluations
Systematic course evaluation is performed for each year of the curriculum by faculty peers, teaching faculty and students. This system permits problem identification, ensures timeliness of feedback, promotes discussion of new teaching methodologies, allows curriculum inventory, recommends changes in course offerings and provides better integration of the curriculum. These reviews are guided through a Curriculum Evaluation Committee (CEC) process for each of the preclinical years of instruction (i.e., CEC I = first year; CEC II = second year), and another CEC to evaluate both clinical years of instruction (i.e., CEC III = third and fourth years).

The Office of Medical Student Education (OMSE) oversees the course evaluation system, which is coordinated by Heather Hageman in OMSE (362-5433). The collected data are forwarded to the respective coursemasters, the Committee on Medical Education and the Academic Affairs Committee.
**Adviser System**

Student academic advising occurs within two broad programs.

1. Clinical Advisers: First-year students select faculty advisers from a listing of volunteers who represent both basic science and clinical faculty. Each advisory group has three students from each of the four years of the curriculum. These groups meet on an informal basis, usually in the hospital setting. The students and faculty member explore mutually interesting topics which may include seeing patients, observing procedures, discussing health insurance or reading journal papers. The advisers serve as faculty contacts but do not have any formal academic advisory role.

Each first-year student is invited to join one of the three academic societies. Entering students are divided equally among the societies. Incoming first-year students and their faculty advisers share the same academic society.

2. Career (fourth-year) Advisers: Each third-year student selects a fourth-year adviser from a list of potential faculty advisers. In most cases, the adviser is a faculty member in the field in which the student will be seeking a residency appointment. The career advisers have responsibility for reviewing the student’s choice for fourth-year electives and making appropriate recommendations for the structure and content of the elective year. In addition, fourth-year advisers serve as valuable resources for information about residency programs.

In addition to the advising programs described, students seek informal advising from faculty with whom they have had contact, either through classroom work, research or clerkships. Students also have faculty contact through membership in the academic societies.

**Degree Programs**

The Washington University School of Medicine offers five programs leading to the MD degree: a regular four-year program, a five-year program, the MA/MD program, the MS program, and a combined MD/PhD program.

**Doctor of Medicine (four-year program)**

**Doctor of Medicine (five-year program)**

**Master of Arts and Doctor of Medicine**

**Master of Science in Clinical Investigation**

**Doctor of Medicine and Doctor of Philosophy**

The Washington University Graduate School of Arts & Sciences awards a doctoral degree offered by the Division of Biology and Biomedical Sciences.

**Doctor of Philosophy**
By conferring the MD degree, the University certifies that the student is competent to undertake a career as a doctor of medicine. It certifies further that, in addition to medical knowledge and skills, the graduate possesses qualities of personality — compassion, emotional stability and a responsible attitude — essential to an effective professional life.

**Four-Year Program**

A course of medical education for the MD degree ordinarily consists of a minimum of four years of study. Students recommended for the Doctor of Medicine degree must be of good moral character, they must have completed an entire academic course of instruction as matriculated medical students, they must have passed all required subjects or the equivalent and have received satisfactory grades in the work of the full academic course, and they must have discharged all current indebtedness to the University. The School requires that students planning to practice clinical medicine take the USMLE Step 1 and Step 2 examinations. All students must take and pass the School's Comprehensive Clinical Examination (CCX) prior to graduation.

At the end of the final academic year, students who have fulfilled these requirements will be eligible for the MD degree.

**Five-Year Program**

In addition to the regular four-year program leading to the MD degree and the MA/MD degree program, students are permitted to spend one additional year in an academic program in a medical or medically related field. In exceptional circumstances, a further additional year may be permitted. The student may receive a stipend but may not be considered an employee of the University. The program must be arranged with an academic adviser and is subject to the approval of the Associate Dean for Student Affairs. The *Student Research Opportunities* brochure provides additional important information about participating in this program. Students enrolled in the five-year program must maintain coverage through Student Health while in St. Louis.

**Master of Arts and Doctor of Medicine**

The objective of the MA/MD program is to provide one full year of individual, full-time, in-depth research experience for medical students in preparation for a career in academic medicine. Program participants absent themselves from medical school and spend 12 months working on basic biomedical research or hypothesis-driven clinical research in the lab of a faculty member. Degree requirements include a presentation before a research advisory committee, submission of a publication-quality manuscript and participation in a research ethics seminar.

No academic credit toward the MD degree will be given, but research may be continued as senior elective for credit. Fellowship stipends and other support are available through the Howard Hughes Medical Institute (basic science research), Doris Duke Foundation (clinical research), National Institute of Diabetes & Digestive & Kidney Diseases (GI, hepatology, endocrinology, nutrition, nephrology and hematology research), Predoctoral Interdisciplinary Clinical Research Training Program (clinical research), and the J. Max Rukes Fund (endocrine and metabolism research). Students unable to qualify for one of these awards may also apply for support from the dean of the medical school. Funding amounts may vary, and some of these sources have deadlines in early January. Please contact the MA/MD program administrator at (314) 747-6787 or visit the web site at mamd.wustl.edu for details.
Master of Science in Clinical Investigation

Since 2006, the School of Medicine has offered a Master of Science in Clinical Investigation (MSCI) to young investigators committed to pursuing academic careers in clinical research. The goal is to provide high-quality, multidisciplinary courses, mentorship and research training, which would culminate in the granting of this degree. Though primarily intended for postdoctoral trainees, the MSCI is also available to a few outstanding pre-doctoral students in Medicine, Psychology, Biology & Biomedical Sciences, Social Work, Audiology, Physical Therapy, Occupational Therapy and related disciplines in the Graduate School of Arts & Sciences who have completed or are enrolled in the intensive Predoctoral Interdisciplinary Clinical Research Training (PICRT) Program, or other structured clinical research training program, and who are interested in pursuing academic careers in clinical research. As the MSCI requirements are rigorous and are performed in addition to the doctoral degree requirements, interested students should contact the program coordinator or director before beginning their structured clinical research training program to ensure that the additional training meets the needs of the individual student, and that all requirements can be completed.

Doctor of Medicine and Doctor of Philosophy

Washington University offers a combined MD/PhD degree program that uses the resources of the Graduate School of Arts & Sciences, the School of Engineering and the School of Medicine under the auspices of the Medical Scientist Training Program (MSTP). The purpose of the program is to train individuals in medicine and biomedical research to prepare them for careers as physician scientists. The program was inaugurated in 1969 and is one of the oldest and largest in the country. The program, normally completed in seven years, has been highly successful; more than 80 percent of those who have completed postgraduate training are actively involved in research programs at leading institutions.

All students in the program receive financial support in the form of stipends (currently $27,500 per year), health coverage, disability and life insurance, and full tuition remission for both the MD and PhD phases of training.

Only students who have spent the equivalent of at least two semesters in laboratory research should apply to the Medical Scientist Training Program. Applicants must meet the requirements for admission to both the School of Medicine and the graduate program of their choice, although the Graduate Record Examination is not required. Students planning to concentrate in disciplines related to the chemical or physical sciences should have completed mathematics through calculus, physics and physical chemistry, and advanced organic chemistry. A course in differential equations also is recommended. For those students whose major interests are in the more biological aspects of medical science, the quantitative requirements for chemistry are less extensive, but a strong background in mathematics, chemistry and physics is still important. Although most individuals enter the program as first-year students, applications will be accepted from students in their first or second year at this medical school. The program matriculates approximately 25 new students each year, which represents one-fifth of the entering medical school class.

The program consists of three parts: 1) two years of an enhanced medical curriculum, 2) at least three years of original research toward a thesis to satisfy the requirements for the PhD degree, and 3) at least 15 months of clinical training based on a student’s career goals. Both degrees are awarded concurrently at the completion of the program.

Funding support commences when the student begins the program, either in June or at the beginning of the medical school year. Students matriculating in June undertake a research rotation with a faculty member of their choosing.

While the Medical Scientist Training Program includes all medical courses required for the MD degree,
it incorporates a high degree of flexibility for individuals through a wide range of electives and graduate courses, some of which may be taken during the first year of the medical curriculum. Every effort is made to individualize each student’s curriculum based on previous background and current interests. The medical and PhD curricula are integrated, which permits students to take PhD coursework in lieu of certain medical school coursework. In this way, students may substantially meet the coursework requirements of the PhD program during the first two medical school years. The MSTP directorate meets with students individually to help them decide on an individualized curriculum and appropriate laboratory rotations. Lab rotations are executed over the summer.

The MSTP Committee monitors the performance of each student, and a high scholastic standing as well as a commitment to research is expected.

Students normally spend between three and five years in the Graduate School of Arts & Sciences or the School of Engineering satisfying the following requirements:

1) Completion of required graduate coursework;
2) Successful performance in qualifying examinations;
3) Execution of original research suitable for a dissertation;
4) Defense of the thesis; and
5) Completion of a one-semester teaching assistantship.

The PhD degree may be obtained in the Program in Biomedical Engineering, the Division of Biology and Biomedical Sciences or in other research-oriented departments such as Anthropology or Physics. The largest contingent of MSTP students are trained under the auspices of the Division of Biology and Biomedical Sciences. The Division, now in its 36th year, is a leader in interdisciplinary biomedical education. Member departments of the Division include all clinical and preclinical departments of the medical school, as well as the Departments of Biology and Chemistry. These departments jointly provide training in the following interdisciplinary programs:

**Biochemistry**
**Computational and Systems Biology**
**Developmental Biology**
**Evolution, Ecology and Population Biology**
**Human and Statistical Genetics**
**Immunology**
**Computational and Molecular Biophysics**
**Molecular Cell Biology**
**Molecular Genetics and Genomics**
**Molecular Microbiology and Microbial Pathogenesis**
**Neurosciences**
**Plant Biology**

Students may conduct research under any of the faculty affiliated with these programs or faculty in the Biomedical Engineering program. The MSTP also permits students to undertake doctoral studies in other disciplines, provided that the resulting thesis is a rigorous, hypothesis-based body of work that is medically relevant. Recent students have earned doctorates under special arrangements with the departments of Anthropology and Physics.

A series of weekly seminars featuring physician scientists is held for MD/PhD students. These seminars are aimed at stimulating student interest in clinical medicine, increasing awareness of major research problems in clinical medicine and exposing students to diverse career paths in academic medicine.

MD/PhD students attend an annual weekend retreat during which students present their research. The retreat also features discussions led by experts on topics selected by students.

To keep students in the PhD phase of training up to date on their clinical skills, monthly opportunities are offered for clinical interactions. Students are matched individually with a clinical mentor in the specialty of their choice. These interactions include going on rounds and attending conferences.
A special two-week non-graded tutorial for MD/PhD students facilitates their transition into the clinical phase of training.

MSTP students are required to complete a minimum of 15 months of clinical training. Opportunities exist to meet part of the requirement while engaged in PhD training. Students may opt to extend clinical training up to 24 months. The intensive clinical training is the last formal requirement for the MD degree. Both the PhD and MD degrees will be granted at the conclusion of clinical training.

Application Procedure: Individuals interested in applying to the Medical Scientist Training Program must complete the MD-PhD section on the AMCAS and the Washington University School of Medicine secondary application. The MSTP requires letters of recommendation from the research mentor(s) of all applicants.

Individuals wishing additional information about the program may contact:

Medical Scientist Training Program
Washington University School of Medicine
Campus Box 8226
660 S. Euclid Ave.
St. Louis, MO 63110-1093
(800) 852-4625
mstp@dbbs.wustl.edu
www.mstp.wustl.edu

Doctor of Philosophy

The Division of Biology and Biomedical Sciences offers doctoral programs in Biochemistry, Computational and Systems Biology, Developmental Biology, Evolution, Ecology and Population Biology, Human and Statistical Genetics, Immunology, Computational and Molecular Biophysics, Molecular Cell Biology, Molecular Genetics and Genomics, Molecular Microbiology and Microbial Pathogenesis, Neurosciences, and Plant Biology. These educational activities are organized on an interdepartmental basis by the faculty of all clinical and preclinical departments of the School of Medicine, as well as the departments of Biology and Chemistry in the School of Arts & Sciences. All degrees are awarded through the Washington University Graduate School of Arts & Sciences. Additional information about Division programs may be obtained by contacting:

Graduate Studies Office
Washington University School of Medicine
Campus Box 8226
660 S. Euclid Ave.
St. Louis, MO 63110-1093
(800) 852-9074
dbbs.wustl.edu

Applying for Admission

For updated information, check our Admissions home page: medschool.wustl.edu/admissions.
Admission Requirements for the Study of Medicine

Entrance requirements to the School of Medicine include:

1. Evidence of superior intellectual ability and scholastic achievement;
2. Completion of at least 90 semester hours of college courses in an approved college or university;
3. Completion of the Medical College Admission Test of the Association of American Medical Colleges;
4. Evidence of character, a caring and compassionate attitude, scientific and humanitarian interests, effective communication skills, and motivation suitable for a career in medicine.

Chemistry, physics and mathematics provide the tools for modern biology, for medicine and for the biological basis of patient care. Thus, a firm grounding in these subjects is essential for the study of medical sciences. Entering students are expected to have had at least the equivalent of one-year courses at the undergraduate level in physics and biology; to have studied mathematics through calculus, including integral equations and differential equations; and to have a background in chemistry, including one year of general or inorganic chemistry and one year of organic chemistry. Course work in biochemistry is encouraged although not required. In addition one semester of biochemistry can be substituted for one semester of organic chemistry. Similarly, one semester of statistics can be substituted for one semester of calculus. In selected instances, one or more of these prerequisites may be waived by the Committee on Admissions, but applicants are strongly advised to pursue their interests in these and in other areas of science.

A major goal of undergraduate college work should be development of the intellectual talents of the individual. This often involves the pursuit of some area of knowledge in-depth, whether in the humanities, social sciences or natural sciences. At the same time, a diversity of background is encouraged in order to provide a necessary foundation for the development of cultural awareness, sensitivity and competence. Specific courses, other than the few in the natural sciences, are not prerequisites because a great variety of courses and life experiences may prepare students for the many roles they may play in their medical careers.

Policy for International Students

The admission decision at Washington University School of Medicine is based on academic and personal merit and not on the ability of the student to pay the costs of education. However, individuals who are not citizens of the United States of America or who do not hold U.S. Permanent Resident Visa status are not eligible for financial aid due to regulations covering many programs used by the School to fund financial assistance. Therefore, in order for the School to complete the required documents which are necessary for issuance of a visa, the student must document, by a date and in a manner designated by the School, that the necessary amount of funds, as established by the School, is
available to pay the costs of education (tuition and living expenses) for the anticipated period of enrollment, normally four years. Documentation of the required amount of financial resources may be by a letter of credit or by deposit of funds in an escrow account with a bank designated by the School.

**Application Procedure**

General information for prospective medical students and how to apply can be found at [http://medschool.wustl.edu/admissions](http://medschool.wustl.edu/admissions).

Washington University School of Medicine participates in the American Medical College Application Service (AMCAS) of the Association of American Medical Colleges. AMCAS provides a centralized system for applying to any participating medical school with only one application and one set of official transcripts of academic work.

The AMCAS Application for Admission, common to all participating medical schools, is available online at [www.aamc.org/students/amcas/](http://www.aamc.org/students/amcas/). Applicants are urged to file their applications as early as possible.

Applicants to the first-year class must submit their AMCAS application no later than December 1 of the year prior to that in which they want to matriculate. On receipt of the application from AMCAS, the Office of Admissions contacts the applicant regarding the additional steps to be taken to complete the application. These include completing a supplemental application via the Internet at [http://wumsapply.wustl.edu](http://wumsapply.wustl.edu), submission of letters of recommendation and payment of a nonrefundable Application Service Fee of $65. These materials must be received no later than December 31. Applicants can check the status of their application via the Internet at the [http://wumsapply.wustl.edu](http://wumsapply.wustl.edu) web site. Once the application is complete, the Committee on Admissions evaluates it.

Selected applicants are invited for a personal interview, as well as a tour of the School of Medicine and the Washington University Medical Center. This visit provides extensive opportunities for the applicant to meet and talk with students and faculty members.

If an applicant is planning a trip to the St. Louis area, it is appropriate to contact us by e-mail (wumscoa@wustl.edu) to inquire if an interview has been authorized. The inquiry should be submitted at least three weeks in advance of the anticipated travel. The Office of Admissions is open weekdays from 8:30 a.m. to 5 p.m. Central Time.

Admission decisions are made by the Committee on Admissions on a rolling schedule beginning October 15. Applicants are notified as soon as a final decision has been made on their application, but by April 15, every applicant should be notified whether he or she is accepted, on the waiting list or not accepted.

Upon notification of acceptance for admission to the School, the applicant is required to file a Statement of Intent within two weeks. Three options are presented: 1) accept the offer of admission and submit the $100 acceptance deposit; 2) accept the offer of admission, submit the $100 deposit and request financial aid materials; or 3) decline the offer of admission. The $100 acceptance deposit reserves a place in the class and is applied to the tuition charge at the time of matriculation. If an accepted applicant withdraws from the class with written or e-mail notification to the Admissions Office prior to May 15, the deposit is refunded. The School of Medicine abides by the traffic rules regarding application timelines as established by AMCAS. Accepted applicants who are non-compliant with AMCAS traffic rules and medical school deadlines may have their acceptance into the class rescinded.

BACK TO TOP
**Background Checks and Screening for Controlled Substances**

Effective in 2005, students entering the School of Medicine who will have contact with patients are required to have criminal background checks and screening for controlled substances (THC-cannabis, cocaine, opiate, amphetamine, PCP-phencyclidine) in order to qualify for participation in clinical activities at Washington University School of Medicine-affiliated clinical facilities. Drug screening usually will be conducted during student orientation prior to the start of classes. Incoming, prematriculant students, or visiting students will be disqualified to study at the School of Medicine if they do not consent to background checks, if they have significant positive findings on the background checks, or if they have illicit substances detected on drug screening without a bona fide medical indication. Disqualified prematriculant students and disqualified visiting students will be precluded from matriculation and will not be registered as students in the School of Medicine.

**Full-Tuition Scholarships**

Please see Financial Information/Financial Assistance section.

**Third-Year Class Transfer Program**

Each year, Washington University School of Medicine accepts a limited number of transfer students into its third-year class depending on the availability of positions. Transfer applications are accepted from well-qualified second-year students who are enrolled in good standing and eligible to continue in their LCME-accredited U.S. medical schools. Applicants must also have a compelling personal reason for requesting transfer and must have the full approval of the dean of their current school. Accepted students are required to successfully complete the USMLE Step 1 examination.

Transfer application forms for admittance into the third-year class are available after October 1 for the following academic year. The deadline for submission of applications is March 31. Those applicants selected for interview will be invited to visit the Medical Center. Applicants will be notified of the decision of the Committee on Admissions by May 15 or when a position becomes available. Inquiries should be directed to:

Third-Year Class Transfer Program  
Washington University School of Medicine  
Campus Box 8077  
660 S. Euclid Ave.  
St. Louis, MO 63110-1093  
Phone: (314) 362-6844  
Fax: (314) 362-4658  
wumscoa@wustl.edu

**Financial Information**

Cost of Education
Cost of Education
For the first-year class matriculant, tuition and estimated expenses for the 2009-10 academic year are listed below. Students who enter in 2009 will benefit from a tuition stabilization plan, which provides that their annual tuition of $47,150 will be constant for up to five consecutive years. The stabilized rate will expire five academic years after matriculation. Therefore, students whose medical education is interrupted for any reason for more than one year will be charged the rate of the class they rejoin. Appeals of this policy should be submitted in writing to the registrar. The items listed below provide an estimate of the expenses for a single student in the 38-week first-year class. The total of these figures suggests a basic minimum budget of approximately $63,602. Allowances for entertainment, travel, clothing and other miscellaneous items must be added to this estimate.

Tuition (includes Student Health Service and Microscope Lending Plan): $47,150
Books, supplies and instruments: $2,147
Housing and food: $10,139
Travel and personal: $4,166

Student Health Service
The Student Health Service provides comprehensive health care, including hospitalization, for all full-time students in the School of Medicine upon completion of orientation. All full-time students are covered in the prepaid dental plan through Assurant Employee Benefits. Dental premium paid for by WUSM Student Health Service. Long-term group disability insurance is provided for medical students. All full-time students in the School of Medicine are covered by a $10,000 life insurance benefit, with the option to convert to an individual portable policy prior to graduation.

Microscope Lending Plan
Microscopes that meet the technical requirements set by the faculty are provided at no additional charge to each student in the first- and second-year classes. The plan saves students the high cost of microscope purchase and makes available to them a superior quality instrument.

Financial Assistance
The ability to finance a medical education at Washington University does not influence the student selection process. As all students accepted for admission have proven scholastic ability, financial assistance is awarded solely on the basis of documented financial need which cannot be met by student and family resources. Students who consider themselves financially independent of their parents must arrange for loans to replace the amount of support parents are analyzed to have the potential to contribute. The School of Medicine’s Office of Financial Aid (Box 8059) will assist students in making these arrangements.

In responding to the Admissions Committee’s offer of admission, an accepted student may request financial aid application materials. The Financial Aid Office acknowledges the student’s intent and provides instructions for completing the FAFSA. Everyone applying for financial aid must complete a Free Application for Federal Student Aid (FAFSA) and designate Washington University School of Medicine, School Code #G24620, as a recipient. Medical school financial aid application documents and detailed instructions will be made available after January 1.

The financial aid application materials solicit information about the applicant and parents, including a detailed description of resources and liabilities. If an applicant’s parents are separated or divorced, the financial information is required from both biological parents (excluding income and assets of their
spouse, if remarried). If the applicant is married, similar information is required of the spouse. The School expects the applicant to complete and submit the financial aid documents within two weeks from the date the applicant receives them. Official copies of both biological parents’ and the applicant’s U.S. Individual Income Tax Returns complete the data required for financial aid consideration.

While "permanent residents" of the United States are eligible for most federal financial aid programs, need-based financial aid from Washington is only awarded if the applicant and both biological parents can provide official, audited documents with the same detailed information as provided on a U.S. income tax return. All information is held in strict confidence.

Financial aid awards are credited toward payment of tuition and fees. Proceeds from loans may be disbursed directly to the borrower. The loan portion of an award will be funded through the resources of the School of Medicine or through the federal Stafford Loan program. All loans awarded by the committee are free of interest while a student is enrolled in the School. Financial aid awards are made for a given academic year. Students may reapply for financial assistance in succeeding years if they remain in good academic and personal standing, and if there is continued financial need. Awards made to a student may vary from year to year, depending upon the student’s needs and upon the availability of funds to the Committee. Students are responsible for filing applications for renewal of awards in the spring of each year.

The committee holds that students receiving assistance have an obligation to notify the committee in writing if their financial situation changes, for example, through employment or receipt of a scholarship not anticipated at the time the application was submitted.

First- and second-year students are urged not to accept employment during the academic year. A number of fourth-year students find employment in hospitals within the Medical Center. The personnel office provides assistance to students’ spouses seeking employment.

**Full-Tuition Scholarships**

In 1978, the School of Medicine established a scholarship program that based selection on merit rather than financial need. As one of the first merit scholarship programs for medical students, the Distinguished Student Scholarship Program has recognized and rewarded academic excellence and personal achievement for 31 years. And, to honor outstanding alumni of Washington University, the Medical Center Alumni Association created in 1989 the Distinguished Alumni Scholarship Program. In 1998, the Barnes-Jewish Hospital Medical Staff Association committed to funding one full-tuition, four-year scholarship to a student in each entering class. Beginning with the 2002-2003 academic year, one additional "named" scholarship was made available through the generosity of a donor.

Most merit-based scholarships are awarded to students in the first-year class and are subject to annual renewal. Recipients of these scholarships are expected to maintain academic excellence. If a scholarship is not renewed, the student may file for financial aid from the School. For scholarship recipients who document financial need above the full-tuition scholarship, additional funds are available to provide support up to the total cost of education. Scholarship recipients may not concurrently participate in the School’s Medical Scientist Training Program, the Armed Forces Health Professions Scholarship Program, or the National Health Service Corps Scholarship Program.

Now known collectively as the Distinguished Scholars Program, its aim is to attract and enroll the most outstanding students in the School of Medicine, thus enriching the scholarly environment and broadening the scope of learning for all students. Scholarship recipients are selected on intelligence, character, personal accomplishments and goals, motivation for medicine, aptitude for science, leadership potential, communication skills and diversity of life experience. Scholarships awarded under this Program include the Barnes-Jewish Hospital Scholars, Danforth Scholars in Medicine, Distinguished Alumni Scholars (DAS), Distinguished Faculty Scholars (DFS), and Distinguished Student Scholars (DSS).

**Barnes-Jewish Hospital Medical Staff Association Scholarship**
One full-tuition, four-year scholarship will be awarded to a student in each entering class beginning in 1999. Selection of the Barnes-Jewish Hospital Medical Staff Association Scholar is the same as for the Distinguished Student Scholarship.

**Danforth Scholars in Medicine**

Named in honor of William H. and Elizabeth Gray Danforth, the chancellor and first lady of the University from 1971 to 1995, the Danforth Scholars Program is a tribute to their legacy of exemplary leadership and service.

**Distinguished Alumni Scholarships**

Up to four full-tuition scholarships are awarded annually to members of the entering first-year class. The application procedure and selection process are the same as for the Distinguished Student Scholarships. Since 1989, Distinguished Alumni Scholarships have been named in honor of:

- Walter F. Benoist, MD
- Leonard Berg, MD
- Grace E. Bergner, MD
- Ellen F. Binder, MD
- Stanley J. Birge, MD
- Eugene M. Bricker, MD
- Keith H. Bridwell, MD
- Elmer B. Brown, MD
- J. William Campbell, MD
- David B. Clifford, MD
- Justin J. Cordonnier, MD
- John D. Davidson, MD
- Louis P. Dehner, MD
- Robert C. Drews, MD
- Ronald G. Evens, MD
- Lewis C. Fischbein, MD
- I.J. Flance, MD
- James W. Fleshman, MD
- Mark E. Frisse, MD
- Bernard T. Garfinkel, MD
- Deborah J. Gersell, MD
- Jerome J. Gilden, MD
- David Goldring, MD
- Sidney Goldring, MD
- Samuel B. Guze, MD
- Paul O. Hagemann, MD
- Marc R. Hammerman, MD
- Alexis F. Hartmann, MD
- Alexis F. Hartmann Jr., MD
- John C. Herweg, MD
- Richard W. Hudgens, MD
- Robert S. Karsh, MD
- John M. Kissane, MD
- Ira J. Kodner, MD
- Allan E. Kolker, MD
- Stuart A. Kornfeld, MD
- Lawrence M. Kotner Jr., MD
- Nicholas T. Kouchoukos, MD
- William M. Landau, MD
- Timothy J. Ley, MD
- Virgil Loeb, MD
Maurice Lonsway, MD
Robert H. Lund, MD
Alan P. Lyss, MD
Philip W. Majerus, MD
Mark J. Manary, MD
Gerald Medoff, MD
Paul A. Mennes, MD
J. Neal Middelkamp, MD
Benjamin Milder, MD
Barbara S. Monsees, MD
Carl V. Moore, MD
David G. Mutch, MD
D. Michael Nelson, MD, PhD
Robert C. Packman, MD
Charles W. Parker, MD
Mary L. Parker, MD
Alan L. Pearlman, MD
Frederick D. Peterson, MD
Gordon W. Philpott, MD
Gary A. Ratkin, MD
Edward H. Reinhard, MD
Fred C. Reynolds, MD
George Sato, MD
Gustav Schonfeld, MD
Clay F. Semenkovich, MD
Hyman R. Senturia, MD
Donald Sessions, MD
Gary D. Shackelford, MD
Penelope G. Shackelford, MD
Larry Shapiro, MD
Bernard L. Shore, MD
Barry A. Siegel, MD
Emily L. Smith, MD
Arnold W. Strauss, MD
Steven L. Teitelbaum, MD
Jessie L. Ternberg, PhD, MD
Bradley T. Thach, MD
Mildred Trotter, PhD
Stuart Weiss, MD
Alison J. Whelan, MD

Distinguished Alumni Scholarship Program honorees 2009–10:

Jennifer W. Cole, '84
Paul R. Manske, '64
Robert A. Swarm, '83
William J. Ross, '72

Distinguished Faculty Scholars

The Distinguished Faculty Scholar Program provides merit-based scholarships (full-tuition for four years) to students who demonstrate their commitment to bringing diverse people together and to enhancing service to disadvantaged groups. In addition, it links each of the scholarship recipients with a member of the faculty who has contributed to the diversity of the medical school. This faculty member will serve as a mentor to the scholarship recipient.

These awards are for students who have:
• challenged themselves and excelled academically;
• demonstrated leadership;
• engaged in or shown a commitment to community service;
• demonstrated their commitment to bringing diverse people together (as, for example, by having been involved in diversity initiatives in their schools or communities); and,
• demonstrated a commitment to serving historically underprivileged populations, and/or demonstrated achievement and determination in the face of personal challenges.

Distinguished Student Scholarships

Full-tuition Distinguished Student Scholarships are awarded annually to selected members of the entering first-year class based on meritorious academic and personal accomplishments. Final selection of scholarship recipients is made by a committee of the faculty based on demonstrated superior intellectual achievement as well as an assessment of the applicant’s character, attitude, motivation and maturity.

The ability to finance a medical education at Washington University does not influence the student selection process. As all students accepted for admission have proven scholastic ability, financial assistance is awarded solely on the basis of documented financial need which cannot be met by student and family resources. Students who consider themselves financially independent of their parents must arrange for loans to replace the amount of support parents are analyzed to have the potential to contribute. The School of Medicine’s Office of Financial Aid (Box 8059) will assist students in making these arrangements.

In responding to the Admissions Committee’s offer of admission, an accepted student may request financial aid application materials. The Financial Aid Office acknowledges the student’s intent and provides instructions for completing the FAFSA. Everyone applying for financial aid must complete a Free Application for Federal Student Aid (FAFSA) and designate Washington University School of Medicine, School Code #G24620, as a recipient. Medical school financial aid application documents and detailed instructions will be made available after January 1.

The financial aid application materials solicit information about the applicant and parents, including a detailed description of resources and liabilities. If an applicant’s parents are separated or divorced, the financial information is required from both biological parents (excluding income and assets of their spouse, if remarried). If the applicant is married, similar information is required of the spouse. The School expects the applicant to complete and submit the financial aid documents within two weeks from the date the applicant receives them. Official copies of both biological parents’ and the applicant’s U.S. individual income tax returns complete the data required for financial aid consideration.

While "permanent residents" of the United States are eligible for most federal financial aid programs, need-based financial aid from Washington University is only awarded if the applicant and both biological parents can provide official, audited documents with the same detailed information as provided on a U.S. income tax return. All information is held in strict confidence.

Financial aid awards are credited toward payment of tuition and fees. Proceeds from loans may be disbursed directly to the borrower. The loan portion of an award will be funded through the resources of the School of Medicine or through the federal Stafford Loan program. All loans awarded by the committee are free of interest while a student is enrolled in the School. Financial aid awards are made for a given academic year. Students may reapply for financial assistance in succeeding years if they remain in good academic and personal standing, and if there is continued financial need. Awards made to a student may vary from year to year, depending upon the student’s needs and upon the availability of funds to the Committee. Students are responsible for filing applications for renewal of awards in the spring of each year.

The committee holds that students receiving assistance have an obligation to notify the committee in
writing if their financial situation changes, for example, through employment or receipt of a scholarship not anticipated at the time the application was submitted.

First- and second-year students are urged not to accept employment during the academic year. A number of fourth-year students find employment in hospitals within the Medical Center. The personnel office provides assistance to students’ spouses seeking employment.

**Standards for Satisfactory Academic Progress for Financial Aid Eligibility**

Federal law and regulations require that all students receiving financial assistance from Federal Title IV funds maintain satisfactory academic progress. The policy presents the standards adopted by the Washington University School of Medicine and applies to all students.

In order to maintain satisfactory academic progress, the maximum time frame of full-time enrollment for completion of each program is as follows:

- Four-year MD program: 6 years
- Five-year MD program: 7-1/2 years
- MA/MD program: 7-1/2 years (or 9 years if a 2-year MA is pursued)

Periods of non-enrollment are NOT counted in the measurement of satisfactory academic progress but all periods of attendance, regardless of whether the student received Title IV aid, are counted.

This policy is applied in the context of each individual student’s enrollment status in order to accommodate the student who does not enroll on a full-time basis. For example, if a student enrolls in a four-year program, the full-time student would meet the 150 percent maximum after six years of full-time enrollment, and the half-time student is expected to complete in twelve years. If a student vacillates between full-time and half-time enrollment, that student would have a maximum time frame between six and 12 years, and the maximum time frame for that student would be continuously adjusted.

Academic requirements for the MD degree include the satisfactory completion of the curriculum designated by the faculty. The progress of each student working toward an MD degree is monitored carefully by the Committee on Academic Evaluation of Students (CAES). Refer to the Assessing Academic Achievement area of the Admissions and Educational Program section.

A student failing to meet the standards of progress as determined by the Committee on Academic Evaluation of Students shall be placed on financial aid probation. While on probation the student may receive financial assistance for one trimester, semester or equivalent time period. At the conclusion of this period, the student must have achieved compliance with each standard. A student who does not achieve compliance with each standard by the conclusion of the probationary period is suspended from financial aid eligibility. The Office of Student Financial Aid must notify a student of implementation of probationary status and/or suspension.

A student shall be reinstated for financial aid eligibility at such time as that student has completed satisfactorily sufficient coursework to meet the standards of progress. A student on financial aid probation or suspension may appeal that status by indicating in writing to the Director of Student Financial Aid the existence of mitigating circumstances which should result in reinstatement of financial aid eligibility. Each appeal will be considered on its merit by the Committee on Student Financial Aid.

The Director of Student Financial Aid shall have primary responsibility for enforcement of this policy. The director shall provide in writing to each student at the time of initial enrollment a copy of this policy. The director shall ascertain at the time of each disbursement of funds and prior to certification of a financial aid application that the student is in compliance with the policy.

**Scholarship Funds**
Helen M. Aff-Drum Scholarship Fund. Established in 1988 to provide scholarship support to financially deserving medical students.

American Medical Association — Education and Research Foundation Medical Student Assistance Fund. Begun in 1983, donors’ gifts supplement the Foundation’s gift to support excellence and contribute to the Distinguished Student scholarships and Distinguished Alumni scholarships program.


Isak and Breine Ascher Scholarship Fund. The late Dr. Eduard Ascher, MD, ’42, established this scholarship through a trust to memorialize his parents, who were lost in the Holocaust during World War II. He chose Washington University School of Medicine because of their willingness to "give a chance" to an Austrian refugee.

Dr. William Monroe Baker Fund. Established in 1988 under the will of Miss Lola Braxton in memory of Dr. Baker to provide scholarship assistance to worthy students who would be otherwise unable to obtain a medical education.

Barnes-Jewish Hospital Medical Staff Association Scholarship. Established in 1998 by the Barnes-Jewish Hospital Medical Staff Association to provide financial assistance to students based on academic excellence.

Floyd A. and Rita Sue Barnett Scholarship Fund. Established in 1994 from a trust agreement (1989) of Floyd and Rita Sue Barnett for scholarships for students who are academically well-qualified and financially deserving.

The Dr. Joseph A. and Helene H. Bauer Scholarship Fund. Created in 1987 by Dr. and Mrs. Joseph A. Bauer to provide scholarship support to academically well-qualified and financially deserving medical students.

Albert G. Blanke, Jr. Endowed Scholarship Fund. Established by a generous gift in 1982, the fund provides scholarship assistance for deserving students in the School of Medicine.

Warren Bowersox, MD Scholarship. Established in 2005 by Mrs. Warren Bowersox in memory of her husband, who was a member of the MD class of 1943-March, to support scholarships for first-year medical students.

Isabel Valle Brookings Scholarship Fund. Established in 1957 by Isabel Valle Brookings (Mrs. Robert S.) for scholarships and loans in the School of Medicine.

Jane Stewart and Robert S. Brua, MD Scholarship Fund. Established in 1996 through the generosity of Dr. Brua.

Ruth Elizabeth Calkins Scholarship Fund. Established by Dr. Delevan Calkins in honor of his granddaughter.

Gilbert L. Chamberlain, MD Scholarship Fund. Created in 1971 by Dr. Gilbert L. Chamberlain to be used to aid worthy students in acquiring their medical education.

Cecil M. Charles — Nu Sigma Nu Medical Student Scholarship Fund. Established by the Nu Sigma Nu Medical Fraternity in memory of Dr. Charles.

T. H. Cheng, MD Endowed Scholarship in Medicine. Established in 2007 by Dr. Tien Hsin Cheng, MD ’76, for deserving medical students with financial need.

Dr. Larry T. Chiang Endowed Scholarship. Established in 2003 to endow a scholarship fund for medical students from China or Taiwan. Besides academic achievement, criteria include positive attitude and determination to succeed.
Class of 1945 Scholarship Fund. Established by the alumni from the class of 1945 in honor of their 45th reunion.

Class of 1954 Scholarship Fund in Memory of Daniel Nathans. Established in 2000 by the alumni from the class of 1954 in memory of their classmate, Daniel Nathans, who was awarded the Nobel Prize in Medicine in 1978. Members of the Nathans family also contributed to the establishment of the fund.

Class of 1956 Scholarship Fund. Established in 1996 by members of the class of 1956 in honor of their 40th reunion.

Class of 1959 Reunion Scholarship Fund. Established in 2008 by members of the Class of 1959 in honor of their 50th Reunion.

Class of 1961 Scholarship Fund. Established in 2001 by the members of the class of 1961.

Class of 1964 Scholarship Fund. Established in 1993 by the alumni from the class of 1964 to support scholarships.

Class of 1968 Scholarship Fund. Established in 1998 by the alumni from the class of 1968 in honor of their 30th reunion to support student scholarships.


Class of 1971 Scholarship Fund. Established in 1999 by members of the class of 1971 in honor of their 25th reunion.

Class of 1972 Scholarship Fund. Established in 1999 by members of the class of 1972 in honor of their 25th reunion.


Class of 1974 Scholarship Fund. Established in 2002 by members of the class of 1974 for their 25th reunion and to honor the memory of their classmate, Jonathan Mann.


Class of 1978 Scholarship Fund. Established in 2002 by members of the class of 1978 in honor of their 25th reunion.

Class of 1979 Scholarship Fund. Established in 2003 by members of the Class of 1979 in honor of their 25th Reunion.


Grace Strong Coburn Scholarship Fund. Created in 1962 through the bequest of Mrs. Grace Strong Coburn for scholarships in the School of Medicine.

Jack W. Cole, MD Scholarship. Established in 2002 by Mrs. Ruth Kraft Cole, in memory of her late husband, a 1944 graduate of WUSM, and to recognize Dr. Cole’s deep appreciation for the education he received. Preference will be given to a student pursuing a career in academic medicine.
T. Griswold Comstock Scholarships. Established under the will of Marilla E. Comstock for students who would otherwise be unable to obtain a medical education.

Clark and Mildred Cox Scholarship. Established in 1998 with a donation from the Clark Cox Trust for scholarships for women.

Arpad Csapo, MD Memorial Scholarship Fund. Established in 1982 by Elise Csapo in memory of her husband, and by his friends and colleagues to provide assistance for students who have shown promise in fields relating to reproductive medicine.

William H. and Elizabeth Gray Danforth Scholars Program. Established in 1998 in honor of Chancellor Danforth’s retirement. The Scholar recipients must demonstrate outstanding academic promise and a record of community service that reflects Dr. Danforth’s values and actions.

Harriet Arey and John D. Davidson Scholarship. Established in 2000 by Harriet Arey and John D. Davidson for scholarships in the School of Medicine.

Davie Family Scholarship. Established by Joseph Davie, MD ’68, and his family to support scholarships for deserving medical students.

Paul and Ruth DeBruine Scholarship. Established in 1994 by Dr. and Mrs. Paul DeBruine in honor of his 35th medical school reunion to provide scholarship support to academically well-qualified and financially deserving medical students.

Distinguished Minority Student Scholarships. Up to seven full-tuition scholarships are awarded to students in each first-year class for academic excellence and personal achievement.

Dr. Charles Drabkin Scholarship Fund. Created in 1964 to provide financial assistance to medical students.

Hazel B. Duncan Scholarship. This fund was established in 2003 through the bequest of Hazel B. Duncan, NU26.

Eichner-Dominguez Family Scholarship. Established in 2005 by Lora Eichner, MD ’93, and her husband, Mr. Frank Dominguez, to make it easier for students to attend medical school.

Dr. and Mrs. Max Elliott Scholarship. Established in 2000 by Dr. Elliott, MD ’64, to assist medical students.

Robert B. Fickel, DDS Scholarship Fund. Received in 1990 and given in memory of Dr. Fickel’s uncle, W. H. Fickel, MD ’12. Awards are made to students after their first year of study.

Carl Fisch Scholarship Fund. Created in memory of Dr. Fisch by his daughter, Marguerite F. Blackmer. Provides support to students who demonstrate financial need.

Flance Medical Scientist Traineeship. Established in honor of faculty member and alumnus I. Jerome Flance, MD ’35 by the Harry Edison Foundation for support of a student in the Medical Scientist Training Program.

Ann Randolph Flipse, MD Scholarship Fund in the School of Medicine. Established in 2007 by Dr. Ann Randolph Flipse to support deserving medical students with a preference for students whose undergraduate degree was in English, history, philosophy, music, arts or a graduate degree in the humanities.

George F. Gill Scholarship Fund. Instituted in memory of a former clinical professor of pediatrics.

Helen H. Glaser Scholarship for Women Medical Students. Established in 1999 by Robert J. Glaser, MD, emeritus trustee and former faculty member, in memory of his wife, Helen H. Glaser, MD ’47.
Anne T. and Carl Goetsch Scholarship. This fund was established in 2003 through the bequest of Dr. Anne T. Goetsch, MD '41, HS44, and Dr. Carl Goetsch, HS43, to support medical students.

Norman M. and Eleanor H. Gross Scholarship Fund. Established in 2001 through a bequest from Mr. Gross for financially needy medical students.

Paul H. and Lila L. Guttman Student Aid Fund. Established in 1976 to provide financial assistance to qualified medical students.

Paul O. and Nancy P. Hagemann Scholarship Fund. Established by Dr. and Mrs. Hagemann to assist academically well-qualified students with documented financial need.

Donald R. and Mary N. Harkness Family Scholarship. Established in 2004 by Drs. Donald and Mary Harkness, both MD’58, in memory of their daughter, Laurel, MD’86.

Lee B. and Virginia G. Harrison Memorial Student Fund. Established in 1996 for scholarships for students who intend to pursue a career in internal medicine or family practice. Dr. Harrison was a 1927 graduate of the School of Medicine.

Harvielle-Bailey Scholarship. Established in 1970 under the will of Miss Isabel Bailey Harvielle as a memorial to Dr. Charles Poplin Harvielle and Dr. Steele Bailey, Jr., alumni of the School.

Ronald C. and Nell W. Hertel Endowed Scholarship for the School of Medicine. Established in 1995 and endowed in 2005 in memory of Mrs. Nell Hertel to provide financial aid to medical students.

Raymond F. Holden, Jr. and Gertrude K. Holden Scholarship. Established in 2009 by Dr. and Mrs. Holden to provide financial assistance to deserving students.

Dr. and Mrs. Charles Y. (Yueh-Gin Gung) Hu Scholarship Fund. Established in 2002 to provide a scholarship to a medical student of Chinese descent.

Dr. Grace Huse Memorial Fund. Provides scholarship awards for deserving Washington University medical students.

Justan Icks Scholarship. Established in 2008 by John Grayson, MD’57, to support students with high academic achievement.

Jackson Johnson Scholarship Fund. Provided through a bequest in 1930 from Jackson Johnson.

Dr. Lorraine A. Johnsrud Scholarship Fund. Established in 1983 as a memorial to Lorraine from her classmates, friends and family to assist deserving medical students in the funding of their medical expenses.

Henry J. Kaiser Family Foundation — Medical Century Club Scholarship Fund. Following the foundation’s generous gift in 1980 for medical student scholarships, the Medical Century Club accepted the challenge to raise new scholarship funds to match an additional gift from the foundation.

Jay and Ronnie Kaiser Endowed Scholarship. Established in 2004 by Dr. Jay, MD ’72, and Mrs. Ronnie Kaiser in appreciation of the financial aid Dr. Kaiser received as a student and to provide support for medical students.

George D. Kettelkamp Scholarship Fund. Established in 1969 by Mrs. Kettelkamp in memory of her husband, an alumnus of the School of Medicine.

M. Kenton King, MD Scholarship Fund. Created by the Executive Faculty to honor Dr. King at the time of his retirement in 1989 as Dean of the School of Medicine after having served in that position for 25 years.

Albert F. Koetter, MD Scholarship Fund. Established in 1978 by Mrs. Stella Koetter Darrow in memory
of her father, an alumnus and former faculty member of the School of Medicine. At least one full-tuition scholarship is awarded annually on the basis of academic achievement and financial need.

Anne L. Lehmann Scholarship Fund. Established in 1983 to grant continued scholarship support to medical students.

Life Insurance Medical Scholarship Fund. Created in 1972 from residual funds in the Life Insurance Medical Research Fund, scholarship support is now awarded to students in the MD degree program.

Maude L. Lindsey Memorial Scholarships. Created in 1976 to assist students in the School of Medicine.

John R. Lionberger, Jr. Medical Scholarship Endowment Fund. Created in 1982 by Dr. John R. Lionberger to be used to aid worthy students in acquiring their medical education.

E.A. Marquard Memorial Student Scholarship. Established in 1994 from the E. Alfred Marquard Memorial Student Loan Fund to provide scholarships for deserving and needy financially deserving medical students.

Alma Mavis Scholarship Fund. Created in 1988 under the will of Alma Mavis to assist students intending to practice family (general) medicine.

Eliza McMillan Scholarship Fund. Provides assistance to young women in any of several schools of the University to secure an education.

Medical Center Alumni Scholarship Fund. Awarded on the basis of academic achievement and financial need.

Edith and Martin Meltzer Scholarship in the School of Medicine. Established in 2004 by the Meltzer Family Foundation to honor Dr. Gerald Meltzer’s (MD’63), parents, who established the foundation.

Roy B. and Viola Miller Memorial Fund. Created in 1963 through the bequest of Roy B. Miller to provide scholarships for medical students and for post graduate students engaged in study and research in the medical sciences.

Warren Seward Miller and Dorothy Jackes Miller Endowed Scholarship Fund. Established in 2008 by Hildreth H. Spencer, PhD, in memory of her aunt and uncle, the Millers, with a preference for students pursuing the specialty of internal medicine.

The Warren S. and Dorothy J. Miller Scholarship Fund. Established in 1982 through the bequest of Dorothy J. Miller to provide scholarships for any students engaged in studies leading to the degree of Doctor of Medicine and especially for those students with an aptitude and desire for the general practice in internal medicine.

Joseph J. and Ernesta G. Mira Scholarship Fund. Established in 1988 by Dr. and Mrs. Mira to provide assistance to students from the Alton, Illinois area, including the counties of Madison, Jersey, Calhoun, Greene and Macoupin.

John and Ruth Musselman Medical Scholarship. Established in 1997 by the John & Ruth Musselman Medical Scholarship Trust to provide scholarships to deserving students.

Mr. and Mrs. Spencer T. Olin Fellowships for Women. Provides for annual financial support to female graduates of an undergraduate institution in the United States in any of several disciplines. Application deadline is February 1.

Spencer T. and Ann W. Olin Medical Fellowships. Created in an effort to help fill the continuing shortage of physicians who pursue careers in biomedical research, the awards are primarily for students in the Medical Scientist Training Program.

Dr. Roy W. Osterkamp Memorial Scholarship. The fund was established in 2003 by Mrs. Linda
Osterkamp Desloge and Mrs. Lila Osterkamp Haberberger, in memory of their father, Dr. Roy W. Osterkamp, DE36. Preference will be given to a student pursuing a career in a medical field related to dental medicine.

Dr. Sidney F. and Dora K. Pakula Scholarship Fund. Established in 2001 by Dr. and Mrs. Lawrence C. Pakula in memory of Dr. Pakula’s parents to support student scholarships.

William B. Parker Scholarship Fund. Established in 1976 by the School of Medicine in honor of William B. Parker’s 51 years of service to the School.

William A. Peck, MD Scholars in Medicine. Established in 2002 to recognize Dr. Peck’s 14 years of service to the Medical Center and Washington University community. University trustees, faculty, staff, alumni and friends honored Dr. Peck with gifts to this scholarship.

Phi Beta Pi — Charles Ruggieri Scholarship Fund. Established in 1985 by the Washington University Alumni of the Phi Beta Pi medical fraternity to honor Charles Ruggieri and to assist deserving medical students enrolled in Washington University School of Medicine with the funding of their undergraduate medical education.

Philpott Family Scholarship Fund. Established in 1995 by the Philpott family to provide support for medical students with financial need and excellent academic achievement.

The George M. (MD ’32) and George K. (MD ’64) Powell Medical Student Scholarship Fund. Established in 1984 by Mrs. George M. Powell in grateful appreciation for the medical education provided to her husband and son by Washington University School of Medicine, which so positively affected the lives of the Powell families.

Henry and Louise Reller Scholarship. To be given to medical students in the name of the parents of Louise Reller.

Lyman K. Richardson, MD Scholarship Fund. Established in 1993 by Mrs. Ellen Richardson to provide scholarship support to medical students.

Samuel Jennings Roberts Scholarship Fund. Created to provide scholarships for any students engaged in study leading to the degree of Doctor of Medicine.

Robert Allen Roblee Scholarship Fund. Established in 1948 through the gift of Mrs. Joseph H. Roblee for students in the School of Medicine.

Thomas W. and Elizabeth J. Rucker Scholarship Fund. Created in 1956 under the will of Eugenia I. Rucker, in memory of her mother and father.

J. Max Rukes Scholarship Fund. Established in 1987, the fund provides scholarship support to deserving medical school students who are doing research in endocrinology or the chemistry of metabolism.


Robert G. and Maxine W. Scheibe Scholarship. Established in 1999 by Robert G. Scheibe, a 1960 Washington University graduate who also received his medical degree here in 1964 and his wife, Maxine, who is a 1966 graduate of the Washington University School of Nursing.

William H. and Ella M. Schewe Fund. Established to provide financial assistance to worthy students in the medical school.

Dr. David Schlessinger Scholarship. Created in 2006 by Dr. Dan Longo in honor of his mentor, Dr. Schlessinger, who was a Professor of Molecular Microbiology, Professor of Genetics and Professor of Microbiology at Washington University School of Medicine.
Scholars in Medicine Program. Established in 1999 with gifts from individual donors to create scholarships to support medical students in the name of the donor.

School of Medicine Scholarship Fund. Created in 1970 to provide financial assistance for medical students.

Edna Schrick, MD Scholarship Fund. Established in 1992 by Dr. Schrick to provide scholarship support to female medical students.

Mordecai E. Schwartz Endowed Scholarship. Established in 2006 by Dr. Mary R. Schwartz, Dr. David Cech and Alexander I. Schwartz in memory of their father, who was committed to the training of future physicians.

Senior Merit Scholarship. Established by an anonymous alumnus of the School of Medicine, it provides a full-tuition scholarship to a senior student who has earned a distinguished record of academic and personal achievements during the first three years in the medical school.

Charlie W. Shaeffer, MD Scholarship Fund. Established in 2008 by Charlie Shaeffer (MD64) and his wife, Claire, for medical students, based on academic merit and/or financial need.

Dr. John B. Shapleigh Scholarship Fund. Established in 1926 with the bequest of Dr. John B. Shapleigh and supplemented by contributions from Mrs. Shapleigh and Miss Margaret Shapleigh.

Alexander Balridge Shaw Scholarship Fund. Created in 1958 through the bequest of Roy A. Shaw in memory of his father, Dr. Alexander Balridge Shaw.

William T. Shearer and Lynn Des Prez Diversity Scholarship. Created by William T. Shearer, MD '70, and his wife, Lynn Des Prez. Scholarships are awarded to medical students from underrepresented minorities with preference given to African-American students.

Dr. Edward Hiroshi Shigeoka Scholarship Fund. Created in 1988 by Dorothy F. Shigeoka in memory of her husband, Dr. Edward Hiroshi Shigeoka, to help disadvantaged and deserving students pursue their careers in medicine.

Ernie Simms Scholarship Fund. Founded in 1984 by friends, colleagues and former students of Professor Simms in recognition of his contributions to scholarly research and teaching in the Department of Microbiology and Immunology.

Stanley B. Smith, MD Scholarship Fund. Established in 2001 in memory of Samuel and Dora Smith, Dr. Smith's parents, to support student scholarships.

Southern Medical Association Student Scholarship. Awarded to a third-year student in recognition of outstanding academic achievements of a physician-in-training.

Beulah B. Strickling Scholarship Fund. Established in 1960 with a bequest from Mrs. Beulah B. Strickling.

Marleah Hammond Strominger Scholarship. Established in 1971 by the family and friends of Marleah Hammond Strominger. The recipient shall be a motivated student with need for financial assistance and shall come from a disadvantaged background.

Mary and Ernst Stuehrk Scholarship Fund. Established in 1987 to assist medical students with documented financial need.

Edwin H. and Virginia M. Terrill Scholarship Fund. Established in 1964 with the bequest of Dr. Edwin H. Terrill, an alumnus. It was Dr. Terrill’s hope that scholarship recipients would repay into the fund the amount of the award.

Betty L. Thompson Scholarship Endowment. Established in 2001 by Anthony Thompson, in honor of
his mother, Betty.

Mildred Trotter Scholarship Fund. For students with documented financial need, the fund was established in 1979 by Dr. and Mrs. Paul Guttman, and supplemented by former students of Dr. Trotter, as a tribute to her many years of teaching in the Department of Anatomy.

Hiromu Tsuchiya Scholarship Fund. Created to provide scholarships in the School of Medicine.

Tuholske-Jonas-Tuholske Medical Scholarship Fund. Established in 1974 by Rose T. Jonas in memory of her father, husband and brother. The recipient shall be a senior student preparing to enter the field of surgery, obstetrics and gynecology, or internal medicine.

Dr. Cornelia M. Van Prooyen Scholarship Fund. Established in 1987, the fund provides scholarship support and other financial assistance to female medical students.

George S. and Aspasia N. Vellios Scholarship Fund. Established by Frank Vellios, MD ‘46, in honor of his parents. Scholarships are awarded to deserving medical students with financial need.

Louis H. Waltke and Marie Waltke Memorial Fund for Medical Education. Created in 1984 to provide scholarships and fellowships at the School of Medicine.

Dr. George S. Wilson Scholarship Fund. Established in 1988 with the bequest of Dr. George S. Wilson to provide scholarship support to medical students.

George and Irene Wolf Medical Scholarship Fund. Established by the donors to benefit students in the School of Medicine.

Dr. Mitchell and Elaine Yanow Scholarship Fund. Established in 2002 by the children of Dr. and Mrs. Yanow to honor the memory of their parents and to provide support for deserving medical students.

George Zografakis Memorial Scholarship Fund. Created by the family and friends of Dr. Zografakis, a distinguished faculty member in the Department of Surgery.

Loan Funds

Auer-Rosenfeld Memorial Loan Fund. Established by Mrs. Elizabeth Auer to be used for educational loans to students.

Dr. John C. Boetto Loan Fund. Established in 1993 by a bequest from Mrs. Josephine D. Boetto as a memorial to her son to provide loans for deserving medical students.

Otto W. Brandhorst Loan Fund. Created in 1985 by the estate of Fern Crawford. This fund supports loans to students in the School of Medicine.

Dr. Harold A. Budke Loan. Established in 1998 to provide financial assistance to needy and deserving medical students.

Harold A. Budke, M.D., Loan Fund II. Established in 2001 with a bequest from the estate of Etta Elise Wedemeyer to provide loans to needy and deserving female students who will practice family medicine, internal medicine or obstetrics-gynecology medicine.

Class of 1947 Loan Fund. Established in 1996 by members of the class of 1947 in honor of their 50th reunion.

Robert Emmet Connor Family Loan Fund. Established in 2000 by Dr. Connor, MD ’79, to provide “zero interest” loans to deserving medical students with need of an unforeseen or emergency nature.

Jess K. Goldberg Memorial Loan Fund by Ophelia H. Kooden and Violet G. Sachs. Created in 1970 to
provide zero-interest loans for medical students in memory of the donors’ brother who passed away while attending medical school.

Health Professions Student Loan Fund. Established by federal legislation for medical students with a demonstrated financial need. Loans are available for long terms at favorable rates.

William Randolph Hearst Medical Scholars Loan Fund. In 1989, the Hearst Foundation provided funding for a new and innovative loan program which provides interest-free loans to students in their last year of study.

Ursula Hecker Loan Fund. Established in 1967 by a bequest from Ursula Lee Hecker for the use and benefit of worthy, deserving and needy medical students.

Kathy E. Holden Loan Fund. Established by Mrs. Roland Holden and the Roland and Ruby Holden Foundation in honor of her granddaughter, Kathy E. Holden, and in recognition of W. Edwin Dodson, M.D., to support loans to deserving medical students.

Horncrest Foundation — School of Medicine Loan Fund. In 1982, the trustees of the Horncrest Foundation approved a proposal on behalf of the School of Medicine to match up to a generous annual cap for five year loan funds solicited by the School. The campaign was extremely successful and now provides loan funds to students with documented financial need.

W. K. Kellogg Foundation Loan Fund. Provides financial assistance to medical students in need of such aid.

Gustel and Edith H. Kiewitt Scholarship Loan Fund. Provides loan funds for medical students.

Medical Scholars Loan Program. Established in 1985 by members of the William Greenleaf Eliot Society, this fund provides an interest-free source of long-term student loans. Annual contributions from alumni and friends support this perpetual and growing resource upon which current and future medical students will draw.

George W. Merck Memorial Loan Fund. Established in 1959 by The Merck Company Foundation, the original purpose of the loan was modified in 1983 to provide loans to graduating students which would help bridge the transition from student to resident physician.


Goldie H. Penn and Lloyd L. Penn, M.D. Student Loan Fund. Dr. Penn, MD ’33 established the fund in 1977 to aid well-qualified and deserving students.

Perkins Student Loan. A federal program (formerly National Direct Student Loan) to provide loans to students with financial need. Permits repayment over an extended period at a favorable interest rate.

Dr. William C. and Elva Pratt Loan Fund. Established in 1982 for medical students with demonstrated financial need.

G. H. Reinhardt Memorial Scholarship Loan Fund. Established in 1947 through the bequest of G. H. Reinhardt.

Aline Rixman Loan Fund. Created in 1940 by William Rixman in memory of his wife, the fund is used to alleviate unexpected financial emergencies of medical students.

James L. and Dorothy Rouner Loan Fund. Established in 1997 by Dr. James and Mrs. Dorothy Rouner to be used for medical students pursuing a career in primary care—general internal medicine.

Caroline O. Schlesinger Loan Fund. Established in 1969 to provide financial support for medical students.
School of Medicine Student Loan Fund. Established to make loans to students with documented financial needs.

Washington University Medical Center Alumni Association Loan Fund. Provides emergency loans to medical students.

The Alan A. and Edith L. Wolff Loan Fund. Established in 1993 by Mrs. Edith L. Wolff to provide loans to students with demonstrated financial need who are in their final year of study for the Doctor of Medicine degree.

Registration, Payment of Financial Obligations, Withdrawal and Refund Policy

For the convenience of our students, the Washington University billing system provides a central financial account against which most student expenses incurred at the University will be posted, including but not limited to tuition, dormitory charges, parking, library fines, etc. This policy, when referring to tuition and other charges, includes any and all charges posted to this account.

All payments of tuition and other University charges are due and payable on the dates specified in the published calendars of the programs in the School of Medicine. Failure of a student to register when required and pay tuition and other charges incurred on or before the date specified in the published calendar will result in a late fee of $50 to be added to the amount due. The late fee will be imposed seven (7) days after the due date if full payment has not been received. Tuition and other charges are usually payable twice a year, at registration time and again at the middle of the academic year as listed on the schedule on the academic calendar.

Any payment due from the student and not paid by the specified date will accrue interest at the usury rate in effect on the first business day of the month in which the payment is due. This fee will be imposed on any accounts not paid in full within 30 days of the due date. Any amount not paid when due plus accrued interest thereon must be paid in full within three months of the due date to avoid suspension from classes.

If a student fails to settle such unpaid amounts within three months of the original due date, the School will not release the student's academic record, grade reports or transcript pending settlement of the unpaid account. A student who has not satisfied all of his/her delinquent financial obligations to Washington University (tuition, Olin Residence Hall rental, parking, etc.) one month before the end of the academic year will not be allowed to progress to the next academic year, or be issued a diploma.

Students who rely on financial aid funds to meet their obligations should submit their applications for processing according to application deadlines published by the Office of Financial Aid. Deadlines allow for receipt of financial aid funds if applications are filed by the deadline. The Office of Student Financial Aid will assist students with loan applications and financial planning upon request.

A student who withdraws or takes a leave of absence from the School will receive a pro rata refund of tuition and appropriate fees. The refund will be based on the ratio of the class days enrolled (from the first day of classes to the termination date) to the total number of class days in the term for which tuition and fees were paid. It is understood that the date on which a student formally notifies the Registrar's Office in writing of the decision to withdraw or take a leave of absence from the School of Medicine shall be regarded as the termination date, with no retroactive clause to be accepted. A prospective date will be accepted, however. If tuition and fees were paid entirely or in part by financial aid from the School, the refund will be applied first to the total repayment of the accounts from which financial aid was drawn, with any remaining refund balance given to the student.
received in excess of the costs of tuition and fees must be refunded by the student to the School on the same pro rata basis as calculated for the tuition refund outlined above. Examples of the application of the refund policy may be requested from the Registrar’s Office.

Assessing Academic Achievement and Professionalism

Committee on Academic and Professional Evaluation of Students (CAPES)

The Academic and Professional Evaluation of Students

Grading System

Individual Study Program

Tutorial Assistance Program

Indications for Review of Academic Performance

Procedures Concerning Review of Academic Performance

Indications for Review of Professional Integrity

Procedures Concerning Review of Professional Integrity

Appeals Process for the CAPES Decisions

Committee on Academic and Professional Evaluation of Students (CAPES)

Responsibility of the Committee

Overall academic and professional evaluation of medical students at the Washington University School of Medicine will be made by the Committee on the Academic and Professional Evaluation of Students (CAPES). The deliberations of the CAPES are generally positive in approach and are committed to the ultimate aim of assisting students to successfully complete the courses of study required by the School. The principle that careful selection of students will minimize attrition from the School is strongly endorsed by the CAPES. The CAPES has several important roles, including:

A. Approving promotion of students to a subsequent year of study;
B. Recommending to the Executive Faculty those students who have successfully completed all the prescribed requirements of the School and are qualified to receive the Doctor of Medicine degree;
C. Requiring entry of a student into an individualized program of study (ISP); and
D. Deciding upon matters of disciplinary action including instances of unprofessional behavior brought to the CAPES.

It is also the ultimate responsibility of the CAPES to decide whether each student meets the academic and ethical standards necessary to enter the profession of medicine.
The rules governing operation of the CAPES apply to students in the following categories:

A. Students who are engaged in the preclinical and clinical education requirements for the M.D. degree;

B. Students in dual degree programs including the M.A./M.D. and the M.D./Ph.D. (MSTP) program taking the pre-clinical or clinical portion of their M.D. education.

C. Students in all years of the Five-Year M.D. program.

**Membership of the CAPES**

A. Appointed and ex officio membership — There will be 12 voting faculty members of the CAPES, and members will be appointed for a four-year term by the Dean of the School of Medicine following nomination of suitable individuals by the department heads and Associate Deans. Initial appointments will be staggered for periods of one-, two-, three- or four-year terms.

A faculty member may be reappointed to serve on the CAPES. Membership will include both clinical and preclinical departments. In addition, the CAPES membership will include, in ex officio capacity, the Registrar (non-voting) and the Associate Dean for Student Affairs (non-voting). The Associate Deans for Medical Student Education, Admissions, Diversity Programs and the Director of the Student Health Service may attend the CAPES meetings as non-voting observers.

B. Guests — A course master who is not a member of the CAPES but who has submitted a Fail/Incomplete grade for a student which is to be discussed at a meeting of the CAPES will be present at the meeting to provide information concerning the student’s performance. Alternatively, a course master may send a designated representative or may submit additional information in writing. In the event that a course master or designated representative is not present or sufficient information has not been forwarded, final action for that student will be deferred until adequate information concerning the student’s performance is available. Similarly, when the committee is addressing issues of professionalism, the individual filing the professionalism concern form will be present for the meeting or in some instances may instead be allowed to submit information in writing.

C. Chair — A faculty member will be appointed by the Dean from within the CAPES committee to serve as chair. The term of the chair will be four years.

**Meeting Frequency**

The CAPES meetings must occur in a timely manner after final examinations or re-examinations (i.e., as soon as practical after grades are submitted to the Registrar). Generally grades will be submitted to the Registrar within 10 days of the completion of an examination or within four days of a re-examination. A meeting of the Committee also may be convened at any time such that timely review of student performance and action thereupon is provided.

**Quorum for the CAPES Meetings**

Seven voting members must be present to consider academic or disciplinary actions.

**Procedures for Making Changes to this Document**

Major revisions in this document will be approved by the Academic Affairs Committee.
The Academic and Professional Evaluation of Students

A. In order to continue their studies at the Washington University School of Medicine, students must demonstrate the ability to synthesize and apply knowledge and the capability of becoming a safe and effective physician. In addition, they must demonstrate the principles of professionalism including sound judgment, honesty and integrity, responsibility, a sensitivity and compassion for individual needs, and compliance with applicable laws, policies and regulations. Serious or repeated breaches of these principles will be referred to the CAPES for review. See the section called Guiding Principles of Professionalism.

B. It is the responsibility of students who feel that personal concerns, health problems, or any other factors may be adversely affecting their academic performance to bring such matters to the attention of the Director of the Student Health Service or the Associate Dean for Student Affairs for possible accommodations.

C. Students are required to take all examinations at the specified time. A student may be excused from this rule for extenuating circumstances at the discretion of the Associate Dean for Student Affairs, who will inform the course master. Extenuating circumstances are defined as sudden personal illness, extreme family circumstance, or significant professional obligation. Doctor appointments of a routine nature or vacation time are not considered to be extenuating circumstances for which students can be exempted from the regularly scheduled exam date. In the event of a student’s inability to attend a scheduled examination due to sudden illness, extreme family circumstance or significant professional obligation, the student is required to inform the Associate Dean for Student Affairs prior to the examination. If the issue is sudden illness, the student must also be evaluated by the Student Health Service. In the event that the student cannot reach the Associate Dean for Student Affairs, the student should contact the relevant course master.

At his or her discretion, the Associate Dean for Medical Student Education may occasionally approve an exam date change for the entire class if the need arises, but this is an exception, as the complete schedule is reviewed prior to the start of each academic year by course masters and student representatives.

D. At the conclusion of each academic year students receive a grade report which indicates the grade achieved in each course. When all the official grades have been received, the official transcript, in addition to listing courses and grades achieved, lists the grade distribution in each course (with the exception of selective and elective courses).

E. At the annual end-of-year CAPES meeting, the Committee will vote to recommend promotion of students who have successfully completed all the requirements of the current academic year to the studies of the subsequent year.

F. Prior to graduation, students are required to complete and pass all required coursework and examinations. Occasionally students are permitted to complete equivalent coursework at other institutions with the permission of the responsible department and written notification to the Registrar.

Grading System

A. First Year

Courses in the first-year curriculum are evaluated on a Pass (P) or Fail (F) basis. For purposes of the official grade records of the School of Medicine, grades used for the first year are:
P = Pass, indicating satisfactory performance
F* = Fail
E = Temporary grade, makeup of failed exam pending
I** = Incomplete, temporary grade pending completion of course requirements, replaced with an F if not removed within one year
L = Successful audit
NG = Course credit earned, students not graded
W = Withdrawal from a course
Z = Unsuccessful audit

Failure of any examination which comprises a significant portion of the final grade (typically 20% or more) must be reported by the course master to the Associate Dean for Student Affairs. In the event of a failure of a single exam within the course, the course master may allow one attempt at remediation of this examination. The scheduling of a remedial examination will be agreed upon by the course master and student but in general should not extend beyond 30 days after the end of the course or academic year, whichever occurs first. Days of recess for Winter Break or Spring Break will not be counted in the 30 days. A grade of E will be submitted by the course master if the remedial examination is not accomplished within the course dates. This grade will stand on the academic record until it is replaced with a valid final grade of Pass or Fail. Grades of E that are not resolved within 30 days will be replaced with a grade of Fail (F). If the student successfully remediates the examination, and has otherwise passed the course, a Pass (P) will be recorded by the Registrar. A student may remediate only one examination in any course.

*Any grade of F remains on the student’s academic record. When the course is repeated or remediated the new grade will appear as a separate entry in addition to the failing grade.

**Incomplete (I) indicates that, because of a delay excused by the course master, the student has not completed the requirements to pass a course.

B. Second and Subsequent Years

For purposes of the official grade records of the School of Medicine, the following grades are used for subsequent years:

H = Honors, reflecting a truly outstanding performance
HP = High Pass, awarded for excellent/very good work
P = Pass, indicating satisfactory performance
F* = Fail
E** = Temporary grade, makeup of failed exam pending
I*** = Incomplete, temporary grade pending completion of course requirements, replaced with an F if not removed within one year
Cr#/NCr# = Credit/No Credit for some second-year courses
L = Successful audit
NG = Course credit earned, students not graded
W = Withdrawal from a course
Z = Unsuccessful audit

*Any grade of F remains on the student’s academic record. When the course is repeated or remediated the new grade will appear as a separate entry in addition to the failing grade.

A failing grade for clinical clerkships will be recorded on the official
educational record when a student fails the subject examination (defined as scoring at less than the 10th percentile as reported by the NBME) for the second time. A failing grade will be recorded when a student fails the clinical portion of the clinical clerkship or elective. In both events, the failing grade remains on the student’s official educational record. When the course is remediated the new grade will also appear on the student’s official educational record.

**In clinical clerkships which have a subject examination, students must score at or above the 10th percentile of the national pool of students taking the examination to pass the clerkship. If a student fails the subject examination once, the grade of E will be recorded. Upon successfully retaking the subject examination the new grade will replace the grade of E on the permanent academic record. If the shelf examination is failed a second time, the grade of F is recorded on the permanent academic record.

***Incomplete (I) indicates that, because of a delay excused by the course master, the student has not completed the requirements to pass a course.

C. Grade Reporting

Final grades will be submitted to the Registrar by course masters within ten (10) working days of the final examination or final class meeting for the first two years. For third and fourth years, grades are due within ten (10) working days of the receipt of standardized examination scores or the last day of the rotation if no examination is given. A web-based University system, WEBSTAC, provides timely access to grades for the first two years. Grades and evaluations of student clinical performance are submitted on a standardized form and are available for review in the Office of Student Affairs throughout the academic year. Final grades for the clinical clerkships and electives are recorded in the University student information system at the end of the academic year and are subsequently available on WEBSTAC, which is updated quarterly. A paper copy of final grades is available upon request from the Registrar’s Office.

D. Grade Point Average, Class Ranking and Grade Distributions

The School of Medicine does not calculate grade point averages. Hours of credit appearing on the transcript reflect clock hours scheduled for the course or clinical rotation. For the purpose of residency applications only, students are placed in the upper, middle or lower third of the class according to a formula which considers weighting of courses and each academic year. This ranking is not recorded on the permanent academic record and therefore does not appear on transcripts. It may appear in the student’s dean’s letter. At the conclusion of the academic year, when all the official grades have been received, the official transcript, in addition to listing courses and grades achieved, gives the grade distribution in each course with the exception of elective and selective courses.

E. Grade Appeals

A student who wishes to appeal his/her grade with the course master should file his/her request for review by completing the grade appeal form which includes the basis for the appeal. This should be filed within 30 days of the course completion. If reasons beyond the student’s control delay the resolution of the appeal past the 30-day deadline, the Registrar must be notified so that the final transcripts, grade distributions and class rankings for match can be held pending resolution of the matter. If this notice is not filed with the Registrar prior to the deadline, the new grade cannot be accepted. Students participating in the residency match should also notify the office of career counseling that a grade appeal is in process. The resolution of the appeal will be noted on the grade appeal form and forwarded to the Registrar and Associate Dean for Student Affairs. A copy of the grade appeal form is available in the Registrar’s Office and is also included in this document.

NO GRADE CHANGES ARE PERMITTED FOR THE ACADEMIC YEAR AFTER JULY 15.

Grade Appeal Form

Please see Appendix A in the "Rules Governing Review of Student Performance" booklet.
**Individual Study Program**

The educational program is designed to assist the specialized needs of all medical students in an individualized and personalized manner. Tutorial assistance is available to any student at any time as detailed below. Occasionally students who have difficulty in handling the normal academic course load will enter an Individual Study Program (ISP), requiring five years to complete rather than four years. The following rules govern students engaged in an ISP:

A. The intent of an ISP is to optimize the prospect that the student will successfully complete the curriculum.

B. Entry into an ISP may occur in one of three ways: 1) a student may request an ISP, or after careful consideration of the student’s academic performance at intervals throughout the curriculum, the CAPES may either 2) recommend or 3) require entry into an ISP.

C. The specific program of any ISP (i.e. the content and sequences of courses) will be determined by the student and the Associate Dean for Student Affairs with input from relevant course masters and the CAPES. The specific recommendations of the CAPES will generally be adopted. The plan for execution of an ISP, once established, will be recorded in the student’s file in the Registrar’s office and a copy provided to the student.

D. Unless extenuating circumstances exist, ISP students are required to take the examinations for a particular course in their usual temporal relationship to the coursework. Requests for consideration of unusual circumstances should be recorded in the student’s file in the Registrar’s office.

E. In the event that a single Fail or Incomplete grade is recorded for a student after entry into an ISP, the CAPES will again review the student’s record. The consequences may include remediation, repeat of the course or dismissal.

F. At the completion of the time for their ISP, ISP students who have not successfully completed and received a grade of Pass or above in the usual courses of the first- and second-year curricula by the start of the second six-week period in the year of the clinical clerkship will be dismissed from enrollment in the School.

**Tutorial Assistance Program**

Students experiencing difficulty in any course may request tutorial assistance. Such requests should initially be directed towards the course masters and thereafter to the Associate Dean for Student Affairs. Students who are repeating courses will be offered the opportunity for tutorial assistance. The CAPES may also require it. There is no charge to the student for tutorial assistance.

**Indications for Review of Academic Performance**

**General**

“Indications for Academic Review” refers to guidelines used at the School in the event that a student
fails a course or fails to complete a course in the requisite time.

A. In the event of any initial failure of a course offered at the School, the student will meet with the Associate Dean for Student Affairs to formulate a plan to remediate such failure.

B. If the Registrar has recorded a Fail or Incomplete grade in two or more courses in a single year or cumulatively three courses between years, the student’s academic performance will be referred to the CAPES for review and determination of a course of action.

C. Refer to The Individual Study Program (ISP) section for guidelines pertaining to students engaged in an ISP.

D. When the performance of a student is referred to the CAPES for potential academic review, the following rules will apply:

1. No student may take more than three years to complete the coursework required for the first two years. The end of such a “three year” period, is defined as 36 months from the date of matriculation to the School. Time periods included in a “Leave of Absence” are not counted in these 36 months.

2. In the absence of extenuating circumstances, no student may take more than two academic years to complete the coursework required in the first year curriculum.

3. The maximum number of attempts to pass any individual course during enrollment in the School, including time in an ISP, will be three.

E. Throughout the enrollment of a student it is within the jurisdiction of the CAPES to terminate the enrollment of a student who has demonstrated serious academic failure or breaches of professionalism.

First Year

A. Failure of any examination which comprises a significant portion of the final grade (typically 20% or more) must be reported by the course master to the Associate Dean for Student Affairs. In the event of a failure of a single exam within the course, the course master may allow one attempt at remediation of this examination. A student may remediate only one examination in any course.

B. If a student has received a Fail/E grade in a single first-year course, the Associate Dean for Student Affairs will meet with the student to formulate a plan from the following options:

1. Take a re-examination in the course at a time prescribed by the course master. The scheduling of a remedial examination will be agreed upon by the course master and student but in general should not extend beyond 30 days after the end of the course or academic year, whichever occurs first. Days of recess for Winter Break or Spring Break will not be counted in the 30 days. A grade of E will be submitted by the course master if the remedial examination is not accomplished within the course dates. This grade will stand on the academic record until it is replaced with a valid final grade of Pass or Fail. Grades of E that are not resolved within 30 days will be replaced with a grade of Fail (F). If the student successfully remediates the examination, and has otherwise passed the course, a Pass (P) will be recorded by the Registrar. A student may remediate only one examination in any course.

2. Enroll in and successfully complete, at the level designated by the course master, a summer course at a different institution, such course being completed and passed by the beginning of classes for the second year.

3. A student who, for a single course, fails the re-examination taken to remediate a failed course or fails to successfully complete an approved summer course will be referred for the CAPES to review and propose a recommended course of action. The CAPES may require such a student to enter an ISP or may terminate enrollment. Alternatively, the CAPES may permit a re-examination. If this re-examination is failed enrollment will be terminated.

C. A student for whom the Registrar has recorded a Fail/Incomplete grade in two or more courses during the first year will be referred to the CAPES for determination of a course of action. The Committee may decide to require that the student enter an ISP, or to permit the student to take re-examinations, if a re-examination has not already been taken, in the courses for which Failed/Incomplete grades have been recorded. Such re-examinations will generally occur during the
last week of the inter-academic year break. If such a re-examination is failed, the student may be
required to enter an ISP or be dismissed from enrollment in the School.

D. The Associate Dean for Student Affairs may also request that the CAPES review performance of a
student who has demonstrated poor academic performance, either by demonstrating poor academic
performance in two or more courses at interval evaluations conducted throughout the course, or by
failing two or more examinations within one course. In such instances the CAPES may recommend a
course of action.

If Fail/Incomplete grades have been recorded for two or more courses or a single
re-examination, the CAPES may require that a student enter an Individual Study Program or that
enrollment in the School be terminated. If a student has failed three attempts to pass a course,
enrollment will be terminated.

E. All first-year courses must be completed before the start of the next academic year.

**Second Year**

A. The Associate Dean for Student Affairs will meet with students

in the following categories regarding taking a re-examination, according to the schedule listed under
the next section (B):

1. a student for whom a Fail or Incomplete grade has been recorded in a single interval examination in
   a year-long course, OR

2. a student for whom a Fail or Incomplete grade has been recorded in one or two block-long courses.

B. Re-examinations in complete courses in Pathology or Clinical Medicine will generally be offered
during the last week of the inter-academic year break, prior to entry into the third year.
Re-examinations for students who have failed one or two block-long courses will be generally offered
at a time determined by the course master and the Associate Dean for Student Affairs. All
re-examinations must be offered to students and completed by them prior to the start of the next
academic year.

Students who fail a re-examination of a single course will be referred to the CAPES to
determine a course of action. The CAPES may decide that the student must enter an ISP.
Alternatively, a re-examination may be offered. If the re-examination is failed, enrollment will be
terminated.

C. Students in the second year for whom the Registrar has recorded Fail/Incomplete grades under the
following categories will be referred to the CAPES for review and resolution of a recommended course
of action:

1. one year-long course OR

2. three or more block-long courses OR

3. an interval examination in one year-long course and two block-long courses OR

4. an interval examination in two year long courses OR

5. students for whom the Registrar has recorded a Fail/Incomplete grade in any re-examination.

D. At review by the CAPES for students referred to above, the Committee may decide to permit the
student to take re-examinations, if a re-examination has not already been taken, in the courses for
which Failed/Incomplete grades have been recorded. Such re-examinations will generally occur during
the inter-academic year break. The CAPES may allow the student to defer beginning the clinical
rotations so that re-examinations may be taken up to 6 weeks after the beginning of the usual cycle of
clinical clerkships. Such extra time, used for study and preparation, will ordinarily mean that the
student will not have the usual unscheduled time in the elective year. In the event that a
Fail/Incomplete grade is recorded at a re-examination, the CAPES may require that a student enter an
Individualized Study Program or that enrollment in the School of Medicine be terminated.

In the event that the CAPES decides not simply to permit re-examination, the CAPES may
require that the student enter an Individualized Study Program as detailed below, or that enrollment
in the School be terminated.
E. No student will be permitted to begin clinical rotations of the third year until all first- and second-year courses have been successfully completed.

**Cumulative Academic Review/Academic Warning**

Prior to promotion to the clinical year, the CAPES will review the cumulative academic record of each student brought forth by the Associate Dean for Student Affairs to determine whether the student’s academic performance justifies advancement to the clinical phase of the medical education without warning. Typically, three (3) remediated examinations and/or failing grades during the first two years of the curriculum would raise concerns about the student’s fund of knowledge and readiness to participate in clinical care of patients. Students with overall records indicating such serious academic failure may be dismissed, may be required to repeat specific preclinical course work or may be advanced to the third year with academic warning.

Upon written notification of advancement with academic warning into the clerkship year, the student must meet with the Associate Dean for Student Affairs

A. to review the planned clerkship schedule in order to consider schedule changes to facilitate successful clinical experiences;

B. to pursue available resources for academic intervention; and

C. to address any additional problems that may arise. It is recommended that these students seek tutorial assistance through each clerkship course master.

A third-year student who has received an academic warning after the first two years and then fails any component of a clinical clerkship may be dismissed from the school.

**Third and Subsequent Years**

A. Regarding performances beyond the second year, the Associate Dean for Student Affairs will meet with a student for whom a single Fail/Incomplete/E grade has been entered regarding the requirements stipulated by the relevant course master to remediate the grade entered. Options will generally include a re-examination or repeating all or a portion of the course. If a Fail/Incomplete grade has been entered following the prescribed remediation, the student will be referred to the CAPES to determine a course of action. When such a student is referred to the CAPES, the CAPES may permit a re-examination or repeating all or a portion of the course. If the course is failed a third time, enrollment in the School of Medicine will be terminated.

B. A student beyond the second year for whom the Registrar has recorded two or more failing grades in the clinical rotations or electives will be referred to the CAPES for review and proposal of a course of action.

C. Any student who fails to achieve a passing grade (defined as greater than or equal to 10th percentile as reported by the NBME) on any two or more subject (shelf) examinations conducted as part of the evaluation of clerkships will be referred to the CAPES for review and proposal for a course of action.

D. The Associate Dean for Student Affairs may also request that the CAPES review performance of a student who has demonstrated poor academic performance in two or more courses at interval evaluations conducted throughout the course when such performance has been reported to the Associate Dean. In such instances, the CAPES may recommend a course of action.

E. For students referred to the CAPES, the Committee may endorse or amend the remediation recommendations of course masters from whom Fail/Incomplete grades have been entered. In the event that a student fails such a course of remediation, as defined by the course master and approved by the CAPES, the CAPES may require that the rotation be repeated or that enrollment of a student in the School be terminated. Students will generally be permitted three attempts to achieve a passing grade in any clerkship course. If three failing examination grades or final clerkship grades have been submitted for a course, enrollment will be terminated.

F. A student who advances to the clinical years with academic warning and who fails any component of a clerkship will be
Actions for Academic Review shall be referred to the CAPES for consideration by the Associate Dean for Student Affairs or Registrar’s office.

A. The Associate Dean for Student Affairs will convene a meeting of the CAPES. He/she shall notify the student in writing of the course(s) for which Academic Review is scheduled and the date and time at which the CAPES will address the matter.

B. The Associate Dean for Student Affairs, the Registrar, the course master(s) or their designated representatives, shall present the matter to the CAPES in a closed and confidential CAPES meeting.

C. For students referred for course failure, the CAPES meetings will have, in addition to the grade report forms for the course for which the student is referred to the CAPES, a complete record of the student’s academic performance and the student file.

D. Seven voting members must be present to consider items of academic disciplinary action (i.e., dismissal from enrollment or required entry into Individual Study Program).

E. All students to be considered at a CAPES meeting will be asked to be available to appear before the Committee to provide additional information relevant to the concern. If the student fails to be available to appear at the meeting, the Committee may postpone the meeting or may conduct the meeting and impose sanctions without the student present. Failure of a student to appear or provide information requested by the CAPES may result in the committee’s filing a professionalism concern form. Meetings may be rescheduled at the discretion of the CAPES Chair.

F. The student shall be permitted, upon request in advance of the CAPES meeting, to appear before the CAPES on his or her own behalf. At the student’s request, he or she may be accompanied by a member of the faculty or staff of the School of Medicine for guidance and support. Alternatively, again following request, the student may be accompanied by a fellow student enrolled in the School of Medicine.

G. A record of the CAPES meeting shall be preserved for purposes of review by the School of Medicine’s Appeals Committee, as necessary.

H. Action taken by the CAPES for poor academic performance may include dismissal. Sanctions short of dismissal from the school include but are not limited to warning, probation, defined penalty, and suspension. Additional consequences may include a program of remediation or additional oversight. The CAPES may also rule that the Dean’s letter/MSPE should include a citation regarding the matter. The CAPES decision shall be by simple majority vote unless the vote is for dismissal, in which case, a three-fourths majority will be required. The decision of the CAPES shall be communicated, in writing, to the student by the Registrar’s office.

I. After the meeting, the Associate Dean for Student Affairs will inform the student verbally of the decision of the CAPES. The Registrar will inform the student in writing of the result within ten working days.
Matters involving possible breaches of professional integrity shall be brought to the attention of the Associate Dean for Student Affairs. The individual(s) raising the questions of possible misconduct shall present them in writing to the Associate Dean for Student Affairs by completing a Professionalism Concern Form providing other detailed written information as necessary. Individuals submitting such forms are reminded of the need for confidentiality regarding all matters of misconduct.

Behaviors inappropriate to the medical profession shall include, but are not limited to breaches of personal confidence and trust, including cheating or unauthorized use of materials during examinations; abuse, misrepresentations or other seriously improper conduct in relation to patients or colleagues including breaches of confidentiality; other misconduct; illegality; substance abuse; failure of judgment including that related to non-compliance in the treatment of any personal medical condition; and misrepresentation or failure in personal actions or in meeting obligations, so as to raise serious unresolved doubts about the integrity of the student to enter the practice of medicine. See Guiding Principles of Professionalism below.

**Procedures Concerning Review of Professional Integrity**

At the discretion of the Associate Dean for Student Affairs, in cases of serious or repeated breaches of professionalism raising concern about a pattern of behavior, the Associate Dean for Student Affairs will convene a meeting with the Associate Dean for Admissions or the Associate Dean for Medical Student Education to review the complaint and to decide whether further action is necessary.

If further inquiry is deemed necessary, the Associate Dean for Student Affairs and either the Associate Dean for Medical Student Education or Admissions will discuss the complaint with the student. If the two Associate Deans deem that further action is warranted, the Associate Dean for Student Affairs will follow the procedures below:

A. The Associate Dean for Student Affairs will convene a meeting of the CAPES. If the person bringing the complaint is a member of CAPES, he or she will not vote but may participate in the discussion. If the person bringing the complaint is not a member of CAPES, he or she will be asked to present the complaint and will then be excused. The CAPES chairperson will be responsible for overseeing the procedure of the meeting. The Registrar will attend the meeting to record the minutes. The CAPES shall, whenever possible, convene within one to two weeks after the initial meeting between the student and the Associate Dean for Student Affairs.

B. Seven voting members must be present to consider items of academic disciplinary action (i.e., dismissal from enrollment or required entry into Individual Study Program).

C. The purpose of the CAPES meeting is to provide fair and prompt review of the inquiry. The Committee is not positioned in an adversarial role against the student, but simply serves to review the evidence as presented and determine its decision regarding disciplinary action.

D. Prior to the meeting, the Associate Dean for Student Affairs will forward information concerning the matter to the Committee. In addition, the Associate Dean for Student Affairs will inform the student in writing regarding the time, date and place of the meeting. A copy of the complaint will be provided to the student. Such notification shall also state that the proceedings are confidential, and that the student may bring a faculty member, staff member or fellow student of the School of Medicine for guidance and support.

Any student to be considered at a CAPES meeting will be asked to be available to appear before the Committee to provide additional information relevant to the concern. If the student fails to be available for the meeting, the Committee may postpone the meeting or may conduct the meeting and impose sanctions without the student present. Failure of a student to appear or provide information
requested by the CAPES may result in the committee's drawing adverse conclusions. Meetings may be rescheduled at the discretion of the CAPES Chair.

E. The CAPES will consider evidence which tends to prove or disprove the alleged conduct. If the CAPES finds that the student engaged in misconduct, it may consider additional evidence of prior conduct, evidence as to the charged student's character, the student's academic record, or any other evidence which could assist the CAPES in determining an appropriate sanction. The Chair of the CAPES will rule on whether or not evidence or testimony will be considered. The CAPES has neither the advantages nor limitations inherent in a court of law. During the meeting the student will have access to the evidence presented and may present evidence and witnesses on his or her own behalf.

F. The decision as to whether the student committed the alleged act will be made solely on the basis of evidence and testimony presented at the meeting. Innocence of the student will be presumed. A CAPES member must find in favor of the student unless the member is persuaded that it is more likely than not that the student engaged in the misconduct alleged.

G. If the person who has submitted the Professionalism Concern Form which is being discussed by the CAPES is a member of the CAPES, that member will provide information about the professionalism issue to the CAPES, but will then recuse him/herself from voting.

H. Action taken by the CAPES for breaches of professional integrity may include dismissal. Sanctions short of dismissal from the school include but are not limited to warning, probation, defined penalty, suspension, fine and restitution. Additional consequences may include a program of remediation or additional oversight. The CAPES may also rule that the Dean's letter/MSPE should include a citation regarding the matter. A simple majority will prevail, except when the motion is to dismiss from the school where three fourths majority will be required.

I. After the meeting and decision of the CAPES, the Associate Dean for Student Affairs will inform the student verbally of the result. The Registrar will inform the student in writing of the result within ten (10) working days.

J. The record of such proceedings will be held confidentially with access restricted to Committee members, the student involved, and members of the Administration involved in the proceedings.

K. All witnesses who appear before the Committee are assured that there will be no personal repercussions from their testimony.

L. Unless it is determined by the Associate Dean for Student Affairs that extraordinary circumstances exist, the student will be permitted to continue in the usual academic activities during the CAPES proceedings. However, if there is a reasonable basis for believing that the continued presence of the student on campus or in clinical rotations poses a substantial threat to the student, to patients or to the rights of others to engage in their normal University functions and activities, the procedure outlined under section B of Leave of Absence applies.

M. Should a student be referred to the CAPES for an issue(s) involving both academic performance and professionalism concerns, the procedures for Professionalism Concerns will be followed.

BACK TO TOP

**Appeals Process for the CAPES Decisions**

The School of Medicine has the right and responsibility to assure that each student, during the time of enrollment, demonstrates levels of academic achievement and ethical stature appropriate to the practice of medicine. The School must also ensure provision of fairness in discharging those rights and responsibilities.

Within twenty (20) days of the date on which an Academic Disciplinary Action decision is rendered by
the CAPES, the student may request, in writing to the Registrar, that the School of Medicine’s Appeals Committee review the record of the CAPES decision or that the Appeals Committee request that the CAPES consider additional information which was not previously presented to the CAPES. The letter to the Registrar should include the basis for the appeal as well as any new relevant information.

An Appeals Committee, composed of faculty members appointed by the Dean of the School of Medicine, shall be created to review appeal of decisions by the CAPES. Members of the CAPES Committee may not be appointed to the Appeals Committee. A quorum of this committee shall consist of five (5) members.

The Appeals Committee shall review the record of the CAPES decision solely to determine whether the pertinent CAPES procedures were followed and whether all relevant information was considered by the CAPES. If the appeal is based on a contention that all relevant information was not presented to the CAPES, the appeal must provide the Appeals Committee with adequate reason why the student did not present this information at the CAPES meeting in question. In all cases, the Appeals Committee shall not substitute its opinions of the merit of matter and appeal for those of the CAPES.

On all appeals the Appeals Committee may either remand the matter to the CAPES for reconsideration with its explanation for the remand, or deny the appeal. If the matter is remanded to the CAPES, all documents, minutes of the Appeals Committee meeting, and information submitted by or for the student in support of the appeal will be made available to the CAPES. The Appeals Committee shall provide its decision in writing to the Dean, the student, the CAPES, the Associate Dean for Student Affairs and the Registrar. The Appeals Committee shall determine whether the student may continue his or her curriculum pending its review of a CAPES decision.

Within twenty (20) days of the date of an Appeals Committee’s decision or referral back to the CAPES, the student may request, in writing, that the Dean of the School of Medicine review the decision of the Appeals Committee. The decision of the Dean shall be final.

BACK TO TOP

Student Life

St. Louis
Housing
Security
Parking and Transportation (UPass & WeCar)
Bulletin Boards
Lockers
Mail
Student Health Services
Dress Code
Student Organizations

Intramural Programs

Primary Care Summer Preceptorships

Student Research Fellowships

Alpha Omega Alpha

Awards and Prizes

Voter Registration

**St. Louis**

The St. Louis area has more than 2.7 million residents, encompassing counties in both Missouri and Illinois. The area ranks high on many publications’ “best cities” lists, and is an appealing destination for singles and families alike. St. Louis has a cost of living that ranks consistently lower than many comparable cities. For recreation, the arts, and great everyday living, St. Louis is a city of opportunities.

Any taste in housing, cuisine, lifestyle and leisure activities can be found in the greater St. Louis area. Attractive, affordable residential communities abound here, many of them within a two-mile radius of Washington University. The Central West End, University City and Clayton — all of which border Washington University — provide attractive housing and recreational opportunities. To the north, small shops, galleries and ethnic restaurants dot the main street of University City. Adjacent to the Washington University Medical Center and close to the Danforth Campus is the Central West End — trendy and restored to its late-19th century grandeur. To the west are the elegant homes and multifamily dwellings of Clayton. Those who come to St. Louis to be associated with the University can find reasonably priced apartments, condos and single-family homes, all in the immediate area. For those who desire a more suburban lifestyle, west St. Louis County is a growing area.

MetroLink, a light-rail line, runs from Lambert Airport through the downtown area and on to Illinois. A stop at the Medical Center makes this mode of transportation especially convenient for many medical school faculty, students and staff. Washington University’s U-Pass program provides free Metro passes to full-time students, benefits-eligible faculty and staff, and full-time employees of qualified service providers who perform daily tasks.

Rising in front of a dramatic skyline, the Arch symbolizes St. Louis’ role as the Gateway to the West. Today, as in the past, St. Louis is a prominent cultural and commercial city, linking the north and south, east and west, through its traditions and its view of the future. The Arch itself, designed by Eero Saarinen, is a remarkable sculptural achievement and an incredible engineering feat, worthy of its dramatic setting. It frames the commercial center of downtown and the Old Courthouse, where in 1847 Dred Scott argued his right to be a free man.

**Cultural Opportunities**

New St. Louisans discover the rich cultural life here in theaters, galleries, museums and festivals. The Saint Louis Symphony, among the finest in the nation, performs at historic Powell Hall. Symphony members bring their skills to the community through teaching and chamber concerts as well. In the downtown area, the rich St. Louis traditions in jazz, blues and ragtime music are continued in a number of lounges and clubs. The Community Music School of Webster University offers community
music education to all ages, and COCA (Center of Creative Arts) is the largest multidisciplinary arts institution in the metropolitan area.

The Opera Theatre of St. Louis has been enormously successful, nationally and internationally, bringing English-language versions of the classics and presentation of contemporary operas to the stage. The Repertory Theatre of St. Louis has an extensive annual season, which includes experimental works and traditional dramas. The Stages St. Louis Theatre Co., Kirkwood Theatre Guild, West End Players Guild, Act. Inc. and the Saint Louis Black Repertory Company enrich the dramatic offerings available in the immediate area. On campus, Edison Theatre offers the highest quality in national and international programs in theater, dance and music. For open-air summer entertainment, the Shakespeare Festival of St. Louis and The Muny, both in Forest Park, are prime destinations.

Broadway comes to St. Louis at the Fox Theatre, a renovation of a 1929 example of exotic cinema temple art. Galleries sprinkled throughout the area bring current visual arts to St. Louis, while antique shops remind us of the past. The St. Louis International Film Festival takes place every fall. Supplanting the standard movie fare available throughout the metropolitan area are two cinemas close to campus, the Hi-Pointe and the Tivoli, both offering excellent foreign and independent films.

When the St. Louis Art Museum was built for the 1904 World’s Fair, much of the Washington University collection was housed in it. Ties with the St. Louis Art Museum remain very close. Students in art and in business intern at the Art Museum, working in arts management and gallery organization.

St. Louis also features Laumeier Sculpture Park, which displays large-scale sculptures by artists of international renown. St. Louis has two major history museums as well: the Missouri History Museum in Forest Park and the Museum of Westward Expansion under the Gateway Arch.

Recreation

For recreation, St. Louisans may use any of the numerous parks that dot the metropolitan area. In Forest Park, which lies between the two Washington University campuses, are the Art Museum, The Muny, Missouri History Museum, the St. Louis Zoo, municipal golf courses, tennis and handball courts, a skating rink, and acres of paths, picnic areas, gardens and wooded groves. Tower Grove Park is in south St. Louis, and adjacent is the Missouri Botanical Garden, world famous for its research, collections and facilities.

Farther afield, St. Louis residents find outdoor adventure in the countryside beyond the city. In the Ozark Mountains, on the rivers of Missouri, on the lakes of neighboring Illinois, variety abounds. Camping, hiking, floating, rock climbing and caving are among the many possibilities within a few hours’ drive of St. Louis. For those who like to sail, there is Carlyle Lake in Illinois. And for those with rod and reel, Missouri streams are made to order.

The Washington University Athletic Complex provides outstanding resources to athletes at every level of ability. Open to all members of the University community, it includes an eight-lane, 25-meter pool, two gymnasiums, weight rooms, racquetball courts, outdoor tennis courts and a track complex. Built on the site of the 1904 Olympic Games, this facility offers recreational opportunities year-round for students, faculty and staff.

For the spectator, St. Louis is a great sports town. For more than a century, it has hosted one of the oldest traditions in baseball — the St. Louis Cardinals. Dizzy Dean and the Gashouse Gang, Stan Musial, Lou Brock, Ozzie Smith and Mark McGwire are all part of Cardinal history. The current Busch Stadium opened in spring of 2006 and played host to the 2009 All-Star Game.

St. Louis’ NFL Rams brought home the Super Bowl trophy in 2000, after being welcomed to the community in the fall of 1995. The St. Louis Blues hockey team moved here in 1967 and enjoys a winning history. St. Louis also supports a number of semi-pro sports teams.

Employment and University Ties with St. Louis
St. Louis is a great place to work; job opportunities are varied and abundant. Many companies are distinguished for their excellent working conditions, and commuting is easier than in many other large cities.

Many major corporations are located here, as are a variety of retail, transportation and banking organizations. Among the top firms are Anheuser-Busch, Emerson and Boeing. Many support services have grown up around these corporations — including law, accounting, data processing, advertising, public relations and design firms, as well as photographic and audio-visual studios.

Employing more than 20,000 people, the Washington University Medical Center (WUMC) is made up of the School of Medicine, the Alvin J. Siteman Cancer Center, Barnes-Jewish Hospital, Central Institute for the Deaf and St. Louis Children’s Hospital. The WUMC generates an annual financial impact of more than $2.6 billion for the St. Louis area, according to an economic model maintained by the St. Louis Regional Commerce and Growth Association.

The John M. Olin School of Business at Washington University enjoys a rich and varied partnership with the business community. As a laboratory for internship opportunities, entrepreneurship study, and student practicums offered through Olin’s Center for Experiential Learning, St. Louis plays an integral role in the education of business students. In turn, Olin creates value for area businesses by matching top Olin talent with pivotal positions in their firms.

Similarly, the School of Law has close ties with the St. Louis legal community and, through its clinical program, offers internships in private and local government offices and in state and federal courts. In addition, the law school is fortunate in the active and interested role of the local bar associations in the development of the school’s special programs.

The George Warren Brown School of Social Work also is linked in many ways to the St. Louis social work community. Students find practicum assignments throughout the area, and both students and faculty do research and consult with local agencies.

A strong partnership exists between technology-based businesses and industries in St. Louis and the School of Engineering & Applied Science. There is a network of more than 80 faculty members associated with Department of Biomedical Engineering, representing numerous divisions of the University, including many from the School of Medicine.

In addition to their ties to local business, both the Danforth Campus and the School of Medicine at Washington University are dedicated to the support of K-12 education. Students from the medical school participate in a variety of outreach programs, including Students Teaching AIDS to Students (STATS), designed to teach awareness and responsible behavior to junior high school students; the Young Scientist Program, an interactive learning experience that brings high school students to the Medical Center; and health and preventive programs on drug and sex education.

In short, Washington University enjoys a special relationship with St. Louis.

Housing

Those who come to St. Louis to be associated with the Washington University School of Medicine find apartments/houses/condos/lofts/Short Term Housing that range in price from $550-$1500 per month, all in the immediate area. The Apartment and Housing Referral Services, located on North Campus, maintains listings of housing appropriate for married and single students. For information, contact Apartment Referral Services at ars@wustl.edu, Campus Box 1016, 700 Rosedale Ave., St. Louis, MO 63112 or (314) 935-5092. You may also visit the web site at ars.wustl.edu
The Spencer T. Olin Residence Hall, (314) 362-3230, at 4550 Scott Ave. on the Medical Campus, has accommodations for approximately 168 single men and women. The building was made possible by generous gifts from Spencer T. Olin, alumni and friends of the School of Medicine. Olin Hall is planned for the convenience of students in the medical or paramedical sciences and includes shared cooking facilities, a gymnasium, weight room and state-of-the-art workout facility, laundry room and penthouse with a recreational area and large-screen television with satellite system. Every effort is made to provide an atmosphere that not only aids residents in meeting their study obligations, but also recognizes their privileges as graduate students.

The rates for rooms for 2009-10 are:

**Summer 2009 (May 23 – August 1)**
- Single Room: $1,087
- Large Single: $1,335
- Solo Suite: $1,618
- Double Room: $728*
- Double Suite: $1,087*

**School Year: Mid August-Mid May (Nine Months)**
- Single Room: $3,631
- Large Single: $4,355
- Solo Suite: $5,290
- Double Room: $2,446*
- Double Suite: $3,631*

*Price per student

**Security**

Security at the School of Medicine is the responsibility of Protective Services. Uniformed Protective Services Officers are on duty 24 hours a day, seven days a week to provide for personal safety, reduce the opportunity for crime, apprehend law violators, provide crime prevention and awareness training and assist in enforcement of University rules and regulations. Armed Response Officers and unarmed Public Safety Officers are radio-dispatched. They respond immediately to telephone calls made to 362-HELP (4357). Officers patrol the campus on foot, on bicycles and in marked mobile units. Contract Agency guards staff a few fixed posts to supplement the in-house officers.

The Medical School access control program makes the campus easily accessible after hours and on weekends. Faculty, staff and students are issued a photo identification badge that identifies the wearer as a member of the medical school community. The badge has a magnetic strip that activates the computerized door lock entrances to the School's buildings. These entrances have two-way intercoms for direct communication with Protective Services' Communications Officers, as do direct-ring telephones located outside selected campus buildings and "Code Blue" emergency telephones on surface parking lots and in the garages.

Each year Protective Services publishes a summary of statistical information concerning campus crime, as required by federal law, on the medical school web page at [wusmproserv.wustl.edu/](http://wusmproserv.wustl.edu/). This information may be found under "Campus Crime Statistics 2006-2007-2008." A daily crime log, information on crime prevention tips and the many services and programs provided by Protective Services also appear on the web. For a printed copy of the annual security report, contact Washington University School of Medicine, Protective Services Department, Campus Box 8207, 660 S. Euclid Ave., St. Louis, MO 63110, or by calling (314) 362-4358.
**Parking and Transportation (U-Pass & WeCar)**

Hourly, daily and permit parking is available in the 2200-space School of Medicine Clayton Garage (corner of Clayton and Taylor avenues) and the 700-space School of Medicine Metro Garage (corner of Children's Place and Taylor Avenue). There is also limited surface permit parking on the School of Medicine surface lots. The WUSM surface lots are in various locations around the Medical Campus with unreserved spaces on a first-come basis. School of Medicine surface parking permits are required Monday through Friday from 7 a.m. to 2 p.m. Surface permits are not required all day Saturday and Sunday and during the week between 2 p.m. and 7 a.m. Parking in patient or visitor spaces by faculty, staff or students is strictly prohibited at all times. Additional information, maps and fees are available at [wusmparking.wustl.edu](http://wusmparking.wustl.edu), by calling (314) 362-6824 or in our office in Olin Residence Hall, 4550 Scott Ave., Room 114.

If you are interested in carpooling, vanpooling, Metro passes or coupon books, please contact the School of Medicine’s Transportation Services.

Shuttle service is available for transportation from one site to another within the Medical Campus in accordance with specific shuttle schedules. If additional information, maps or shuttle schedules are needed, please visit [wusmparking.wustl.edu](http://wusmparking.wustl.edu), contact Transportation Services at (314) 362-6824 or stop by our office in Olin Residence Hall, 4550 Scott Ave., Room 114.

If you are a registered full-time student of Washington University, Washington University School of Medicine, or a benefit-eligible employee of the same; you can register for a U-PASS online at [parking.wustl.edu](http://parking.wustl.edu). There is no charge for the U-PASS. The U-PASS allows you to access the MetroBus and MetroLink system; however, you must show your valid Washington University ID in conjunction with a valid U-PASS to ride free. The Danforth Campus, West Campus, North Campus and Medical Campus all have MetroLink stations. The Medical Campus also has the Central West End MetroBus hub located on their campus.

For those needing a car to run an errand or for overnight, we have a car-sharing program called WeCar. Located on Lot E (off McKinley behind Olin Residence Hall), a Toyota Prius is available for use for only $10/hour (there is a separate rate for overnight use). Go online ([www.WeCar.com/WUSTL](http://www.WeCar.com/WUSTL)), print off the agreement and within 3-6 business days after membership approval, you will be issued your personal key fob and customer PIN number. Then go online and reserve a time!

---

**Bulletin Boards**

Bulletin boards are on the wall outside the Admissions Office, on the first and second floors of the McDonnell Medical Sciences Building, on the first floor of Olin Residence Hall, and in the lounge on the ground floor of the Bernard Becker Medical Library. Please check these frequently.

---

**Lockers**

Student lockers with combination padlocks are on the third and fourth floors of the Farrell Learning and Teaching Center. Locker assignments are made by the Registrar’s Office for a nominal fee to
cover the cost of the padlock. Only padlocks issued by the Registrar’s Office may be used.

**Mail**

First-class student mail sent to the School of Medicine will be put in student mailboxes. This will most probably serve as a temporary mailing address and be used only until students are settled in St. Louis. It is important that mail addressed and sent to the School of Medicine include both student status (WUMS = Washington University Medical Student) and year, as follows:

Jane Doe, WUMS I  
Washington University School of Medicine  
Campus Box 8077  
660 S. Euclid Ave.  
St. Louis, MO 63110-1093

**Student Health Service**

Director: Karen S. Winters, MD  
Information/Appointments: (314) 362-3523  
Billing/Benefits: (314) 362-2346

For a complete description of benefits please visit wusmhealth.wustl.edu/.

The Student Health Service provides a complete service for full-time students registered in the School of Medicine. Services are provided through a self-funded program included in tuition costs. Services include professional care by staff internists and counselors, with referrals to other consultants. Services are available by appointment on site at 4525 Scott Ave., Suite 3420, Monday through Friday from 8 a.m. to 4 p.m. The Health Service has implemented an after-hour coverage monitored by Dr. Winters. Students may call 362-3526 after hours for non-urgent care. All medications, diagnostic tests, X-rays and consultations ordered by the physicians are covered 100 percent with a small co-payment, in the absence of private insurance. In addition, the Health Service offers full major medical benefits including labor and delivery. Emergency care is available at the emergency department of Barnes-Jewish Hospital.

There is a maximum lifetime benefit per student of $1,000,000. The student or his/her family is responsible for meeting the costs of hospital care in excess of those paid by the Student Health Service. There are no benefits for outpatient care or medication away from the Medical Center. The responsibility of the Student Health Service for hospitalization and emergency care will end 30 days after an individual ceases to be an officially enrolled student. The School of Medicine also offers a dental, disability and life insurance policy to all full-time students registered in the medical and allied professional schools of the Medical Campus. The Student Health Service offers easy access to medical and psychiatric care so that physical and emotional problems will not interfere with university life. Subsequent medical care is provided as long as full-time enrollment is maintained in the School of Medicine.

The Health Service pre-screens every incoming student prior to their arrival at the School to ensure all federal requirements have been met regarding communicable diseases. Entering students are required to have a medical examination within one year of matriculation and to show proof of immunity to
measles (rubeola), rubella and mumps and a tetanus booster within 10 years. The Health Service tracks all immunizations during and prior to enrollment. Statements of Health for internships and practicums are provided.

**Spouses, Dependents**

Students frequently ask if they can purchase health coverage for their spouse and/or dependents through Student Health Services. Student Health Services is a benefit available to full-time students enrolled in the medical or allied professional schools only, and there is no provision for health coverage for spouse and/or dependents. For your convenience, Student Health has partnered with Destefano & Associates to assist your spouse/dependent with their insurance needs. For more information please contact Sharon Silver at (636) 230-2928. However, Student Health Services has arranged a few alternative options for you to review.

**Dental Care**

Benefits provided by Student Health Service for injury to a sound natural tooth only. Coverage for injury to a sound natural tooth is 100% of the first $300 of expenses, and 80% of the balance, not to exceed $1,000 as a result of any one accident. Student Health Services will provide a list of private dentists upon request.

In addition to the benefit provided by Student Health Service, all eligible full-time students registered in the medical and allied professional schools of the Medical Campus will be covered by a prepaid dental plan through Assurant Employee Benefits Heritage. All full-time students are covered automatically, with the coverage premium paid for by WUSM Student Health Service. There are no enrollment forms for the student to complete. However, you will NOT officially have coverage until a participating dentist is selected. To select a participating dentist, you may call Assurant Customer Service at (800) 443-2995 or visit their web site at [www.assurantemployeebenefits.com](http://www.assurantemployeebenefits.com). You must select a participating general dentist in Assurant’s Heritage network before you can use your benefits. This plan is available to your family members as well for the yearly premium; see Student Health Benefit office for details.

**Counseling Services**

Students at the Medical Center may have concerns over poor concentration, ineffective study habits, anxiety over their performance, low self-esteem, getting along with others, grief or depression. The psychiatry and clinical psychology staff members are available to help students cope with these concerns. Initial evaluations are made at the Student Health Service. Subsequent care may be at the Medical Campus or a designated physician's office. Call 362-3523 for more information. All records are confidential and may not be seen by anyone without the student's written consent.

In addition, Student Health Service provides a Student Assistance Program (SAP) for all enrolled students and their immediate family members. This prepaid benefit is offered as a way to help our Students resolve issues that may have an impact upon their personal lives and their school performance.

The SAP provides confidential, professional assistance to full-time enrolled students and their family members to help resolve problems that are affecting their personal life or school performance. The program is managed by ENI, a nationally known professional consulting firm specializing in SAP services.

Students can contact ENI 24 hours a day, seven days a week to arrange a confidential appointment with an SAP specialist. SAP specialists have professional training and expertise in a wide range of issues such as academic problems, eating disorders, credit problems, adjusting to school, marriage and family problems, alcohol and drug abuse, emotional and psychological concerns, financial difficulties, stress and much more.

The SAP can be reached by calling (800) 327-2255 and selecting prompt #3.
Disability Insurance

All students are covered by group disability insurance. A student who is completely disabled for six consecutive months is eligible to receive $500 per month benefit. Coverage increases to $1,500 per month in the third year. Individual disability policies are issued to fourth-year students, increasing the total monthly benefit to $2,000. Individual policies are portable, guaranteed issue and can be increased after graduation up to a maximum $4,700 per month benefit. Call 362-2346 for more information.

Life Insurance

All eligible full-time students registered in the Washington University Medical School and allied professional schools are covered automatically, premium paid for by WUSM Student Health Service. An enrollment form listing your beneficiaries is required to complete enrollment. In brief, the term life insurance plan and AD&D plan for medical students and affiliated programs provided by Guardian is as follows: term life plan provides $10,000 of term life insurance and the AD&D plan $10,000 of accidental death and dismemberment protection. A detailed description of the plan is available at Student Health Services.

Upon graduation, you can convert the amount of your term life insurance to a participating whole life plan underwritten by Guardian.

Dress Code

While Washington University School of Medicine does not have a written dress code, it is expected that all students will dress in attire that is appropriate for a professional.

Appropriate attire in the clinical setting is especially important, not only because the student will be part of the team representing the medical profession to patients, but also because the student will be representing the School of Medicine.

Appropriate attire for male students on the clinical services includes man-tailored shirt and tie, trousers or slacks and closed toe shoes. Appropriate attire for female students includes a dress, a blouse, tailored shirt or sweater, slacks or skirt, and closed-toe shoes. Both men and women should wear a short white jacket with the appropriate hospital identification card clearly visible.

Student Organizations

Students at Washington University School of Medicine are active participants in medical student organizations on the local, state and national levels. The American Medical Student Association (AMSA), the Student National Medical Association (SNMA), the American Medical Women’s Association (AMWA), the Asian-Pacific American Medical Students Association (APAMSA), the Medical Student Section of the American Medical Association (AMA-MSS), the Missouri State Medical Association (MSMA), the Organization of Student Representatives (OSR) in the Association of American Medical Colleges (AAMC) and the Student Organized Community Clinic (SOCC) provide forums for addressing the educational, social and political concerns of medical students. The School of Medicine supports student participation in these national organizations and provides partial funding for travel and other expenses on an annual basis. Medical Student Government (MSG) represents the student interests, supports social and educational activities and expands the perspectives of the future graduates of the medical school.
**Academic Societies**
To foster communication between students and faculty, three academic societies — The Joseph Erlanger and Evarts Graham Society, The Carl and Gerty Cori Society, and The Oliver Lowry and Carl Moore Society — meet independently throughout the academic year to enjoy a social hour, dinner and conversation. The societies promote a collegial environment for the medical school's diverse faculty and student body. Medball, held in March of each year, is hosted in part by the academic societies and provides a formal social evening with medical faculty and medical students.

**AMA-MSS**
Washington University has an active chapter of the American Medical Association Medical Student Section. WUSM students are involved at the local, state and national levels and represent Washington University in policy development.

**AMSA**
On the local level, AMSA is the major student organization at the School of Medicine. The chapter’s annual activities include a speaker series and several community service projects.

**AMWA**
The American Medical Women’s Association is a national organization designed to address issues of concern to women in medicine. Washington University has an active student group, and funding is available for student representation at regional and national meetings.

**APAMSA**
The Asian-Pacific American Medical Students Association was founded to address issues and needs specific to Asian-Pacific American medical students. To that end, it serves as a support group for students, fosters student-faculty interaction and promotes cultural awareness, as well as providing a framework for community service programs.

**Forum for International Health and Tropical Medicine**
The Forum for International Health and Tropical Medicine (FIHTM) was formed to promote awareness of international health concerns and facilitate international health experiences for medical students. In addition, the group has worked closely with administration in the design of a formalized international health elective program and funding structure.

**Program for Women in Science and Medicine**
The Program for Women in Science and Medicine is designed to foster interaction among women at all levels at the medical school. The program sponsors a variety of informal discussions, receptions and dinners with informative speakers throughout the academic year.

**SNMA**
The Student National Medical Association (SNMA) is the oldest and largest medical student organization focused around the needs and concerns of African-American, Latino and Native American medical students. This organization is concerned with providing services to medically underserved communities, promoting minority student recruitment and retention to schools that train health personnel and assisting in ways to provide quality education to minorities and women. Washington University has an active SNMA chapter, and funds are available for representation at regional and national meetings as well as for community service activities.

**Student Organized Community Clinic**
As the number of uninsured citizens in America continues to rise, the Student Organized Community Clinic (SOCC) provides an important service to the community of St. Louis. The clinic provides the sole access that many patients have to the health care system. It provides a close-up look for our student volunteers at how severe the problem of the uninsured in America is.

**Washington University Medical Center Housestaff Auxiliary**
Washington University Medical Center Housestaff Auxiliary (WUMCHA) is an organization made up of female medical students, residents, fellows, attending physicians, as well as the female spouses, partners and "significant others" of those affiliated with Washington University Medical Center,
including Barnes-Jewish and Children’s hospitals, the School of Medicine and Mallinckrodt Institute of Radiology. The purpose of the organization is to provide friendship and social support among its members. In addition to sponsoring numerous recreational and educational activities, WUMCHA publishes a welcome guide containing information about relocating to St. Louis and area attractions. Annual dues are $30 and information about membership and applications can be obtained by contacting Anne Sebert-Kuhlmann at (314) 862-0761 or annesebert@hotmail.com, or by visiting www.wumcha.com.

Community Service Experience
Participation in a host of community service projects nurtures students’ altruistic nature and provides an alternative educational experience. University-sponsored, student-run, community-based service activities include the Perinatal Project, which provides information concerning well-baby care and prenatal care to women from lower socioeconomic groups. Students Teaching AIDS to Students (STATS) allows trained medical students to provide sixth- and seventh-graders with information about AIDS. The combined efforts of medical students, faculty, middle school teachers, parents and speakers with AIDS have made STATS a very successful program. The Geriatrics Outreach Program helps prepare students for the challenges and rewards of working with older patients. Pediatric Outreach Program (POP) matches children in the St. Louis area who are suffering from chronic illnesses and the siblings of these children with big brothers and big sisters from Washington University School of Medicine. Community CPR trains medical students to become instructors in CPR for the medical school curriculum and in the community of St. Louis. The Mental Health Outreach Program (MHOP) works to increase the awareness of mental health issues among medical students and the general public. Smoking Cessation Project trains medical students to assist patients in smoking cessation through group and individual counseling using the American Lung Association Freedom from Smoking program. The Family Medicine Interest Group works with the local community by providing health screenings and nutritional classes. A newer group, SPOTS (Sun Protection Outreach Teaching by Students) is piloted to teach middle school students about the dangers of skin cancer and how to protect themselves from the sun.

Student Publications
Students organize and spearhead several publications at the School of Medicine. The Dis-Orientation Guide is produced annually as a student-to-student guide to the curriculum and the city. Hippocrene is a literary magazine published once a year where you will find poetry, short stories, essays and photographs submitted by members of the WUSM community.

Intramural Program
Students enrolled in Washington University School of Medicine enjoy an active and diverse Intramural (IM) Program. The IM Program offers students the opportunity to participate in a wide range of sports. Utilizing the state-of-the-art facilities in the University’s Athletic Complex, medical students pursue personal athletic interests and enjoy interaction with students enrolled in both undergraduate and graduate degree programs. The IM Program provides an excellent opportunity to socialize with colleagues as well as other graduate students. Differences in curricular demands among participants are considered in scheduling games so that neither academic nor athletic goals are compromised.

Traditionally, the School of Medicine is represented each year by teams or individuals in over 10 intramural sports. In recent years, medical student teams competed in men’s and women’s flag football, soccer, volleyball, cross country, basketball, swimming, softball, and track and field as well as coed ultimate Frisbee, volleyball, inner tube water polo and softball. In addition, there are different levels of competition so that the needs of both the competitive and recreational athlete can be met.

The School has always made a strong showing in both the mixed and graduate school division, as evidenced by the many championship T-shirts team members sport.

BACK TO TOP
Primary Care Summer Preceptorship

Students appreciate early and sustained patient contact. Since 1996 the school has sponsored a primary care preceptorship program for students during the summer between their first and second years of classes. Students select a preceptor in internal medicine, pediatrics or family practice and spend up to eight weeks observing that physician’s clinical practice. A stipend is provided to the student. Although many of the preceptors are in St. Louis, others, particularly alumni, are located in cities throughout the country. Applications should be made to the Associate Dean for Student Affairs, Washington University School of Medicine, Campus Box 8077, 660 S. Euclid Ave., St. Louis, MO 63110.

Student Research Fellowships

Student research is an important part of the educational program. Fellowships in basic science or clinical areas will be awarded each year to selected students who undertake research projects under the direction of faculty members. Research allows students to discover firsthand the problems and rewards of obtaining and assessing new information, thus adding another dimension to their experience as investigators.

Most students take the opportunity for research during the summer after their first year of classes, but incoming students to the school also are eligible. All research must be conducted at the School of Medicine. Students will be awarded a fellowship and stipend for a two-month program. Inquiries should be made to Student Research Program, Koong-Nah Chung, PhD, Washington University School of Medicine, Campus Box 8107, 660 S. Euclid Ave., St. Louis, MO 63110, (314) 362-6844, chungk@wusm.wustl.edu.

Alpha Omega Alpha

Alpha Omega Alpha is a national medical honor society. Members are selected by a standing AOA committee during the final year of medical school. Selection is based upon academic performance during the first three years, in addition to other qualities such as leadership. Approximately one-sixth of the class is elected to AOA.

Students elected to AOA are honored at an awards dinner during the final year and at a special AOA lecture.

Awards and Prizes

Washington University School of Medicine publicly recognizes and rewards at two annual events outstanding scholarship, research accomplishments and community service of individual students. In December, the Student Awards Luncheon acknowledges academic excellence earned during the first three years of study. As part of the festive commencement activities in May, graduates are recognized
for meritorious research and clinical achievements accomplished during their medical school careers.

Morris Alex, MD Prize. Awarded each year to the medical student who is outstanding among his or her peers in the second-year Practice of Medicine course. The November 2008 recipient: Ira H. Schachar.

Alpha Omega Alpha Book Prize. Awarded to a member of the graduating class who has performed outstandingly for the entire medical course. The May 2009 recipient: Andrew Thomas Harger.

American Academy of Neurology Medical Student Prize for Excellence in Neurology. Awarded to a member of the graduating class for excellence in clinical neurology and outstanding personal qualities of integrity, compassion and leadership. The May 2009 recipient: Tara Marie Scherer.

American College of Physicians Michael M. Karl, MD Book Award. Presented annually to a member of the graduating class committed to a career in internal medicine, in recognition of highest achievement in the field of internal medicine. The May 2009 recipient: William John Hucker.

American College of Physicians Award for Excellence in Physical Diagnosis. Given to a student annually for outstanding performance in the second-year Practice of Medicine course. The November 2008 recipient: Jake M. Chanin.

American College of Physicians Clerkship Award. Established in 1992 to be awarded to a student completing the third year of study with meritorious achievement in the Internal Medicine Clinical Clerkship. The November 2008 recipient: Marios Giannakis.

American Medical Women’s Association Glasgow-Rubin Memorial Achievement Citations. Presented to women medical students graduating in the top 10 percent of their class. The May 2009 recipients: Ellen Hunter Bailey, Laurel Beth Barrett, Nadia Vicki Giannakopoulos, Rebecca Suzanne Hoodecheck, Jessica Lee Maschin, Valliammai Muthappan and Midori Jane Seppa.

The Ruth Bebermeyer Award. Established in 2001 by the WUMCAA executive council to honor Ruth Bebermeyer for her many years of dedicated service to WUMCAA (1990-2000) and to the students of the School of Medicine. The award is given to "a student who has shown extraordinary kindness and sensitivity to the needs of others," whether those others be fellow students, patients or just people in general. The November 2008 recipient: Andrew T. Harger.


Jacques J. Bronfenbrenner Award. Provided by Dr. Bronfenbrenner’s students in memory of his inspiration as a teacher and a scientist, and awarded to the member of the graduating class who, as judged by the Department of Medicine, has done the most outstanding work in infectious diseases or related fields. The May 2009 recipient: Syki Quang Duong.


Dr. Harvey Butcher Prize in Surgery. Awarded annually in memory of Dr. Harvey Butcher to the members of the graduating class who, as judged by the Department of Surgery, show the greatest promise for general surgery. The May 2009 recipient: Ellen Hunter Bailey.

Class of 2001 Award. Established by the Class of 2001 as its gift to the medical school. Awards are to be given to third-year medical students in recognition of outstanding performance in the areas of community service and student group activities in the first two years of medical school. The November 2008 recipient: Huay-Zong Law.

Class of 2003 Award is dedicated to the memory of three classmates who died in a car accident, and is awarded to a first-year student recognized by peers as being selfless, exceptionally kind to others and dedicated to the highest standards in medicine, traits for which these classmates will be remembered. The November 2008 recipients: Jonathan Byrd and Travis N. Keeling.

Carl F. and Gerty T. Cori Prize in Biochemistry. Awarded at the end of the first year to the class member who has demonstrated superior scholarship in Biochemistry. The November 2008 recipient: Jada L. Roe.

Edmund V. Cowdry Prize in Histology. Established in 1969 to honor Dr. Cowdry; awarded to a medical student in the first-year class who has performed meritoriously in Microscopic Anatomy. The November 2008 recipient: Melinda Y. Wu.

Antoinette Frances Dames Award in Cell Biology and Physiology. Awarded annually to members of the first-year class who have demonstrated superior scholarship in these fields. The November 2008 recipient: Amy T. Metzger.

Elisabeth L. Demonchaux Prize in Pediatrics. Established in 1985, the prize is awarded annually to a graduating student who has done outstanding work in pediatrics. The May 2009 recipient: Christina Kim Ahn.

Steven Dresler Prize. Awarded to a graduating student who has demonstrated a commitment to promoting social good, civil rights and civil liberties through social action and volunteerism. The November 2008 recipient: Scott E. Hadland.

Dr. William Ellis Award. Established in 1990 by Dr. Ellis and awarded to a senior student in recognition of meritorious research in ophthalmology. The May 2009 recipient: Aaron Yuntai Lee.

The Endocrine Society Medical Student Achievement Award. Recognizing a graduating medical student who has shown special achievement and interest in the general field of endocrinology. The May 2009 recipient: Ada Ping Lee.

The Family Health Foundation of Missouri Scholarship Award. Awarded to the top graduating student entering the specialty of family medicine.

George F. Gill Prize in Pediatrics. Awarded to a member of the graduating class who has demonstrated superior scholarship in pediatrics. The May 2009 recipient: Midori Jane Seppa.

Alfred Goldman Book Prize in Diseases of the Chest. Created in 1972 as an annual award to be given to a student selected by the faculty for outstanding clinical work or research in diseases of the chest or pulmonary physiology. The May 2009 recipient: Angela Christine Hirbe.

Max and Evelyn Grand Prize. Established in 1985 by Dr. M. Gilbert Grand, the prize is awarded annually to a member of the graduating class for excellence in ophthalmic research or clinical ophthalmology. The May 2009 recipient: Courtney Lynn Kraus.

Peter Halstead Hudgens Award. Established by Dr. Richard W. Hudgens in memory of his son, this award recognizes a graduating student for excellence in research and clinical psychiatry. The 2008 recipient: Frances Wen-Hui Lee.

Herrmann Prize. Created by Dr. Paul Herrmann (MD '61) and his wife, Susan, to recognize a student who is considered a thoughtful and sensitive communicator in the clinical arena and whose listening and communication skills every patient hopes their physician will possess. The November 2008 recipient: Laxminarsimha D. Reddy.

Peter Halstead Hudgens Award. Established by Dr. Richard W. Hudgens in memory of his son, this award recognizes a graduating student for excellence in research and clinical psychiatry. The May 2009 recipient: Chad Michael Sylvester.

Dr. John Esben Kirk Scholastic Award. Established in 1975 and awarded to a graduating student of high scholastic standing. The May 2009 recipient: Scott Evan Hadland.

Rosalind Kornfeld Student Leadership Award. Presented to a woman or women in the graduating class who has or have demonstrated outstanding leadership in service to or advancement of women in the community. The May 2009 recipient: Amanda Elaine Rohn and Sara Ann Van Calcar.

Louis and Dorothy Kovitz Senior Prize in Surgery. Senior award in surgery recognizing members of the graduating class who have shown the most outstanding ability, zeal and interest in surgical problems. The May 2009 recipients: Mohammed Haseebuddin and Neil Suresh Sachanandani.

I. Wallace Leibner Award. Established in 1988 in memory of Dr. Leibner, the award is given to the member of the graduating class who has not only demonstrated excellence in diagnosis and therapeutics, but also an understanding of human nature and needs, and an active nurturing of both patient and family. The May 2009 recipient: Scott Evan Hadland.


Edward Massie Prize for Excellence in Cardiology. Awarded to the member of the graduating class, selected by the director of the Division of Cardiovascular Disease in the Department of Medicine, who has done the most outstanding clinical or basic research work in the field of cardiovascular disease. The May 2009 recipient: Hamid Majid Kargbo.

Howard A. McCordock Book Prize in Pathology. Awarded at the end of the second year to a member of that class for general excellence in pathology. The November 2008 recipient: Cheryl A. Mather.

McGraw-Hill/Lange Medical Student Book Award. Awarded annually to medical students for high scholastic standing. The November 2008 recipients: Eric A. Millican, Jason A. Meyers and Yevgeniy V. Sychev.

Medical Center Alumni Scholarship Fund Prize. Given annually to students who have shown excellence in their work during the preceding year. The November 2008 recipients: Bradley J. Carra, Brian F. Flaherty and Jonathan Lake.

Medical Fund Society Prizes. One prize awarded annually to a graduating student who has excelled in the study of internal medicine; one prize awarded annually to a graduating student who has excelled in the study of surgery. No individual is eligible for both prizes. The May 2009 recipients: Jessica Lee Maschin (Medicine) and James Robert Wade (Surgery.)


Missouri State Medical Association Award. Presented annually to honor School of Medicine graduates for outstanding achievement in the study of medicine. The May 2009 recipients: Mohammed Haseebuddin, Eric James Monroe and Daniel Alexander Wattson.

Dr. Helen E. Nash Academic Achievement Award. Given annually to a student who has exhibited to an unusual degree the qualities of industry, perseverance, determination and enthusiasm. The prize is given in honor of Dr. Helen Nash, a pediatrician noted in the St. Louis community for her commitment to excellence, tireless advocacy on behalf of children, and endless enthusiasm for the field of medicine. The November 2008 recipient: Adewale O. Adeniran.

The Dr. Philip Needleman Pharmacology Prize. Established by his family in 1989 to honor Dr. Needleman, who was Chairman of the Department of Pharmacology from 1976-89. This annual award is given to a member of the graduating class for outstanding research in pharmacology. The May 2009 recipient: Bryson William Katona.


The Dr. Philip Rosenblatt Award in Pathology. Given to a senior medical student for distinguished performance during an elective in pathology or laboratory medicine. The May 2009 recipient: Jena Beth Hudson.

The Richard and Mildred Poletsky Education Fund. Established in 1995 by the family of Mr. Richard Poletsky, an alumnus of Washington University. A prize is awarded annually to a professional student in the health sciences whose interest is in research on dementia and care of demented patients.

The Dr. Frank O. Richards Medical Student Scholarship Prizes. Provided by African-American alumni and friends of Washington University School of Medicine. The prizes embrace diversity efforts and are awarded in recognition of achievements in the first and second year of the curriculum. The November 2008 recipients: Oluwafunmi O. Awonuga and Isabelle T. Chumfong.

The John R. Smith Memorial Fund Award. Created in 1982, it is awarded to a medical student who has done meritorious clinical and/or research work in the Division of Cardiovascular Disease within the Department of Medicine. The May 2009 recipient: William John Hucker.

Dr. Margaret G. Smith Award. Given to a woman medical student for outstanding achievement in the first two years of medical school. The November 2008 recipient: Cheryl A. Mather.

Society for Academic Emergency Medicine Excellence in Emergency Medicine Award. Based on demonstrated excellence in the specialty of emergency medicine, it is awarded to a senior medical student at Commencement. The May 2009 recipient: Molly Katharine Tran.

Samuel D. Soule Award in Obstetrics and Gynecology. Presented to a member of the fourth-year class for meritorious achievement in either basic or clinical investigation in obstetrics and gynecology. The May 2009 recipient: Amanda Elaine Rohn.

Jessie L. Ternberg Award. Presented to a woman graduating from the School of Medicine who best
exemplifies Dr. Ternberg’s indomitable spirit of determination, perseverance and dedication to her patients. The May 2009 recipient: Ellen H. Bailey

Washington University Internal Medicine Club Research Award. Awarded to the member of the graduating class who has done the most significant research in any area of internal medicine. The May 2009 recipient: Karen Ama-Serwa Chachu.

Washington University Summer Research Prize. The award recognizes students for meritorious research in the Summer Research Fellowship Program at Washington University School of Medicine. The November 2008 recipients: David X. Jin, Agnieszka M. Milczarek.

Samson F. Wennerman Prize in Surgery. Donated by his wife, Zelda E. Wennerman, and awarded annually to the fourth-year student who has demonstrated promise in the field of surgery.

Doris P. and Harry I. Wexler Fund. Established in 1998 by a bequest from Mrs. Wexler, the prize is awarded annually for research in multiple sclerosis and in alternate years research in eye disease.

The Park J. White, MD Prize. Created in 1992 in honor of the centennial of the birth of Dr. White, who was a distinguished pediatrician, social activist and pioneer teacher of medical ethics. He introduced the first course on medical ethics to students in 1927. The prize is awarded to students for outstanding performance in the ethics elective offered by the Program for the Humanities in Medicine. The May 2009 recipient: Amelia Ann Adams.

Hugh M. Wilson Award in Radiology. Given annually to a graduating medical student in recognition of outstanding work in radiology-related subjects, either clinical or basic science. The May 2009 recipient: Lauren Qing Chang Sen.

The Wynder Prize in Preventive Medicine. An annual prize established in 1994 and awarded to senior medical students who have done the best research in preventive medicine. The May 2009 recipients: Scott Evan Hadland and Tammy Ting-Yu Shen Jacobs.

James Henry Yalem Prize in Dermatology. Established by Charles Yalem in memory of his son and awarded annually to members of the fourth-year class for outstanding work in dermatology. The May 2009 recipient: Monique Gupta.

**Voter Registration**

The 1998 Higher Education Act requires all postsecondary institutions to make available voter registration forms to all degree-seeking students.

Voter registration forms are made available to students at various sites on campus several months prior to each federal election cycle. The next federal election will occur on Tuesday, November 2, 2010. Registration forms will be available early in the Fall 2010 semester on the Medical Campus at the Student Affairs Office, Room 100, McDonnell Medical Sciences Building.

To register to vote in Missouri, you must:
- be a citizen of the United States
- be a resident of Missouri (new residents may register immediately, but proof of residency shall be required.)
- register at least 28 days prior to the election
- be at least 17-1/2 years of age (you must be 18 to vote)
- not be on probation or parole after conviction of a felony, until finally discharged from such probation or parole
- not be convicted of a felony or misdemeanor connected with the right of suffrage
You may register to vote:
- By mail through the post-card registration application
- At the office of the local election authority — Board of Election Commissioners for the City of St. Louis, Saint Louis County Board of Election Commissioners
- At any Department of Motor Vehicles office, or state agency which provides a service to the public, including libraries.

For additional information on voter registration, contact:
Secretary of State
Elections Division
James C. Kirkpatrick State Information Center
P.O. Box 1767
Jefferson City, MO 65102-1767
(573) 751-2301 (voice)
(800) NOW-VOTE (669-8683)
(573) 526-3242 (Fax)
www.sos.mo.gov/elections/movote.asp

The Washington University Graduate
Residency Training
Postdoctoral Training
Continuing Medical Education
Medical Alumni and Development Programs

**Residency Training**

Postgraduate residency training in an approved hospital is considered essential preparation for the practice of medicine. Most Washington University graduates serve three or more years of residency training, and many will gain additional experience as postdoctoral fellows.

In order to aid students in obtaining desirable residency appointments, an active counseling program is maintained. Students in their preclinical years can participate in a career counseling workshop in which they are given very specific information about subspecialties. They are encouraged to look at their own interests, attributes and priorities and, with this information, begin to make decisions about the specialty best suited for them. In addition, small group conferences are held for students to meet with faculty members from a variety of the specialty divisions at Washington University to learn more about the fields that they are interested in.

During their third and fourth years, students interact closely with the Career Counseling Office, which provides them with individual counseling to help plan for the residency application process. Students receive general background information about the kinds of residencies available, special issues concerning certain extremely competitive residencies and help identifying faculty members for further assistance. The Career Counseling Office maintains a web site (residency.wustl.edu) where students
can find information regarding 20 residency specialties. As the number of residencies may gradually decrease to closely approximate the number of graduates applying, students must make their choices with considerable care. The School participates in the National Resident Matching Program, which offers distinct advantages to applicants.

Results of these efforts have been gratifying. The PGY-1 residencies selected in the most recent residency matching (2009) are identified in the Alphabetical List of Students in the Register of Students section of this web site.

The School maintains an active interest in its graduates and is pleased to assist them in subsequent years as they seek more advanced training or staff appointments in the communities in which they settle.

**Postdoctoral Training**

Those departments that offer postdoctoral fellowships individualize such educational activity up to a maximum of 36 months of academic time. Such fellowships lead integrally to certification by the appropriate specialty and/or subspecialty boards of the American Medical Association.

**Fellowship And Other Funds**

Alexander and Gertrude Berg Fellowship Fund. Created in 1952 through the bequest of Gertrude Berg to provide a fellowship in the Department of Molecular Microbiology.

Glover H. Copher Fellow in Surgical Research. Established in 1971 to support a postdoctoral fellow in surgery.

William H. Danforth Loan Fund for Interns and Residents in Surgery. Provides financial assistance in the form of loans for postdoctoral students in surgery.

Antonio Hernandez, Jr. Fellowship in Pediatric Cardiology. Established in 1987 as a memorial to Dr. Hernandez.

Leopold and Theresa Hofstatter Fellowship. Established in 2000 from the estate of Leopold and Theresa Hofstatter to be used to support fellowships in neurological research.

J. Albert Key Fellowship Fund. Provides a stipend for a fellow in orthopaedic surgery.

Louis and Dorothy Kovitz Fellowship Fund. Established in 1970 by an alumnus and his wife to provide support for research by qualified residents or students interested in surgery, at the discretion of the Head of the Department of Surgery.

Carol B. and Jerome T. Loeb Teaching Fellowships at the School of Medicine. Established in 2004 to honor and thank St. Louis-area physicians with clinical excellence to encourage teaching that excellence to residents and students.

Stephen I. Morse Fellowship. Established in 1980 by Carl and Belle Morse in memory of their son; awarded to predoctoral or postdoctoral students pursuing research careers in microbiology, immunology and infectious diseases.

William D. Owens Anesthesiology Research Fellowship. Established in 2000 in honor of William D. Owens, MD. This fund will allow an individual to do a clinical or basic research fellowship for a two-year period.
The Esther and Morton Wohlgemuth Foundation Fellowship. Established to support a fellow in the Division of Cardiovascular Diseases.

Wyeth Fellowship in Antibiotic Resistance. Established in 2005 to provide an additional year of mentored research training for Infectious Diseases Fellow to focus their research on the prevention and control of antibiotic resistance.

Continuing Medical Education

The study of medicine is a lifelong process with continuing medical education being an integral component of the continuum. Since 1973 the School of Medicine has supported this learning endeavor through the operation of the Continuing Medical Education Program. Continuing Medical Education’s mission is to facilitate lifelong learning through providing learning opportunities for educational renewal and advancement in order to assist health care professionals to maintain and enhance professional competencies and performance to improve health care.

Pursuant to this mission the objectives of the continuing medical education program include the following:

• Enable the acquisition of new knowledge and skills through periodic courses, regularly scheduled conferences, and enduring materials for the delivery of quality patient care.
• Translate the results of research to clinical diagnosis and treatment for practicing physicians.
• Apply educational approaches in support of continuous quality improvement in health care delivery.
• Integrate clinical outcome measures for delivery of quality patient care into the educational process.
• Assist physicians’ adaptation to changing health care delivery environments.
• Support faculty development as postgraduate medical educators and leaders.
• Improve health care outcomes.

Each year more than 150 symposia and more than 180 recurring academic rounds and conferences as well as videos and monographs are provided with CME credit by this office. About 8,000 registrants attend these courses annually and receive more than 120,000 hours of instruction. CME-Online provides educational programs via the Internet. Since starting in 2000, the CME online program has grown to include more than 120 hours of potential CME credit. The URL is cme.wustl.edu. The educational program is fully accredited by the Accreditation Council for Continuing Medical Education and provides credits to physicians pursuant to the Physician’s Recognition Award of the American Medical Association, as well as various other types of state and specialty recertification and relicensure activities.

Medical Alumni and Development Programs

The Department of Medical Alumni and Development Programs works with individuals and organizations to secure the human and financial resources necessary to help the School of Medicine achieve and maintain excellence in research, teaching and patient care.

Washington University Medical Center Alumni Association

The Washington University Medical Center Alumni Association was organized more than 60 years ago to foster a continuing spirit of fellowship among graduates, and to maintain and enhance the tradition of excellence of the School of Medicine. Membership is provided to graduates and former house staff of the Medical Center.
The association complements the goals and purposes of the School of Medicine through a variety of programs for its members and current students. Involvement in these activities also provides the opportunity to continue the relationships begun as students and to develop rewarding professional associations.

**Student-Alumni Programs**

The Office of Medical Alumni and Development Programs and the WUMC Alumni Association assist students in a variety of ways. The Association makes a substantial financial commitment each year to support 16 Distinguished Alumni Scholars. These promising medical students receive full tuition, four-year scholarships in honor of great teachers and mentors who were also alumni of the School of Medicine. The Association also provides an activity fund for both the first- and second-year classes and sponsors a reception for the graduating class, their families and faculty.

In addition, the Association provides financial support to a number of student-initiated community service activities, including a variety of health education programs in public schools and clinics.

Medical Alumni and Development coordinates an alumni resource bank that arranges more formal contacts between alumni and students. Alumni volunteers host students who wish to spend time with a practicing physician, provide information to help students choose a specialty, serve as preceptors for clerkships and electives, and provide overnight lodging to fourth-year students going on residency interviews.

**Reunions and Other Events**

The School of Medicine's Reunion is held in May for medical classes who return at five-year intervals, beginning with the class observing its 10th year following graduation and continuing through the class celebrating its 65th reunion. The reunion schedule includes a scientific program, social events, tours of the Medical Center and the presentation of Alumni/Faculty, Alumni Achievement and Distinguished Service awards. Award recipients are chosen on the basis of personal accomplishment, professional achievement and/or service to the School of Medicine. Members of the graduating class are special guests at the awards banquet and are officially welcomed into Association membership.

The Alumni Office sponsors special alumni activities in selected cities across the United States. Volunteers from each area assist in sponsoring these events, which help alumni to stay abreast of the educational and research activities at the School of Medicine. The Alumni Office also compiles class newsletters for selected classes, including recent graduates and those in the "Diamond+" years (all those classes who have celebrated their 60th reunion).

**Alumni Support**

Supporting their school generously is a tradition for a large percentage of alumni of the medical school and the health professions programs. Each year alumni and friends make gifts to the Annual Fund, which supports the School's departments, divisions and health care professional programs, as well as scholarships and low-interest loan programs for students. Alumni also designate gifts for special purposes within the School, including specific research, education and training programs.

In 1977, School of Medicine members of the Eliot Society created the Alumni Endowed Professorship Program, through which gifts are used to establish an Alumni Endowed Chair in the School's departments. Nine such chairs have been created thus far.

**Policies, Student Constitution and Bylaws, Class Officers**
POLICIES RELATED TO EVALUATION

United States Medical Licensing Exam (USMLE)

Washington University School of Medicine students who anticipate practicing clinical medicine are required to take the USMLE Step 1 and 2 examinations.

The USMLE is designed to "assess a physician’s ability to apply knowledge, concepts, and principles, and to demonstrate fundamental patient-centered skills, that are important in health and disease and that constitute the basis of safe and effective patient care." The USMLE represents a single uniform examination for medical licensure in the United States, and as such, is a minimum requirement for
obtaining a medical license.

The USMLE consists of four separate examinations. "Step 1 assesses whether you understand and can apply important concepts of the sciences basic to the practice of medicine, with special emphasis on principles and mechanisms underlying health, disease, and modes of therapy. Step 1 ensures mastery of not only the sciences that provide a foundation for the safe and competent practice of medicine in the present, but also the scientific principles required for maintenance of competence through lifelong learning.” Step 1 is taken after completing the second year at WUSM.

Step 2 consists of two separate examinations, Step 2 CK (Clinical Knowledge) and Step 2 CS (Clinical Skills) which are taken at different times. "Step 2 assesses whether you can apply medical knowledge, skills, and understanding of clinical science essential for the provision of patient care under supervision and includes emphasis on health promotion and disease prevention. Step 2 ensures that due attention is devoted to principles of clinical sciences and basic patient-centered skills that provide the foundation for the safe and competent practice of medicine.” Step 2 exams are taken after completing the third year but prior to graduation from WUSM.

“Step 3 assesses whether you can apply medical knowledge and understanding of biomedical and clinical science essential for the unsupervised practice of medicine, with emphasis on patient management in ambulatory settings. Step 3 provides a final assessment of physicians assuming independent responsibility for delivering general medical care.” Step 3 is taken following graduation and during internship/residency training.

Further information can be obtained from the USMLE Bulletin of Information published by the National Board of Medical Examiners, and is available, along with application forms and information, at www.usmle.org.

Washington University School of Medicine Guidelines for Exam Administration*

Following are general guidelines for exams administered in the undergraduate medical curriculum. Additional requirements may be posed by the individual course master.

A. Expectations for Students:

1. Take the exam during the originally scheduled time, excepting extenuating circumstances. Note the Committee on the Academic and Professional Evaluation of Students’ policy:

"Students are required to take all examinations at the specified time. A student may be excused from this rule for extenuating circumstances at the discretion of the course master. Extenuating circumstances are normally defined as sudden personal illness. Doctor appointments of a routine nature or vacation time are not considered to be extenuating circumstances for which students can be exempted from the regularly scheduled exam date. Such occasions will be promptly reported to the Registrar. In the event of inability to attend a scheduled examination due to sudden illness the student is required to inform the course master prior to the examination and to be evaluated by the Student Health Service. In the event that the student cannot reach the relevant course master, the student should contact the associate dean for student affairs.”

2. Tardiness will not be excused except in extenuating circumstances.

3. Not share study materials, exchange information, collaborate or communicate with others during the exam
4. Turn off and leave cell phones and other electronic devices in their bags.
5. Hand their exam to the proctor prior to leaving the room.

*Not applicable to take-home exams

**B. Expectations for Faculty:**

1. Exams should be proctored by a faculty member or a staff member comfortable with proctoring and exam administration guidelines.
2. Administration should be fair to all students:
   3. IF the faculty member answers a substantive question or clarifies an issue, the same should be communicated to ALL students, including those in separate rooms or at different times.
   4. Reasonable adjustments should be offered to students who require special accommodations, including a separate room or additional time. Course masters are notified of these students through the Associate Dean for Student Affairs.
   5. If a student behaves inappropriately, the course master should notify the Associate Dean for Student Affairs immediately.
   6. All requirements of students should be communicated to all students PRIOR to the start of the exam.

**POLICIES RELATED TO ABSENCES AND LEAVES**

**Absence Policy for MD Students on Clinical Clerkships**

The profession of medicine requires the utmost commitment of time and energy to patient care and research activities. While the development of this commitment begins in the preclinical years, it is further practiced and developed during the clinical clerkship.

The clinical clerkship year at Washington University School of Medicine comprises 48 weeks of required core clinical experiences. All students on the clinical clerkships have a scheduled 2-week winter recess break, a 3-day spring break and a 2-week break between the end of the third-year clinical clerkships and the start of fourth-year elective rotations (or free time prior to graduation for MSTP students). During every clinical clerkship, each student is expected to participate fully in all activities of the clerkship up until the designated end time of the clerkship or the start time of a holiday break. This regularly requires participation beyond formal weekday hours to include evening and nighttime call and clinical responsibilities on weekends.

If a student is ill or has a personal emergency, (s)he should notify the clerkship course master’s office and the resident supervising his/her clinical team the morning of the absence. If the absence extends beyond two consecutive days, the student should also notify the Office of Student Affairs.

It is recognized that a student may, on a very occasional basis, desire to be excused from clinical activities for professional or significant personal events. For the third year, the Curriculum Evaluation Committee agreed upon the following guidelines regarding the maximum number of days of excused absences (including illness) from clerkships: Students may miss up to 5 days on a 12-week clerkship, 3 days on a 4-week clerkship, and 1 day for a 2-week clerkship without making up the missed time. Students must recognize that clerkship teaching, learning and evaluation are dependent on the student’s presence and participation in every aspect of the clerkship. While students will not be graded
down only because of an excused absence, time spent away from the clerkship may decrease learning and impede effective evaluation; students are encouraged to make up missed work on rotations in which this can result in meaningful learning and should discuss this option with the clerkship director. It is the responsibility of the student to directly contact the clinical clerkship course master in writing (by letter or e-mail) to obtain permission for any planned absences well in advance of the planned absence.

At the discretion of the course master, any student who misses portions of the clinical clerkship experiences due to planned and/or unplanned absences that exceed the maximum time may be required to utilize winter recess, spring break or free time at the end of the third year clinical clerkships to complete the 48 weeks of mandatory clinical clerkships.

Absence Policy for MSTP Students on Clinical Clerkships

It was agreed at the April 17, 2003, CEC-III meeting that MSTP students would be allowed to miss up to three days of any four-week clerkship, and up to nine days of any 12-week clerkship for any reason including interviews. This is a substantially more flexible policy than we have towards the M.D. students, in which we limit the number of days off to two in a four-week period, and five in a twelve-week period. We recognize that for some MSTP students entering competitive specialties with limited interview dates it may be necessary for them to plan far enough ahead in their training to schedule a month for either a very light elective or a free month to allow appropriate flexibility for interviews. The committee also agreed that the MSTP students should be encouraged to: (1) talk with Dr. Kathryn Diemer early for assistance in residency planning; (2) seriously consider coming out of lab a month earlier to allow flexibility for interviewing; and (3) delaying graduation by one year to increase flexibility. When absences are necessary on a clerkship, advanced discussion with the clerkship director will better allow placement on a team to allow maximum educational value. We believe this policy strikes an appropriate balance between increased flexibility for the MSTP students and assuring a meaningful educational experience on the core clerkships.

Leave of Absence Policy

A. A student may request a leave of absence for academic or personal reasons by submitting a statement in writing to the Office of Student Affairs. Such a statement should include indication of the beginning and anticipated ending dates and a brief statement of the reason (academic or personal). Requests for leave of absence must be approved by the Associate Dean for Student Affairs. Leaves of absence shall be granted for no more than one year, but in unusual cases may be renewed by the CAPES for additional years after discussion with the Associate Dean for Student Affairs. Students requiring a personal leave of absence for medical reasons must submit a supporting letter from the Director of the Student Health Service. A written statement of medical clearance will be required before the student may return from such a leave.

B. If there is a reasonable basis for believing that the continued presence of the student on campus or in clinical rotations poses a substantial threat to the student, to patients or to the rights of others to engage in their normal University functions and activities. The following procedure applies:

1. The Chancellor or his designate may impose an involuntary leave of absence when there is evidence that a student has committed an offense under these rules or the University's Judicial Code and there is evidence that the continued presence of the student on the University campus or as a participant in a clinical rotation poses a substantial threat to himself or herself, to patients or to the rights of others to continue their normal University function and activities.
2. Imposition of the involuntary leave of absence may result in denial of access to the campus, prohibition of class attendance and/or prohibition of participation in clinical rotations.

3. If an involuntary leave of absence is imposed, the suspending authority shall prepare a written notice of the imposition and shall have the notice mailed certified or personally presented to the student. The written notice shall include a brief statement of the reasons therefore, and a brief statement of the procedures provided for resolving cases of involuntary leave of absence under these rules.

4. The student shall be given an opportunity to appear personally before the suspending authority within five (5) business days from the date of service of the notice of imposition of the involuntary leave of absence. If the student asks to appear personally before the suspending authority, only the following issues shall be considered:
   a. Whether the suspending authority's information concerning the student's conduct is reliable; and
   b. Whether under all the circumstances, there is a reasonable basis for believing that the continued presence of the student on campus or in clinical rotations poses a substantial threat to the student, to patients or to the rights of others to engage in their normal University functions and activities.

5. Within one week of the date of imposition of the involuntary leave of absence, the suspending authority shall either file a statement of charges against the student with the University Judicial Board, and shall have the statement or charges served, by mail or personal service, upon the student and the dean of the school or college or director of the program in which the student is enrolled or initiate proceedings under these rules to convene a Disciplinary Committee.

6. A temporary suspension shall end when
   a. rescinded by the suspending authority, or
   b. upon the failure of the suspending authority to promptly file a statement of charges with the University Judicial Board or a Disciplinary Committee, or
   c. when the case is heard and decided by the University Judicial Board, or the Disciplinary Committee.

Return of students from involuntary leave of absence requires clearance of both the Director of the Student Health Service and the Associate Dean for Student Affairs.

C. Students receiving financial aid should be advised that at the end of sixty (60) days or more leave of absence, the grace period for loan repayment during a leave of absence may be exhausted. In such cases there will be an obligation for the student to start payments. According to the Federal rules under which loans are made, the use of a grace period during a leave of absence will generally mean that the schedule for loan repayment may be changed. Students who are receiving financial assistance should consult with the Financial Aid Office to determine the implications of a Leave of Absence for their financial aid.

D. A student returning from a leave of absence of one year duration or less will maintain the same tuition rate. Students returning after more than one year leave of absence will assume the tuition rate of the class they are rejoining. Appeals of this policy should be submitted in writing to the registrar. Please refer to the section on Registration, Payment of Financial Obligations, Withdrawal and Refund Policy regarding policies on the effect of a leave of absence on tuition and other financially related matters.
registered in the graduate school during the research years. Both student health and disability coverage are provided by the Division of Biology and Biomedical Sciences.

**MA/MD**

Student status is maintained while in the research phase of the MA/MD program. Students are registered in the graduate school during the research year. Both student health and disability coverage are provided.

**Five-Year MD Program**

Research Year Here: Student status is maintained throughout the approved research year. In exceptional circumstances, a second research year may be permitted. The student may receive a stipend, but may not be considered an employee of the university. Students are registered in the School of Medicine. Both disability and student health coverage are required and are payable by the student. Outside funding often covers such fees.

Research Year Away: Student status is maintained throughout the approved research year. Students are registered in the School of Medicine. Both disability and student health coverage are optional with proof of like coverage. The cost of either elected coverage is payable by the student. Outside funding often allows these costs.

**Leave of Absence**

Leave of Absence Year Here: Student status is not maintained during the leave of absence though benefits of student health coverage and disability insurance are optional throughout an approved leave. Costs are payable by the MD program students. MD/MA and MD/PhD students may request support for these costs from the Division of Biology and Biomedical Sciences if funds are available. The Office of Financial Aid should be consulted for information regarding loan repayment and grace periods when on a leave of absence.

Leave of Absence Year Away: Same as Leave of Absence Year Here

A student returning from a leave of absence of one year duration or less will maintain the same tuition rate. Students returning after more than one year leave of absence will assume the tuition rate of the class they are rejoining. Appeals of this policy should be submitted in writing to the registrar.

**POLICIES RELATED TO PROFESSIONALISM AND CONDUCT**

**Guiding Principles of Professionalism**

**A. Preamble:**

Medicine is one of the oldest of the learned professions. A professional is one who is in command of a specialized body of knowledge and skills, and is given specific rights not typically allowed to the public. Along with those rights, the professional has specific responsibilities or duties not generally expected of the public.

The singularity of medicine is that it deals with human health. Patients are potentially at their most vulnerable when establishing a relationship with a physician. That the patient’s relationship with his/her physician involves a dependency that encompasses life and death adds further to the uniqueness of this relationship.

The label of professional is not a right but must be earned. The special contract physicians have with society has professionalism as its foundation. Professionalism consists of fundamentally important qualities including altruism, compassion and empathy, respect for patients and health care workers, commitment to ongoing excellence, honesty, trustworthiness, integrity, accountability, recognition of
limits, collaboration, and duty to society.

Professional development is an on-going process at all levels of training and practice. The purpose of this document is to outline those elements of professionalism expected of our medical students. It is not meant to be all encompassing, providing exact guidelines for all possible situations. Rather, four broad categories of professional behaviors are described below, with specific principles cited for each in bold print, and examples provided for some of the principles in regular text. While this document was developed with medical students in mind, it is generally applicable to all medical professionals.

B. Professional Responsibility:

1. Students have a responsibility to actively participate in their education and to work to improve the educational environment for future students.

2. Students should have a willingness to pursue life-long, self-directed learning, which is an essential attribute of any professional.

3. Students should act responsibly in their personal and academic lives with regard to meeting deadlines, financial obligations and other comparable responsibilities.

4. Preparation for class and during clinical rotations sets a good example for peers, maximizes every student’s learning opportunity, and demonstrates respect for the teachers and peers.
   a. Respecting one’s peers in a classroom or in the hospital setting includes behaviors such as arriving on time, exhibiting respectful body language, listening attentively, turning off cell phones and allowing all present to engage in discussion.

5. Students should report to the appropriate supervisor potentially serious errors that others have committed.

6. Students should contribute to their community.
   a. Students are encouraged to participate in the first- and second-year teaching groups.
   b. These provide a service to the larger St. Louis community, while teaching students how to communicate with people of diverse backgrounds.
   c. Students are encouraged to serve at the Saturday Neighborhood Health Clinic and other community service and teaching activities.

7. Students should be aware of the larger social and economic context in which disease occurs, and take advantage of opportunities to deepen their knowledge about this topic.

C. Competence and Self-improvement:

1. In order to function at the expected level, students should attend to their own physical and emotional health.
   a. The experience of being a medical student can be physically and emotionally challenging. Students need to be able to identify when they are overwhelmed to the point where they may not be able to function appropriately. Students are encouraged to seek educational assistance and/or the emotional support of others in these instances.

2. Recognizing and admitting errors in patient care are key to being a good physician.
   a. Students should view mistakes as part of learning. Assuming responsibility for mistakes is critical for professional development.
   b. Developing productive strategies for dealing with mistakes and non-confrontational ways of correcting them is essential.

3. Feedback, advice and criticism from residents, fellows and faculty fosters personal and professional
development, and should be taken in the context of mentoring.

a. Students should assume that opinions of their faculty/residents/fellows that may seem unclear are usually solidly founded, and accept feedback regarding their performance openly, and maturely from individuals more experienced than they.

b. Students should provide suggestions and examples for improving the mentoring environment by forthrightly evaluating their instructors.

4. Students should identify and correct errors in patient care as soon as possible or notify those who can correct it.

5. Students should balance personal and professional interests.

a. Students should not over-commit.

b. Students should communicate schedule conflicts to course directors, lecturers, and/or house staff.

D. Respect for others and professional relationships:

1. Students should conduct themselves with manners and consideration of all others, and be respectful of others’ time.

2. While individual effort is important in developing a medical knowledge base, much of what students learn in medical school will depend on a collaborative effort with their peers.

a. From the first day of medical school, students should encourage each other and collaborate with their peers when appropriate in the learning environments of lectures, small group discussions, and lab sessions. In doing so, they are laying the foundation for the truly collaborative nature of medicine.

b. During the clinical years, students should understand that their peers are a valuable resource. Likewise, a student should assist peers in patient care responsibilities.

c. In all cases, students should respect the work and learning opportunities of their classmates and they should share educational opportunities with their peers. Professional behaviors include listening to other’s presentations, and encouraging others’ opportunities to present, ask/answer questions, admit patients, participate in surgical cases/procedures, or perform duties.

3. Respect for the ethnic and cultural diversity of classmates provides for a more nurturing environment for all.

a. Students should be aware that their classmates come from a wide variety of religious and ethnic backgrounds and that they will have differing lifestyles and viewpoints. This diversity is an important resource in our community, contributing to personal and professional growth of all.

b. Students should be sensitive to the importance of these issues and should seek opportunities to enhance appreciation of multiple cultures through dialog, educational opportunities, etc.

4. Students should be supportive of peers during difficult times in their personal and professional lives.

a. Students must appreciate that their peers may have issues in their personal or professional lives (e.g. family, medical, academic, or administrative problems) that may affect their interactions with others. In these circumstances, students should make every attempt to be sympathetic and to offer their support to those students.

5. Participation and teamwork enhances the educational experience.

a. The learning process is a partnership between students and faculty. Students should actively participate in this partnership by providing feedback to professors by way of evaluations and surveys.

b. Contributing to the overall functioning of the team maximizes both learning and patient care in the clinical setting.

6. Understanding the appropriate venues for feedback to house staff/fellows/faculty is critical to
successfully resolving conflicts.

a. Students should be aware of the hierarchy of the team, and appropriate mechanisms for handling disagreement with faculty/residents/fellows. Conflicts can be translated into productive outcomes if handled appropriately.

b. medicine.wustl.edu/students/conduct.htm

7. Maintaining a professional relationship with teachers (including faculty/residents/fellows and TAs) is important, especially during times when these teachers are in a position to grade or evaluate the student.

a. Students should avoid behaviors that could potentially be construed as attempting to influence the faculty, for example running personal errands.

b. The University has specific codes and regulations regarding romantic relationships between a student and a teacher, including faculty/resident/fellows (www.wustl.edu/policies/consent.html)

   Students engaged in such relationships should review these codes and avoid any situation that can cause potential conflict of interest in the academic setting.

8. Patients should be treated as individuals in the context of their family, culture and community. Personal bias should be subordinated when possible to further the therapeutic relationship.

   a. Use of offensive language or gestures is unacceptable.

   b. At times, some religious beliefs will require the use of alternative care approaches.

   c. Students, like practicing physicians, should not refuse to participate in the care of a patient with a communicable disease unless this represents a meaningful threat to the student’s own health. In contrast, a student who is verbally or physically threatened by a patient may ask to be excused from care of that patient.

9. Students should treat hospital staff with appreciation and respect as they are vital members of the health care team.

E. Honesty and integrity:

1. Student work should be original.

   a. Only authorized resources should be used during examinations, quizzes or graded course work. WUSM has a zero tolerance policy for plagiarism. [link to University’s definition]

   b. When students are aware that a classmate has submitted work that is not their own (cheated), they should discuss this situation with the Course Master and/or the Associate Dean for Student Affairs.

2. Students must respect patients’ rights and maintain confidentiality, in accordance with HIPAA guidelines.

   a. Students should be ever aware that patients are ill and have the right to refuse care, particularly when poorly provided.

   b. Patient information should only be discussed with appropriate people at appropriate times.

   c. Patient records should not be photocopied carelessly or removed from appropriate areas.

   d. Patient information should be disposed of appropriately to prevent careless transmission of patient information.

3. Students should clearly communicate their abilities and level of training to patients.

   a. If a student does not know the answer to a patient’s question, it is his/her responsibility to admit this lack of knowledge.

   b. Even if other members of the health care team introduce students to patients as “doctor,” the
student should never do so as it leads to a false perception of expertise on the patient’s part.

c. Students should always be truthful with the house staff and other medical staff in terms of patient care and never compromise patient care as a consequence of personal gain.

4. Students should not participate in any aspect of patient care if under the influence of a substance that may compromise his/her judgment or otherwise cause the patient harm. Likewise, students should report any member of the health care team who may be participating in patient care while under the influence of a judgment-impairing substance.

5. Any student who is impaired by physical or psychological illness should excuse him/herself from patient care responsibilities, and should also respect recommendations to do so from colleagues or supervisors.

6. Although students are often tired or under stress, they should attempt to maintain an appropriate level of composure at all times.

7. Students should be appropriately attired for all patient care duties.

8. Students should carefully consider their participation in benefits provided by pharmaceutical companies or other medically-related businesses.

9. Students should respect the laws of federal, state and local governments in both professional and private life.

**Washington University School of Medicine Professionalism Concern Form**

Please see Appendix B in the "Rules Governing Review of Student Performance" booklet.

**Research Integrity Policy**

Allegations of breach of research integrity policy are the primary responsibility of the Research Integrity Committee of the School of Medicine. Complaints regarding students enrolled for the M.D. degree will be directed promptly to that committee. The Research Integrity Committee will promptly investigate the charges and report its conclusions and recommendations to the Dean, who will refer the issue to CAPES as a breach of professional integrity if further action is warranted.

For further information, refer to the policy’s web site: [www.wustl.edu/policies/research.html](http://www.wustl.edu/policies/research.html)

**Policy Against Abusive Conduct**

**A. Policy Statement**

Washington University School of Medicine (WUSM) is committed to having a positive learning and working environment for its students, faculty, and staff. All individuals have the right to enjoy an environment free from all forms of conduct that can be considered harassing, threatening or intimidating. In addition, academic freedom can exist only when every person is free to pursue ideas in a non-threatening atmosphere of mutual respect. WUSM is committed to protecting the academic freedom and freedom of expression of all members of the school community and this policy against abusive conduct will be applied in a manner that protects those freedoms. Abusive conduct is reprehensible and threatening to the careers, educational experience, and well being of all members of our community and will not be tolerated. This policy applies to all students, faculty and staff and is in addition to the Washington University Policy on Sexual Harassment.

**B. What is Abusive Conduct?**
Abusive conduct is behavior that creates an intimidating environment and is likely to interfere with an individual's work or education. This conduct can be verbal, visual, physical, or communicated in writing or electronically. Such conduct is typically directed against a particular individual or individuals. It includes, but is not limited to, situations where one person has authority over another. In such situations, abusive conduct is particularly serious because it may unfairly exploit the power inherent in a faculty member's or supervisor's position.

1. Examples of conduct that may be considered abusive include but are not limited to:
   a. Threatening or intimidating behavior or words (written or oral)
   b. Obscenities/profanities (verbal or gestures) directed at a person
   c. Threatening or obscene gestures, jokes or cartoons
   d. Degrading a person or a group on the basis of a personal or cultural characteristic
   e. Taunting, jeering, mocking or humiliating another person through acts or words
   f. Screaming and/or yelling at or around others
   g. Insulting someone, especially in the presence of others
   h. Endangering the safety of an individual or individuals

2. In considering a complaint under this policy, the following understandings shall apply:
   a. Abusive conduct must be distinguished from behavior which, even though unpleasant or disconcerting, is appropriate to the carrying out of certain instructional, advisory, or supervisory responsibilities. In the context of patient care clear and direct communication may be necessary in order to deliver safe, effective, appropriate and timely clinical treatment.
   b. Instructional responsibilities require appropriate latitude for pedagogical decisions concerning the topics discussed and methods used to draw students into discussion and full participation.

The fact that someone did not intend to be abusive is generally not considered a sufficient defense to a complaint, although the reasonableness of the accuser's perceptions may be considered. In most cases, it is the characteristics and the effect of the behavior on the complainant and whether a reasonable person would find the conduct abusive that determines whether the behavior was abusive.

C. Reporting Abusive Conduct

The Medical School can respond to specific instances and allegations of abusive conduct only if it is aware of them and therefore encourages anyone who believes that he or she has experienced abusive conduct to come forward promptly with inquiries, reports, or complaints and to seek assistance. In addition, any faculty member, manager, or employee who becomes aware of instances or allegations of abusive conduct, by or against a person under his or her supervisory authority, is required to report it to the appropriate dean, director, department head or other similar administrator or to the Human Resources Department. Once a complaint is received, it is the responsibility of the dean, director, department head or similar administrator to respond to the allegations and reports of abusive conduct and take corrective action, if appropriate, or to work with Human Resources to develop such a response and corrective action, if appropriate. All complaints and their resolution must be reported to Human Resources.

D. Protection of Rights

1. Retaliation
   a. Definition: Retaliation means conduct that adversely affects another’s terms or conditions of employment or education and has the effect of harming a person for filing a complaint or for participating in the investigation. Retaliation can take many forms. Examples include but are not limited to:
      • Reassignment of work duties without good reason
• Loss of job benefits (i.e., travel)
• Loss of salary
• Termination
• Threats

b. Against the Complainant: It is a violation of this policy to retaliate against persons who report or make a charge of abusive conduct or against those who testify, assist, or participate in any investigation involving a complaint. Any such retaliation – or any encouragement of another to retaliate – is a violation of this policy, independent of whether the particular claim is substantiated.

c. Against the Respondent: Lodging a complaint is not proof of prohibited conduct. A complaint shall not be taken into account during reappointment, tenure, promotion, merit, or other evaluation or review until a final determination has been made that the policy has been violated.

2. Knowingly False or Malicious Complaints:
Accusations of abusive conduct typically have injurious and far-reaching effects on the careers and lives of accused individuals. Therefore allegations must be made in good faith and not out of malice. Knowingly making a false or frivolous allegation will not be tolerated and will subject the person making such a report to disciplinary action.

E. Possible Sanctions
Possible sanctions for a person found to exhibit abusive conduct include but are not limited to the following:

In many situations, the following examples of sanctions may be sufficient.
  • oral or written reprimand
  • required attendance at a sensitivity program
  • apology to the victim
  • oral or written warning

In certain situations, the following sanctions may also need to be considered.
  • loss of salary or benefit, such as sabbatical or research or travel funding
  • loss of non-salary benefits (i.e., travel funding)
  • demotion
  • suspension, probation, termination

While counseling is not considered a sanction, it may be offered or required in combination with sanctions.
Washington University Policy on Discriminating Harassment

Washington University School of Medicine Guidelines for Professional Conduct in Teacher/Learner Relationships

I. Goals of Policy

1. To define standards of conduct among all members of the Washington University Medical Center community generally, and specifically within the teacher/learner relationship.

2. To specify a procedure for reporting potential student mistreatment or abuse.

3. To create an administrative mechanism for handling alleged incidents of mistreatment or abuse.

4. To develop a monitoring system to identify individuals or departments whose abusive behavior persists despite intervention.

II. Preamble

The goal of the Washington University Medical Center is to provide patient care, medical education, and biomedical research of the highest quality. Accomplishing this goal depends in part on an atmosphere of mutual respect and collegiality among all those who work here. Disrespectful or abusive conduct of any kind at the Medical Center will not be tolerated. To this end, the School’s Committee on the Professional Treatment of Medical Students endorses the Professional Service Commitments outlined by Washington University School of Medicine, as well the standards put forth by the Barnes-Jewish Hospital BJH Cares campaign. These documents address the broad issues of respectful behavior among all members of our Medical Center community. The current document focuses instead on the special issues presented by the teacher/learner relationship, and applies to all years of the medical school curriculum.

Our students are exceptionally talented individuals, dedicated to becoming outstanding physicians, who have selected this medical school for their training. Effective learning is possible only in an environment where students can trust their teachers to treat them fairly and with respect. The teacher may be a faculty member, resident, student, or other member of the health care team. One manner in which the teacher/learner relationship is unique is that students are vulnerable, depending on many of their teachers for evaluations and recommendations. In addition, medical education includes mastering not just pathophysiology but also the essentials of professional behavior. Students learn professional behavior primarily by observing the actions of their teacher role models. Unprofessional, disrespectful or abusive behavior by teachers is antithetical to standards of professional conduct that medical students are expected to master. These behaviors by teachers may also be self-perpetuating, as students come to believe that such behavior is appropriate when they assume the role of teacher.

III. Responsibilities of Teachers and Learners

The teacher-learner relationship confers rights and responsibilities on both parties. Behaving in ways that embody the ideal student-teacher relationship fosters respectful behavior, minimizes the likelihood of student mistreatment or abuse, and optimizes the educational experience for students.

A. Responsibilities of Teachers

• Be prepared and on time.
• Provide learners with most current materials.
• Treat students fairly, respectfully, and without bias related to their age, race, gender, sexual orientation, disability, religion or national origin.
• Give students timely, constructive and accurate feedback.
• Distinguish between the Socratic method, where insightful questions are a stimulus to learning and discovery, and over-aggressive questioning, where detailed questions are repeatedly presented with the endpoint of embarrassment or humiliation of the student.

B. Responsibilities of Learners
In all settings:
• Be courteous and respectful of teachers and fellow students regardless of their age, race, gender, sexual orientation, disability, religion or national origin.
• Treat fellow students as colleagues, not competitors.
• Take responsibility for maximizing your educational experience by addressing conflicts and discomforts which may impede your learning.
• Be an enthusiastic learner.
• Be trustworthy and honest.
• Know your limitations and ask for help when needed.

In the clinical setting:
• Put the patients’ welfare first.
• Know what’s going on with your patients.
• Take the initiative to educate yourself about their illness.
• Put patient welfare ahead of your educational needs.
• Treat all patients and members of the health care team respectfully, regardless of their age, race, gender, sexual orientation, disability, religion or national origin.
• Be compassionate.
• Respect patients’ privacy.

IV. Unprofessional and Abusive Behaviors
The responsibilities of teachers and students listed above constitute examples of respectful and professional behaviors. These should be our standards. Some behaviors which fall outside of these guidelines are clearly abusive. More commonly, however, they represent poor judgment, unprofessional behavior or mistreatment. Determining whether a given behavior constitutes abuse or unprofessional behavior is often a matter of perception. It involves a subjective assessment of the intentions of the doer and how the behavior in question was perceived by the recipient. The behaviors listed below in Section A are clearly abusive. Students who feel they may have been abused should discuss the incident or behavior in question with the individuals listed in Section V of this policy. Other disrespectful or unprofessional behaviors, such as (but not limited to) those noted in Section B, may also disrupt the student’s educational experience. Students who feel they have been treated in this manner may also discuss the incident or behavior with other students, faculty members or residents, coursemasters, or the individuals listed in Section V of this policy. Students are encouraged to take responsibility for addressing issues which may be detrimental to their educational experience.

A. What is Clearly Student Abuse
1. Unwanted physical contact (such as hitting, slapping, kicking, pushing) or threats of same.
2. Sexual harassment (see the institution’s policy on sexual harassment above).
3. Discrimination based on age, race, gender, sexual orientation, disability, religion or national origin.
4. Requiring students to perform personal chores (i.e., running errands, babysitting, etc).

B. Disrespectful or Unprofessional Behavior
(This list is not intended to be all-inclusive, but to provide examples of inappropriate behaviors.)
1. Repeated questioning of a student with the primary intent to humiliate or embarrass.
2. Grading based on factors other than performance or merit.
3. Coercing students to do something they find morally objectionable.
4. Public humiliation.
5. Requiring excessive menial, noneducational chores. Work related to the care of patients contributes to the efficient functioning of the team, but must be balanced with educational opportunities.
V. What to Do If You Believe That You Have Been Abused or Mistreated

First, carefully examine the circumstances of the incident or incidents which occurred. Discuss the event with someone else who witnessed it, or with another student or individual whose judgment you trust. Do they come under the behaviors listed in Section A above? If so, meet with your coursemaster and describe what happened. If the coursemaster takes action to settle the complaint, he/she will submit a written report of these actions to the Associate Dean for Medical Student Education. If you are not satisfied with your interaction with the coursemaster, or do not feel comfortable approaching him/her, meet with the Associate Dean for Medical Student Education. The Associate Dean will follow the procedure listed below.

If you determine that you have been treated disrespectfully or in an unprofessional manner, but have not been abused as described in Section A above, it may still be appropriate to pursue your complaint. You may do this by directly approaching the person whom you feel mistreated you, or by seeking assistance from another student, faculty member, resident, the coursemaster, or the Associate Dean for Medical Student Education. The goal of this process is to foster your educational experience by minimizing behaviors which detract from it.

The University will keep confidential all records of complaints, responses and investigations, to the extent permitted by law. Please refer to the University’s policy on sexual harassment above for details regarding confidentiality.

VI. Procedure for Handling Complaints of Student Abuse

The Associate Dean for Medical Student Education will be responsible for hearing complaints of student abuse (as described under Section A above) which are not settled at the coursemaster level. (Complaints settled by the coursemaster will also be relayed to the Associate Dean in writing.) He/she will be responsible for reviewing the complaint and obtaining additional information. If the initial review discloses that the complaint warrants further review, he/she will convene an ad hoc committee to hold a hearing. The accused will be notified in writing of the complaint and the policy for handling such complaints, and will be invited to attend the hearing. A confidential copy of the notification will be sent to the accused’s department chair (for faculty and residents), training program director (for residents), or the Associate Dean for Student Affairs (for students).

If, however, the initial review discloses that the complaint has no merit, the Associate Dean for Medical Student Education will dismiss it. The student will be notified and may appeal to the Associate Dean for Student Affairs, who will convene an ad hoc committee to address the complaint.

The ad hoc committee will meet to review the facts of the complaint, and may receive written or oral testimony. All materials will be held confidential by the committee. The accused may attend the hearing, and will be provided the opportunity to rebut the complaint. The chair of the ad hoc committee will submit a written report of the committee’s findings to the Associate Dean for Medical Student Education. The Associate Dean will notify the accused and the student in writing of the findings. The department chair, program director or Associate Dean for Student Affairs will also be notified (see above), and will be responsible for determining disciplinary actions, which will not be disclosed to the accusing student. The Associate Dean for Medical Student Education will be notified in writing of any disciplinary action taken. Record of the proceedings will be kept by the Associate Dean for Medical Student Education. All complaints of student abuse brought to the Associate Dean will be cross-checked to determine if the accused has been cited previously.

VII. Appeals Process

If the accused is a faculty member and wants to appeal the decision of the ad hoc committee or the disciplinary action of the supervisor, a written appeal may be submitted to the University’s Committee on Faculty Rights, which will follow its policy for review. If the accused is a resident physician, a written appeal may be submitted to the Associate Dean for Graduate Medical Education.

If the accused is a student, a written appeal may be submitted to the Dean of the School of Medicine.
The Dean or his designate will conduct an appeal review by examining the proceedings of the ad hoc committee as well as any new facts the accused student offers for consideration. The Dean or designate will notify the accused student in writing of his decision. There will be no further appeal.

**Washington University School of Medicine Tobacco-Free Policy**

**Effective June 11, 2008**

It is the policy of the University to provide a healthy, comfortable and productive work and learning environment for all faculty, staff and students. All smoking and other use of tobacco products are strictly prohibited within the School of Medicine buildings and on our property, including during breaks and meal times. This policy applies to the entire School of Medicine community, including, but not limited to all faculty, staff, students, patients, contractors and visitors.

Individuals within the WUSM community are not permitted to smoke or use tobacco products within WUSM owned, leased or occupied facilities or on WUSM owned, leased or occupied property. This includes: the physical campuses; parking facilities and lots (including in personal vehicles at these locations); WUSM owned, leased or rented vehicles; within 25 feet of entryways or exits; near air intakes; or near fire/explosion hazards; any worksites in which individuals within the WUSM Community work.

If individuals within the WUSM community smoke or use tobacco products off WUSM properties, they are expected to be respectful of residents, hospitals and businesses neighboring WUSM facilities. They should not loiter in front of homes, hospitals or businesses near WUSM facilities and must discard tobacco products in appropriate receptacles.

Violations of the policy may result in disciplinary action.

**HIPAA Policies**

**Washington University Computer Use Policies**

**POLICIES RELATED TO STUDENT RIGHTS, PROCEDURES, AND SERVICES**

**Policies for Students with Disabilities**

It is the goal of Washington University to assist students with disabilities in removing the barriers their disabilities may pose and provide support in facing the challenge of pursuing an education at Washington University.

Washington University recognizes and accepts its professional, legal and moral responsibility to avoid discrimination in the acceptance and education of qualified students with disabilities and to provide reasonable accommodations to such students consistent with the principles embodied in the law. These guidelines apply to students seeking admittance as well as to those who become disabled while they are enrolled.
Washington University makes every effort to insure that all qualified applicants and students can participate in and take full advantage of all programs and opportunities offered within the University. Washington University encourages and gives full consideration to all applicants for admission. Washington University does not discriminate in access to its programs and activities on the basis of age, sex, sexual orientation, race, disability, religion, color, or national origin.

All students in educational programs at the School of Medicine, those seeking admittance, as well as those who become disabled while they are enrolled, must possess those intellectual, ethical, physical, and emotional capabilities required to undertake the full curriculum and to achieve the levels of competence required by the faculty and the profession.

In this regard, we will be guided by the principles outlined below.

A. Responsibilities of the Student

1. Disclosure of Disability

It is the responsibility of a student who has a disability to disclose it and request accommodation from the Dean for Student Affairs or Program Director. The School encourages students with disabilities to identify themselves as early as possible in order to optimize the mobilization of resources and available accommodations.

2. Diagnosis of Disability

Students who are in academic difficulty that might be a consequence of a disability are encouraged to avail themselves of diagnostic services that may lead to accommodations. Furthermore, such students are encouraged to explore with the administration of their academic unit the possibility of a disability if the inquiry is relevant to educational performance and there is evidence of educational performance problems.

3. Documentation of Disability and Request for Accommodation

The disability, its functional impact and requested accommodation(s) must be documented. If the student discloses a disability and requests accommodation, the School requires documentation of the disability from a qualified professional. The student is financially responsible, unless there are extraordinary and compelling circumstances, for the costs related to the documentation by an appropriately educated and trained professional. The information provided by the professional must be factual, objective and technically valid, and must establish clearly that the disability substantially limits one or more of the student’s major life activities. The professional(s) who evaluate the student should identify options for management of the disability. Based on this information, the affected student then should request in writing the accommodations which he or she requests be made. The Dean for Student Affairs or Program Director and the student should work together to arrive at reasonable accommodations. The School may also require a second expert opinion for which the School may be financially responsible under extraordinary and compelling circumstances. The School reserves the right to request as much detailed information from the student and/or the professional(s) as is necessary to assess the scope of the disability and/or the reasonable accommodations.

B. Responsibilities of the School

1. Review of Requests for Accommodation

Requests for accommodations will usually be reviewed by the Dean for Student Affairs or Program Director. An ad hoc assessment team may be convened which may include the Dean for Student Affairs, the educational Program Director (or curriculum supervisor), selected members of the Disabilities Oversight Committee (See Section B.5 below) and other consultants as appropriate to the individual circumstances. The assessment team usually should include: (1) individuals who understand the curriculum in question; (2) a person who is knowledgeable about the Americans with Disabilities Act; (3) a person with authority to authorize accommodations and cause them to be implemented.

2. Responsibilities for Accommodation

The School of Medicine is responsible for the costs incurred in making accommodations which are not unduly burdensome or unreasonable. Accommodations may include but may not be limited to academic modifications which do not fundamentally alter the nature of the program, auxiliary services, modifications of the circumstances and methods of qualification examinations, classroom modifications and others. The School’s responsibility to accommodate ends when a student with a disability: (1)
refuses reasonable accommodations; (2) is unable, with reasonable accommodations, to fulfill the essential requirements of the program; (3) fulfills the essential requirements and graduates; or (4) transfers to another institution. The School is not required to provide an accommodation which fundamentally alters the nature of the program, is unduly burdensome or is unreasonable.

3. Confidentiality

Information pertaining to a student’s disability and accommodations will be maintained in a file that is kept confidential and separate from the student’s academic record. Appropriate faculty, staff and administrators may be informed regarding the disability, limitations, restrictions, and accommodations when they have a need to know such information.

4. Application of the CAPES Policies

The policies and procedures of the School regarding promotion and retention are contained in the CAPES Policies for each academic unit. These policies and procedures govern the relationship between the School and all students, including those with disabilities. The School is not obligated to retain a student with a disability who poses a significant threat to the health or safety of others when there is no reasonable accommodation that either eliminates or sufficiently reduces that risk.

5. Disabilities Oversight Committee

There shall exist a standing Disabilities Oversight Committee composed of members designated by the Dean of the School of Medicine. The committee shall have the following responsibilities: periodic review of requests for accommodations and accommodations granted, provide recommendations regarding accommodations for disabilities, to serve as requested on disability appeals committee. This group serves as a resource regarding issues of significance to the institution and to students with disabilities.

C. Appeals

A student with a disability who believes that a request for accommodation has been improperly denied or who perceives that he or she has been discriminated against on the basis of a disability should direct his or her appeal to the Dean of the School of Medicine. As needed, the Dean of the School of Medicine may assemble an advisory group to review appeals and make recommendations. This group may include, but may not be limited to, the following: the chair of the committee that oversees academic evaluation and advancement of students for the particular academic unit, students, and/or representatives of the Disabilities Oversight Committee.

BACK TO TOP

University & Medical School Policy on Student Rights Under Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

A. The right to inspect and review the student’s education records within 45 days of the day the University receives a request for access.

Students should submit to the registrar, dean, head of the academic department or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

B. The right to request the amendment of the student’s education records that the student believes are inaccurate or misleading.

Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to
amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

C. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if that official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

D. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA.

The name and address of the Office that administers FERPA is: Family Policy Compliance Office U.S. Department of Education 400 Maryland Avenue, S.W. Washington, D.C. 20202-4605

BACK TO TOP

Student Academic Records and Transcripts

The Family Educational Rights and Privacy Act of 1974 (FERPA) provides current and former students of the University with specific rights of access to and control over their student record information. In compliance with the statute, appropriate federal regulations, and guidelines recommended by the American Association of University Registrars and Admission Officers, the University has adopted procedures that implement these rights.

A copy of the University policies regarding educational records and the release of student record information may be obtained online at medschool.wustl.edu/students/FERPArights.html

Transcript requests may be made in person or by writing to the Registrar’s Office. Faxes are accepted: (314) 362-4658. The written request must include your name, signature, date of birth and approximate dates of attendance.

BACK TO TOP

Washington University Medical Campus Policy on HIV and HBV Infection

In 1992, the Executive Faculty of the School of Medicine formally adopted a Medical Campus policy on Human Immunodeficiency Virus (HIV) and Hepatitis B virus (HBV) infections. This policy was updated in 2001 to include Hepatitis C virus (HCV) infections. The purpose of the policy is to provide guidelines to prevent or reduce the transmission of these infectious agents between patients and health care workers.

The policy deals with: 1) the University’s responsibilities to infected patients (including obligation to treat, confidentiality and appropriate serologic testing), 2) appropriate health and safety precautions and procedures for faculty, students and staff (including compliance with CDC guidelines, blood and
body fluid precautions and handling of needles or sharp instruments), and 3) the University's responsibilities to faculty, staff or students who are infected with HIV, HBV or HCV infection (including admission to medical school, participation in clinical rotations, serologic testing confidentiality and medical treatment).

The policy makes a distinction between class I activities (those involving no risk of transmission from infected health care workers to patients, such as routine physical examinations, dressing changes, intravenous line placement) and class II activities (those that involve the potential for transmission of HIV, HBV or HCV from infected health care workers to patients, such as invasive surgical procedures in which trauma to a health care worker is possible).

This policy is comprehensive, and a complete copy is available to any interested student through the Office for Student Affairs.

Student Computing Services Policies

Liability Insurance

Technical Standards Statement

Graduates of Washington University with a Doctor of Medicine degree are expected to have broad competence in the basic skills that underlie the general practice of medicine and surgery. All graduates must be able to take a history, examine a person, synthesize the findings into a diagnosis and plan of evaluation and treatment independently. Thus, medical students must possess the requisite sensory, motor, communicative and cognitive capabilities to accomplish these requirements in a reliable manner in order to be competent and safe medical practitioners.

Non-Discrimination Statement

Washington University encourages and gives full consideration to all applicants for admission, financial aid, and employment. The University does not discriminate in access to, or treatment or employment in, its programs and activities on the basis of race, color, age, religion, sex, sexual orientation, national origin, gender identity or expression, veteran status, or disability. Present Department of Defense policy governing all ROTC programs discriminates on the basis of sexual orientation; such discrimination is inconsistent with Washington University policy. Inquiries about compliance should be addressed to the University's Vice Chancellor for Human Resources, Washington University, Campus Box 1184, One Brookings Drive, St. Louis, MO 63130. The School of Medicine is committed to recruiting, enrolling and educating a diverse student body.

Student Constitution and Bylaws of the Washington University
**School of Medicine Medical Student Government**

**Article I:**

*Name, Purpose, and Membership*

**A.** The name of this organization shall be the Medical Student Government of The Washington University School of Medicine.

**B.** The purpose of the Medical Student Government shall be the advancement of student interests and welfare to achieve excellence in academic pursuits and professional interactions.

**C.** The Medical Student Government shall represent all students pursuing a medical degree who are in good standing with the University.

**Article II:**

*Class Officers*

**A. Offices:** Each Class shall elect the following officers: President, Medical Education Representative (MER), Representative to the Organization of Student Representatives (OSR Rep) of the Association of American Medical Colleges (AAMC), Representative to the Graduate-Professional Council (GPC Rep), and a Social Chair/Committee.

**B. Duties:** Each class officer shall have specific responsibilities:

1. **President:** Each class shall elect one President. This person shall serve as the official spokesperson for the class in dealings with the Student Government and with the University. The President shall disseminate information regarding medical student affairs and activities. The President shall have oversight and approve of all moneys spent by the Social Chair/Committee. The President shall perform any and all duties that are unique to the class represented.

2. **MER:** The MER shall represent the class at all meetings of the MERs and Curriculum Evaluation Committee and serve as a liaison between students and faculty on curricular matters. The MER shall poll the class as needed regarding course evaluations and selection of recipients for the various Faculty Awards presented each year.

3. **OSR Rep:** The OSR Rep shall keep class members up to date with news from the OSR and from the AAMC. The OSR Rep shall represent the University at regional and national meetings of the OSR under an agreement with the University.

4. **GPC Rep:** The GPC representatives shall represent the School of Medicine at GPC meetings and shall inform the GPC of issues affecting the School of Medicine, learn about issues affecting other schools, discuss and find solutions to problems affecting the whole graduate and professional student population, and plan and advertise social activities that foster communication between all graduate and professional students. The Reps shall be the liaison to the other programs within the School of Medicine, as well as to the rest of the University community. In addition, the four Reps will divide the responsibilities of serving on the Professional and Graduate Students Coordinating Committee (ProGrads), the Medical Campus Committee (temporarily named), and other inter-school/division committees as needed.

5. **Social Chair/Committee:** The Social Chair/Committee shall organize social functions for class members and interact with other Social Chairs/Committees to organize social functions with other classes and within the University community. The Social Chair/Committee shall consult and obtain approval from the class President for all moneys spent on such functions.
C. Elections: An Election Official designated by the Student Government shall be responsible for the organization and execution of all elections held for offices specified under the Constitution, including President, MER, OSR, GPC, and social chair. Elections shall be held for each of the class officer positions according to the following format:

1. Voting Eligibility: All students who will be a member of the class during the term for which the elected officers will serve will be eligible to vote in the election. For elections for first- and second-year offices, a member of the class will be considered to be an individual who is currently planning on taking the MD course of study for the upcoming year. For elections for third- and fourth-year offices, a member of the class will be considered to be an individual who is planning on taking the MD course of study anytime during the upcoming two years, including any individual planning to pursue an MA degree for one year during either the third or fourth year of medical school. Efforts should be made by the appointed election official to extend the opportunity to vote to students who will be entering their respective classes in the upcoming year, including but not limited to the large number of MD/PhD students returning for their clinical clerkships.

2. Nominations: All students who will be a member of the class during the term for which the elected officers will serve, as defined in Article II. C. 1., will be eligible to be nominated for the election. Nominations for each office shall be held starting at least one week prior to the election and ending no later than three days prior to the election. Nominations shall be submitted in writing to the Election Official. Any student eligible to run for office may nominate him/herself or another medical student in good standing. Candidates must have the firm intention of carrying out all the duties and obligations of the office for the entire term.

3. Elections and Terms: All terms shall begin upon election. Regular elections shall be held according to the following schedule:
   a. First Year: Elections shall be held within three to six weeks of the beginning of the first-semester classes. Each position carries a term of one academic year.
   b. Second Year: Elections shall be held within six weeks prior to the completion of the first academic year. Each position carries a term of one academic year.
   c. Third and Fourth Year: Elections shall be held within six weeks prior to the completion of the second academic year. Each position carries a term of two academic years.

4. Class Officer Balloting: To be elected a candidate must receive a simple majority (greater than 50 percent) of the votes cast for that particular office by at least a quorum of one-half of the eligible voters. Write-in candidates shall be allowed on this ballot. Absentee ballots shall be allowed if they are given in writing to the Election Official prior to the day of election. Ballot counting shall be the responsibility of the Election Official under the observation of a witness agreeable to all candidates.

5. Class Officer Runoff Procedures: If no candidate receives a simple majority for a particular position, a runoff between the top two candidates shall be held within three days of the initial election. Write-in candidates will not be allowed on this ballot. To be elected a candidate must receive the most votes cast for that particular office by at least a quorum of one-half of the eligible voters.

6. Social Chair Election Procedure: Social chair elections will be conducted in conjunction with MSG class officer elections. A maximum of four social chairs can be elected into office. Candidates do not have to receive a majority of votes to be elected into office. All other MSG election procedures apply.

7. Appeals: All decisions are made by the Election Official during the election period. Appeals may be made by a candidate in writing to the Chair of the Medical Student Government and will be reviewed and ruled on by a group consisting of the current President, MER, OSR, and GPC from each of the four classes; the decisions of this group will be considered final.

8. Vacant Offices: If any office is vacated before its set term, an election will be held for that office using the procedures outlined above within three weeks of the vacancy. If a current class officer runs for the vacated office, that officer must vacate the post he/she occupies.

9. Removal from Office: In the unfortunate event that a class officer is not fulfilling his/her obligations and duties, MSG by a two-thirds majority of a quorum of one-half may vote to recommend that an
officer be removed from office to the class that elected the officer. A vote of recall shall then be held within one week. If a three-fourths majority of a quorum of two-thirds of a class votes to recall the officer, the officer shall be removed from office. An election for vacant office shall then be held.

D. **MD/PhD Research Students:** There shall be two Representatives of the MD/PhD students who are outside the core medical curriculum. These Representatives shall be selected by a method chosen by the Medical Scientist Training Program (MSTP.) In addition, these individuals shall be full voting members of the MSG. Each Representative shall serve a two-year term, with elections for one Representative each summer, so the terms of the two Representatives overlap by one year.

E. **Technology Liaison:** The responsibilities of the class appointed Technology Liaison include serving as the representative to the administration regarding the availability and utilization of technology and addressing related class concerns. In addition, the Technology Liaison will work with Instructional Technologies and Library Systems (ITLS) to provide new services and assist the MER with technology-related education initiatives. One Technology Liaison will be appointed for each medical school class after the class-wide elections have taken place. After a call for applications from the class, the four (4) elected MSG members of that class review each application and select the Technology Liaison by consensus. The term of the Technology Liaison will be the same as the elected officials of that class.

**Article III:**

The Medical Student Government

A. **Membership:** The Student Government shall consist of the President, the MER, the OSR Rep, and the GPC Rep from each of the four classes, as well as a Representative of MD/PhD Students. In addition, the Student Government may offer a non-voting position to a duly elected representative of any student group which is recognized nationally, regionally or within the Medical School so long as such a group is open to all medical students without discrimination and that such a group is not in conflict with the goals of the Student Government.

B. **Purpose and Responsibilities:** The Student Government shall carry out the business of the Student Government pursuant to the goals stated in Article I. The purpose of the Student Government shall be to represent and promote the interests and concerns of the medical student body through activities including but not limited to:

1. Forming and representing official student body opinions for interaction with the University, its Administration and other groups associated with medical education.
2. Serving as a forum for interaction between student groups.
3. Serving as a forum for student-initiated curricular review and reform in the pursuit of academic excellence.
4. Promoting interaction among the School of Medicine students, faculty and administration, and with the wider University community.
5. Establishing a funding mechanism and budget with the associated collection and disbursements of funds for activities pursuant to goals stated in Article I.
6. Organizing elections for class officers and any other official representative of the student body at large.
7. Exercising any such additional authority as may be granted to it by the School of Medicine or by other organizations, so long as such authority is consistent with the purposes stated in Article I.
8. Posting agenda of all meetings for public reference.
9. Formulating all rules and bylaws necessary for the Student Government to carry out the responsibilities and powers granted through this constitution. Such rules and bylaws shall require a simple majority of a quorum of two-thirds of the voting Student Government members.
10. The Student Government shall meet regularly and at intervals of no more than six weeks.
11. Representatives from the various student groups sitting on the Student Government shall keep the Student Government informed of all activities associated with their posts in the form of a written brief to be presented at the Student Government meeting as appropriate for their group's activities.
C. Student Government Offices: There shall be a Student Government Chair and Vice-Chair elected from the voting members of the Student Government. Election shall require a simple majority of the voting Student Government. The election shall be held within six weeks prior to the completion of the academic year. The terms of these offices shall be one academic year.

1. Student Government Chair: The Student Government Chair shall preside at all meetings of the Student Government and have specific responsibilities:
   a. The Chair shall serve as official representative and spokesperson for the Student Government to the University, its Administration, and to other groups associated with medical education.
   b. The Chair shall be responsible to ensure the duties of the Student Government are carried out efficiently and in a timely manner.
   c. The Chair shall report the names of the Class Officers to the Dean, and post such a list for public reference.
   d. The Chair shall be responsible for overseeing and maintaining records and to set the agenda for such meetings in written form for distribution to Student Government members prior to each meeting.
   e. The MSG shall be responsible for overseeing and maintaining records of all financial transactions of the Student Government. The second-year class president shall regularly update the Student Government on its financial standing, and must make all financial records available to any medical student, member of the Administration, or to any official of the University. All transactions shall require the signatures of the Chair and the Vice-Chair.
   f. The Chair shall be empowered to call for standing and ad hoc committees to evaluate and make recommendations about specific areas of concern to the Student Government, the School of Medicine and its students. MSG shall appoint these committees.
   g. The Chair shall be empowered to designate another Student Government member to take on one or more of his/her duties.

Article IV:

Ratification and Amendments

A. In 1993 this Constitution was ratified by a 2/3 majority of a quorum of one-half of the student body pursuing a medical degree.

B. This Constitution can be amended by either a 2/3 majority of a quorum of one-half of the students in their first, second, and third years, or by a unanimous vote of the elected members of the Medical Student Government.

Class Officers

Fourth-Year Class Officers

President
Amit Patel

Medical Education Representative (MER)
Huay-Zong Law

Representative to the Organization of Student Representatives (OSR Rep)
Lina Nayak

Representative to the Graduate Professional Council (GPC Rep)
Aggie Bielksa
Third-Year Class Officers

President
Jonathan Byrd

Medical Education Representative (MER)
Alex Edwards

Representative to the Organization of Student Representatives (OSR Rep)
Kal Clark

Representative to the Graduate Professional Council (GPC Rep)
Ameet Thaker

Second-Year Class Officers

President
Ryan Anderson

Medical Education Representative (MER)
David Levine

Representative to the Organization of Student Representatives (OSR Rep)
Elizabeth Davlantes

Representative to the Graduate Professional Council (GPC Rep)
Leisha Elmore

First-Year Class Officers

President
Elaine Khoong

Medical Education Representative (MER)
Jennifer Hranilovich

Representative to the Organization of Student Representatives (OSR Rep)
Michael Verre

Representative to the Graduate Professional Council (GPC Rep)
Jared Wilkinson
Departments

Department of Anatomy and Neurobiology

The structure of the human body is presented in two courses: Human Anatomy and Development, offered in the first semester, and Microscopic Anatomy, which extends over the first and second semesters. A third course, Neural Sciences, is taught at the end of the second semester. Human Anatomy and Development is largely a laboratory course, and lectures deal with anatomical principles and human growth and development. Instruction in Microscopic Anatomy focuses on cell and tissue biology, with laboratory sessions paralleling the lectures in these areas. This is a component of the Cell and Organ Systems Biology course jointly taught with the Department of Cell Biology and Physiology. Neural Sciences is an integrated course that deals with the structure, function and development of the nervous system from molecular, cellular and systems perspectives. Throughout all three courses, attention is paid to the results of recent investigations and to major developments in each field. In addition, the departmental faculty have a lead role in many graduate courses that may be taken as electives by students in any of the four years. The department is well-equipped for specialized work in several areas, including gross anatomy, electron microscopy, tissue culture and all aspects of neurobiology.

Courses

First Year

M35 554  NEURAL SCIENCES
Instructors: David C. Van Essen, PhD, 362-7043; Timothy E. Holy, PhD, 362-0086; W. Thomas Thach Jr., MD, 362-3538 (Co-Coursemasters)
Neural Sciences is an intensive seven-week course that covers the structure, function and development of the nervous system as seen from molecular, cellular and systems-oriented perspectives. The emphasis is on the organization and function of the nervous system in health, but there is frequent reference to the clinical relevance of material presented. The course includes regular lectures, conference sessions and laboratories, plus a number of clinically oriented presentations. Computer-aided instructional programs, accessible from a variety of locations, provide auxiliary modes of self-paced learning and review. The midterm and final emphasize the core body of important facts and principles presented in lectures and laboratories. (SPRING ONLY).

M05 501A  HUMAN ANATOMY AND DEVELOPMENT
Instructor: Glenn C. Conroy, PhD, 362-3397
The course is based largely on the dissection of the human body. Lectures on functional and topographic anatomy emphasize the principles of organization of the various systems of the body. Lectures on developmental anatomy stress organogenesis as an adjunct to understanding the normal and abnormal anatomy. An extensive museum of labeled dissected specimens is housed in the dissection room for ready reference by students who encounter abnormalities or variations in their dissections. Frequent use of CT, MRI, and X-ray images aid in the synthesis of knowledge gained through dissection. Small group discussions emphasize radiological anatomy and clinical correlations. This course is restricted to first year medical students, but limited space is sometimes available for non-medical students enrolled in the PhD program with instructor’s permission. Cross-listed with L41 (Bio) 501.

M75 503 CELL AND ORGAN SYSTEMS BIOLOGY
Instructor: Paul C. Bridgman, PhD, 362-3449
The structure of cells, tissues and organs is studied with regard to the functional significance of the morphological features. Lectures integrate histology with cell biology and physiology. The laboratories consist of the study of prepared slides, electron micrographs and digital images. A dual-view microscope will be provided for each pair of students. Limited space is available for non-medical students with instructor's permission. This course is cross-listed in the Department of Cell Biology and Physiology.

**Selectives**

**M04 552 GENETICS AND MOLECULAR BIOLOGY OF ION CHANNELS**  
Instructor: Lawrence B. Salkoff, PhD, 362-3644  
A functional genomics approach to studying membrane excitability. How the new DNA sequence data from genomic and EST sequencing projects can be exploited to get a comprehensive picture of gene families that contribute to membrane excitability. How DNA sequence data can contribute to understanding questions of physiology, development, regulation and structure-function relationships.

**Fourth Year**

**Electives**

The department offers a number of graduate-level courses that may be taken as electives by medical students. The department participates in the Division of Biology and Biomedical Sciences, which also offers courses relevant to anatomy and neurobiology.

These course descriptions are presented in the section on Biology and Biomedical Sciences.

L41 (Bio) 5571 CELLULAR NEUROBIOLOGY  
L41 (Bio) 5651 NEURAL SYSTEMS  
L41 (Bio) 590 RESEARCH OPPORTUNITIES

*Note — The number preceding the course title indicates that the course is offered by the Division of Biology and Biomedical Sciences and carries credit in the Graduate School of Arts & Sciences.*

**M05 810 ADVANCED DISSECTION**  
Instructor(s): Staff, 362-3397  
Location: North Building  
Elective Contact: Glenn Conroy, PhD, 362-3397  
Other Information: Self Study. Pass/Fail. Contact Dr. Conroy one week prior to the start of the elective.  
Enrollment limit per period: 14  
Valid start weeks for 4-week blocks are: Weeks 29, 33, 37, and 41.

Different regions of the body will be dissected in detail. A period of four weeks should be allowed for each region: head and neck, thorax and abdomen, and superior and inferior limbs. Surgical approaches, cross-sections, X-rays, and CT scans can be studied.  
Student time distribution: A minimum of 40 hours is required  
Major teaching responsibility: N/A  
Patients seen/weekly: N/A  
On call/weekend responsibility: N/A

**M05 820 TEACHING ASSISTANT IN HUMAN ANATOMY**  
Instructor(s): Glenn Conroy, PhD, 362-3397  
Location: North Building  
Elective Contact: Glenn Conroy, PhD, 362-3397  
Other Information: Self Study. Pass/Fail. Students should contact Dr. Conroy one week prior to the
start of the elective. Students are required to attend each Anatomy session during the course of the elective.
Enrollment limit per period: 3
Valid start weeks for 4-week blocks are: Weeks 13 and 21.

Offers the student the opportunity to review human anatomy by assisting the Anatomy faculty in teaching first-year medical students in the Anatomy laboratory.
Student time distribution: N/A
Major teaching responsibility: N/A
Patients seen/weekly: N/A
On call/weekend responsibility: N/A

Research

(M05 900)

Cross-listed with L41 (Bio) 590

Dora Angelaki, PhD, 2nd Floor East McDonnell Specialized Research Facility, 747-5529. Neural basis of motion perception and spatial orientation. Neural control of eye and head movements.

Nancy L. Baenziger, PhD, 9th Floor McDonnell Medical Sciences Building, 362-2817. Environmental stress impact on receptor signal transduction and neuronal connectivity in cellular models of Alzheimer's disease.

Paul Bridgman, PhD, 4th Floor McDonnell Medical Sciences Building, 362-3449. Cell biology of the developing nervous system.

Andreas Burkhalter, PhD, 4th Floor North Building, 362-4068. Development and synaptic organization of cortical circuits.

Harold Burton, PhD, 3rd Floor East McDonnell Specialized Research Facility, 362-3556. Cortical functional reorganization in response to sensory deprivation in blindness, unilateral deafness or cerebral palsy.

Valeria Cavalli, PhD, 4th Floor McDonnell Medical Sciences Building, 362-3540. Axonal transport and nerve regeneration.

James M. Cheverud, PhD, 3rd Floor North Building, 362-4188. Evolutionary quantitative genetics, genetics of growth and morphology, gene mapping for obesity and diabetes-related traits in mice.

Glenn C. Conroy, PhD, 3rd Floor North Building, 362-3397. Comparative primate anatomy and human evolution.

J. David Dickman, PhD, Central Institute for the Deaf, 747-7221. Neural processing of motion detection, spatial orientation and navigation.

David I. Gottlieb, PhD, 9th Floor McDonnell Medical Sciences Building, 362-2758. Embryonic stem cell
models of neural development and disease.

Paul A. Gray, PhD, 9th Floor McDonnell Medical Sciences Building, 362-9063. Molecular development of neural circuits underlying simple behavior.

Timothy E. Holy, PhD, 4th Floor North Building, 362-0086. Mammalian pheromones: neural mechanisms of action.

Arthur D. Loewy, PhD, 9th Floor McDonnell Medical Sciences Building, 362-3930. Brain circuits controlling physiological functions.

Michael L. Nonet, PhD, 9th Floor McDonnell Medical Sciences Building, 747-1176. Molecular genetic analysis of synaptic development and function.


Camillo Padoa Schioppa, PhD, 3rd Floor East McDonnell Specialized Research Facility, 362-3530. Neuronal bases of economic choice and decision making.

Narendrakumar Ramanan, PhD, 9th Floor McDonnell Medical Sciences Building, 362-0233. Transcriptional control of synaptic plasticity.

Lawrence B. Salkoff, PhD, 9th Floor McDonnell Medical Sciences Building, 362-3644. The roles of ion channels in neuronal long-term excitability changes.

Paul J. Shaw, PhD, 9th Floor McDonnell Medical Sciences Building, 362-2703. Molecular genetics of sleep and circadian rhythms.

Lawrence H. Snyder, MD, PhD, 3rd Floor East McDonnell Specialized Research Facility, 747-3530. Computational and cognitive issues in cortical control of eye and arm movement: electrophysiology and imaging.

Paul H. Taghert, PhD, 9th Floor McDonnell Medical Sciences Building, 362-3641. Neurobiology of circadian rhythms. Regulation of neurotransmitter properties.

David C. Van Essen, PhD, 2nd Floor East McDonnell Specialized Research Facility, 362-7043. Organization, function and development of primate cerebral cortex, especially in humans; generation and utilization of neuroinformatics tools for data mining.

Faculty
DAVID C VAN ESSEN, PHD  Head of the Department of Anatomy and Neurobiology, Edison Professor of Neurobiology
DORA ANGELAKI, PHD  Alumni Endowed Professor of Neurobiology
NANCY L BAENZIGER, PHD  Research Associate Professor of Neurobiology
DENNIS L BARBOUR, MD, PHD  Assistant Professor of Neurobiology
KEVIN J. BLACK, MD  Associate Professor of Neurobiology
PAUL C BRIDGMAN, PHD  Professor of Neurobiology
ANDREAS H BURKHALTER, PHD  Professor of Neurobiology
HAROLD BURTON, PHD  Professor of Neurobiology
VALERIA CAVALLI, PHD  Assistant Professor of Neurobiology
JAMES M CHEVERUD, PHD  Professor of Anatomy
THEODORE J CICERO, PHD  Professor of Neurobiology
GLENN C CONROY, PHD  Professor of Anatomy
MAURIZIO CORBETTA, MD  Professor of Neurobiology
J. DAVID DICKMAN, PHD  Professor of Neurobiology
KRIKOR T DIKRANIAN, MD, PHD  Assistant Professor of Anatomy
GAMMON MARIE EARHART, PHD  Assistant Professor of Neurobiology
SUSAN M FITZPATRICK, PHD  Adjunct Associate Professor of Neurobiology
JAMES E. GALVIN, MD, MS  Associate Professor of Neurobiology
ROBERT W GEREAU, PHD  Professor of Neurobiology
MARK PAUL GOLDBERG, MD  Professor of Neurobiology
URSULA W. GOODENOUGH, PHD  Associate Professor of Anatomy
DAVID I GOTTLIEB, PHD  Professor of Neurobiology
PAUL A. GRAY, PHD  Assistant Professor of Neurobiology
TIMOTHY E. HOLY, PHD  Associate Professor of Neurobiology
TIMOTHY EVERETT HULLAR, MD  Assistant Professor of Neurobiology
VLADIMIR JIVKOV KEFALOV, PHD  Assistant Professor of Neurobiology
DANIEL KERSCHENSTEINER, PHD  Assistant Professor of Neurobiology
ROBYN SUE KLEIN, MD, PHD  Associate Professor of Neurobiology
ERIC CLAUDE LEUTHARDT, MD  Assistant Professor of Neurobiology
CHRISTOPHER J LINGLE, PHD  Professor of Neurobiology
ARTHUR D LOEWY, PHD  Professor of Anatomy and Neurobiology
PETER DAVID LUKASIEWICZ, PHD  Professor of Neurobiology
STEVEN JAMES MENNERICK, PHD  Associate Professor of Neurobiology
DAVID NORMAN MENTON, PHD  Associate Professor Emeritus of Anatomy
MARK A MINTUN, MD  Professor of Neurobiology
DANIEL MORAN, PHD  Assistant Professor of Neurobiology
JEFFREY J NEIL, MD, PHD  Professor of Neurobiology
BRUCE L NOCK, PHD  Associate Professor of Neurobiology
Anesthesiology is a medical specialty encompassing a broad range of medical and scientific activities. The clinical practice of anesthesiology includes: 1) assessment of, consultation for and preparation of patients for anesthesia; 2) provision of insensibility to pain during surgical, obstetric, therapeutic and
diagnostic procedures; 3) monitoring and restoration of physiologic homeostasis during the perioperative period, as well as homeostasis in the critically ill or seriously injured patient; 4) diagnosis and treatment of painful syndromes; and 5) clinical management and teaching of cardiopulmonary resuscitation (CPR). The realm of scientific investigation in anesthesiology also spans a broad range. Scientific efforts at the cellular and molecular levels are directed to understanding the molecular mechanisms of anesthesia and analgesia. Clinical research in anesthesia includes broad epidemiological approaches to identifying indicators of outcome as well as prospective clinical studies examining new technologies, anesthetic agents and methods.

The Department of Anesthesiology presents the student with the opportunity to: 1) acquire and apply pharmacologic knowledge related to anesthetic, narcotic, paralytic and sedative drugs and to drugs affecting the autonomic nervous system; 2) understand and apply the basic principles of airway management and mechanical ventilation; 3) understand and apply the principles of cardiopulmonary resuscitation; 4) understand and apply the technical skills and anatomic and pharmacologic knowledge used in performing regional nerve blocks; 5) learn and apply the fundamental principles of acute and chronic pain management; and 6) learn and apply the basic principles of critical care medicine.

Anesthesiology bridges the gap between basic science and clinical medicine. It provides experience in the clinical evaluation and management of patients, and in applied physiology and pharmacology. The Department of Anesthesiology offers student experiences in the operating room, the intensive care unit, the pain clinic and the laboratory.

This clerkship introduces all of the basic aspects of anesthetic practice, including preoperative assessment, intraoperative anesthetic administration, placement and interpretation of invasive and noninvasive physiologic monitoring, airway management and regional anesthetic administration. Students taking this clerkship work one-on-one with attending anesthesiologists and are an integral part of the anesthetic care team. By the end of the clerkship, the student should be able to provide (under supervision) anesthesia for an uncomplicated surgical procedure. This rotation offers a unique opportunity for the student to work directly with attending physicians and to acquire fundamental skills (airway management, invasive monitoring, regional anesthesia) applicable to all aspects of acute medicine.

Students who have taken the anesthesia clerkship in the third year may elect to repeat this rotation in the fourth year. These students will be exposed to more complicated cases and techniques, and will be given increased responsibility for perioperative patient management. Students who have taken the clerkship in the third year also may elect to take an elective in the subspecialty areas of Cardiothoracic Anesthesiology, Pediatric Anesthesiology, Obstetric Anesthesiology or Anesthesia for Neurosurgery. Students taking these electives will be exposed to surgical cases of increased complexity requiring specialized invasive monitoring and anesthetic techniques.

Four-week electives are also offered in surgical critical care and cardiothoracic critical care. In these electives, the student is an integral part of the intensive care team. Students learn techniques of mechanical ventilation, hemodynamic monitoring, resuscitation and vasoactive drug treatment while managing all aspects of patients assigned to their care.

The clerkship in pain management offers the student the opportunity to participate in comprehensive, multidisciplinary management of acute, chronic and cancer pain problems. Students will be expected to assist in the care of both inpatients and outpatients. Students will learn fundamental aspects of pain management, which should provide the knowledge with which to manage routine acute and cancer pain in their subsequent practice.

Special electives in basic science research as it applies to anesthesiology can be arranged with the principal investigators in the Department of Anesthesiology, in the Anesthesiology Research Unit under the direction of C. Michael Crowder, MD, PhD, the Washington University Pain Center under the direction of Rob Gereau, PhD, or the Division of Clinical and Translational Research under the direction of Evan Kharasch, MD, PhD. These laboratories focus on various aspects of molecular neurobiology, including ion channel structure and function; G-protein molecular biology; molecular mechanisms of volatile anesthetic action; genetics of anesthetic responsiveness; and the molecular, cellular and genetic basis of acute and chronic pain. Arrangements for these special electives are made through
the specific investigators: Walter A. Boyle III, MD; Zhou-Feng Chen, PhD; C. Michael Crowder, MD, PhD; Alex S. Evers, MD; Narasimhan Gautam, PhD; Richard S. Hotchkiss, MD; Christopher J. Lingle, PhD; Joseph H. Steinbach, PhD; Gina Story, PhD; Yu-Qing Cao, PhD; or Robert W. Gereau, PhD. In addition, opportunities exist for clinical research in the Clinical Research Division, under the direction of Evan Kharasch, MD. PhD.

Courses

Fourth Year

Electives

M10 805 ANESTHESIOLOGY
Instructor: Tom Davis, MD, 362-2351; davisto@wustl.edu
Location: Barnes-Jewish Hospital, South Campus; Department of Anesthesiology, Third Floor
Elective Contact: Gerri Neumann, 362-4449
Other Information: Please contact the department student secretary, Gerri Neumann, 362-4449, prior to the elective for specific instructions. Students should meet in the Clinical Simulation Center, 3rd floor Barnes-Jewish Hospital Service Building, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is designed to familiarize the student with basic aspects of anesthesiology practice. The primary teaching method is patient care in a clinical setting (one-on-one). The student will learn the basics of preoperative evaluation of surgical patients, the use of intraoperative monitoring in patient management and postoperative care. During the four-week rotation, the student will learn airway management skills, practical perioperative fluid and electrolyte therapy, along with general and regional anesthetic techniques. As an integral part of the anesthesia care team, the student will participate actively in the anesthetic management of surgical patients. The rotation will include three clinical simulator sessions using a simulator mannequin for practical management of airway problems, resuscitation and trauma emergencies. By the end of the rotation, the student should be able to independently (under supervision) provide anesthesia for uncomplicated surgical procedures. NOTE: Presence and participation in the three Friday Simulator Sessions and the Presentation on the last day of the rotation are required to receive a grade.

Student time distribution: Inpatient 85%, Conferences/Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Single attending and/or senior resident
Patients seen/weekly: 15
On call/weekend responsibility: Medical students are not required to take call during their rotation, but they may volunteer to work in the main operating rooms or in the obstetrical suite any evening or weekend.

M10 811 CARDIOTHORACIC ANESTHESIOLOGY
Instructor: Rocco Huneke, MD, 362-2756
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Lydia Swink, 362-1196
Other Information: Students should meet at the offices of the Division of Cardiothoracic Anesthesia, 3rd Floor Barnes-Jewish Service Building, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective offers practical experience in the perioperative assessment and management of surgical patients undergoing cardiothoracic procedures. The student, as part of the cardiothoracic
anesthesia team composed of faculty members, fellows and residents, will learn basic principles of airway management and lung ventilation, essential aspects of pharmacologic treatment of hemodynamic abnormalities and cardiac dysrhythmias, and management of intraoperative coagulation disturbances. Emphasis will be placed on the interpretation of intraoperative hemodynamic data, echocardiographic finding (TEE) and laboratory results in clinical decision making and treatment approach during anesthesia and surgery. During this rotation, the student will also gain practical experience in endotracheal intubation and the placement of intravenous lines, and invasive monitoring lines, including radial artery and pulmonary artery catheters. At the conclusion of the rotation, the student will have a better understanding of invasive monitoring and data interpretation, as well as a more systematic approach to the management of intra- and post-operative hemodynamic, pulmonary and coagulation abnormalities. The students are expected to attend the didactic sessions of CTA and the Department of Anesthesiology. A presentation or paper will be assigned.

Student time distribution: Inpatient 100%; Subspecialty Care 100%
Major teaching responsibility: Rocco Huneke, MD
Patients seen/weekly: 15
On call/weekend responsibility: None

**M10 812 PEDIATRIC ANESTHESIA**

Instructors: Kelly Chilson, MD; Gary Hirshberg, MD; Tessa King, MD; and David Murray, MD, 454-6215
Location: 5th Floor, St. Louis Children's Hospital
Elective Contact: Kelly Chilson, MD, 454-6215
Other Information: Students should contact Martha Severn, 454-6215, one week prior to the start of the elective.

Enrollment limit per period: 3
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is designed to teach the theory and practice of pediatric anesthesiology and pain management. It features individualized instruction with faculty who specialize in the perioperative care of pediatric patients. The elective consists of four weeks of active participation with pediatric anesthesiologists at St. Louis Children's Hospital and St. Louis Shriners Hospital learning preanesthetic assessment, the performance of routine anesthetics (which includes instruction and practice in pediatric airway skills), learning other technical skills such as intravenous line placement and the management of post-anesthesia care and pain therapies. The final week may be tailored to meet the student’s individual interests, needs and career goals. Possibilities include exposure to sedation and anesthesia for procedures outside of the operating rooms, and to subspecialties including cardiovascular anesthesia, neurosurgical anesthesia, and acute and chronic pediatric pain management. Students also will have an opportunity to learn the management of some common medical emergencies in the Clinical Simulation Center.

Student time distribution: Inpatient Surgery 5%, Outpatient Surgery 80%, Conferences/Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Attending, fellows and senior anesthesiology residents; students will generally spend most of each day with a single attending or senior anesthesiology trainee (fellow or resident).
Patients seen/weekly: 25
On call/weekend responsibility: None

**M10 819 CARDIOTHORACIC CRITICAL CARE**

Instructors: Charl de Wet, MD, coursemaster; Laureen Hill, MD; Michael Avidan, MD; Eliot Fagley, MD; and Mike Wall, MD
Location: Barnes-Jewish Hospital, Southwest Tower
Elective Contact: Maureen Arends, 747-4155
Other Information: Students should meet in the Cardiothoracic Intensive Care Unit, 5600 ICU, 5th Floor Southwest Tower Physician Workroom, 6:30 a.m. first day of elective.
Enrollment limit per period: 3
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective offers practical experience in the postoperative management of cardiothoracic patients. The student will be fully integrated into the intensive care team and have the opportunity to contribute to the management of critically ill patients. Students will be afforded the opportunity to follow specific patients over the course of their stay on the ICU, during which time they will gain insight into holistic management of patients with multi-organ dysfunction. The CTICU environment is both challenging and exciting. Cardiorespiratory physiology and pharmacology will be demonstrated at the patients’ bedside, an invaluable and unforgettable learning experience. Students will have numerous opportunities to assist with and learn procedures, such as central lines, chest tubes, bronchoscopy and pulmonary artery catheter insertion. Principles of management and resuscitation of hemodynamically unstable patients following surgery will be emphasized. At the conclusion of the rotation, the student will have a better understanding of shock, sepsis, multi-organ failure, organ system support and compassionate withdrawal of life support. An exciting teaching program will be prepared for the students. Students will be encouraged to present on their patient at morning ward rounds, during which constructive feedback and interactive teaching will occur. Students will present on a topic related to one of their patients at the end of the block.

Student time distribution: Inpatient 100%; Subspecialty Care 100%
Major teaching responsibility: CTICU attendings
Patients seen/weekly: 21
On call/weekend responsibility: None

M10 820 CRITICAL CARE
Instructor: Walter Boyle, MD, 747-3581, coursemaster; Timothy Buchman, PhD, MD; J. Perren Cobb, MD; Craig Coopersmith, MD; Alex Evers, MD; Eliot Fagley, MD; John Green, MD; Robin Guillory, MD; Richard Hotchkiss, MD; George Tseng, MD; John Mazuski, MD; John Kirby, MD; Patricia Penkoske, MD; Mike Wall, MD, and Doug Schuerer, MD
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Barbara McKinney, 747-3581
Other Information: Students should meet in 8400 Surgical Intensive Care Unit, 7 a.m. first day of elective.

Enrollment limit per period: 4
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students on this rotation are integral members of the multidisciplinary intensivist-led critical care team in the Surgical Intensive Care Unit (SICU). Students learn an organ systems-based approach for evaluation and management of critically ill and injured patients and application of evidence-based principles in delivery of state-of-the-art critical care. Emphasis is placed on critical care knowledge and techniques used at the bedside in the clinical management of serious traumatic and surgical conditions. Students become familiar with resuscitation and cardiopulmonary support, including methods for noninvasive and invasive hemodynamic monitoring and techniques for airway management and pulmonary support in respiratory failure. Basic knowledge and skills in the management of neurologic injuries, liver and/or renal failure and life-threatening infections in the surgical patient are also taught, as is the importance of treatments to alleviate anxiety and pain, maintain fluid and electrolyte balance, and provide adequate nutrition. Practical experience is gained in placement of vascular access devices; interpretation of laboratory data; and use of guidelines, protocols and quality assurance tools in the management of critically ill patients.

Student time distribution: Inpatient 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: ICU Attendants
Patients seen/weekly: 50
On call/weekend responsibility: Variable
**M10 821 PAIN MANAGEMENT**
Instructor: Robert A. Swarm, MD, 747-0202
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Robert A. Swarm, MD, 747-0202
Other Information: Students should report to 10th Floor CAM Building, 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Acute pain is the most common symptom of medical illness and is ubiquitous after major surgery. Chronic pain is the leading cause of worker disability. Severe pain afflicts most people with advanced cancer. Learning the fundamentals of pharmacologic, interventional and multidisciplinary pain management is important for all areas of clinical medicine. Rotation is based at Barnes-Jewish Hospital with focus adjusted to meet student’s interest and career plans.

Student time distribution: Inpatient 30%, Outpatient 60%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 70
On call/weekend responsibility: One weekend per rotation

**M10 822 ANESTHESIA FOR NEUROSURGERY**
Instructors: René Tempelhoff, MD, 362-2330; Jeff Yoder, MD, 362-2944
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: René Tempelhoff, MD, 362-2330
Other Information: Students should meet on 3rd Floor Barnes-Jewish Hospital, South Campus, Department of Anesthesiology, 7 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Challenging neurosurgical procedures. Student will become familiar with complex procedures for brain monitoring, cardiovascular support and airway management and will be exposed to all kinds of neurosurgical ailments.

Student time distribution: Inpatient 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attending, fellow and senior resident
Patients seen/weekly: 8
On call/weekend responsibility: None

**M10 823 OBSTETRICAL ANESTHESIA**
Instructors: Swarup Varaday, MD, 362-6252, pager 253-1033
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Swarup Varaday, MD, 362-6252, pager 253-1033
Other Information: Students should report to 5400 Labor and Delivery, 7 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 2- or 4-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41 and 43.

The medical students will learn the different analgesia/anesthetic options for the labor patient. They will also learn how the physiological adaptations of pregnancy influence anesthetic management. They will be actively involved in the parturient's management, i.e., starting an IV, placement of spinal, epidural or CSE (combined spinal epidural) anesthetics. They will also attend the OB anesthesia conferences and interview patients in labor (with an OB anesthesia attending).

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending, senior resident, fellows
Patients seen/weekly: 20
On call/weekend responsibility: None (optional)

Faculty

ALEX S EVERS, MD Head of the Department of Anesthesiology, Henry E Mallinckrodt Professor of Anesthesiology
NABIL ABOUD, MD Instructor in Anesthesiology
SIRAJUDDIN AGHA, MBBS Assistant Professor of Anesthesiology
GUSTAV AKK, PHD Assistant Professor of Anesthesiology
MICHAEL SIMON AVIDAN, MBBS Associate Professor of Anesthesiology
GEORGE RICHARD BENZINGER, III, MD, PHD Assistant Professor of Anesthesiology
LAILA M BOTTROS, MD Assistant Professor of Anesthesiology
WALTER A BOYLE, III, MD Professor of Anesthesiology
YUQING CAO, PHD Assistant Professor of Anesthesiology
LAURA FRANCESCA CAVALONE, MD Assistant Professor of Anesthesiology
ZHOUFENG CHEN, PHD Associate Professor of Anesthesiology
ZIWEI CHEN, MBBS, PHD Research Instructor in Anesthesiology
KELLY LYNNE CHILSON, MD Assistant Professor of Anesthesiology
ALBERT MURRAY COHEN, MD Assistant Professor of Anesthesiology
JENNIFER W COLE, MD Associate Professor of Anesthesiology
CRAIG M COOPERSMITH, MD Associate Professor of Anesthesiology
THOMAS E COX, MD Associate Professor of Anesthesiology
CHARLES M CROWDER, MD, PHD Associate Professor of Anesthesiology
Bakul Dave, MD Assistant Professor of Anesthesiology
VICTOR G DAVILA-ROMAN, MD Professor of Anesthesiology
THOMAS ALLEN DAVIS, MD Associate Professor of Anesthesiology
CHARL JOHAN DE WET, MBCHB Associate Professor of Anesthesiology
GEORGE J DESPOTIS, MD Associate Professor of Anesthesiology
SUNITA DHARMARAPU, MD Instructor in Anesthesiology
MICHAEL N DIRINGER, MD Professor of Anesthesiology
RICHARD ELIOT FAGLEY, MD Assistant Professor of Anesthesiology
JAMES J FEHR, III, MD Associate Professor of Anesthesiology
STEVEN EDWARD FEIT, MD Assistant Professor of Anesthesiology
BEVERLY J. FIELD, PHD, BA Assistant Professor of Anesthesiology
NARASIMHAN GAUTAM, PHD Professor of Anesthesiology
ROBERT W GEREAU, PHD Professor of Anesthesiology
DANIEL PATRICK GILLEN, MD Assistant Professor of Anesthesiology
THOMAS JAMES GOBLIRSCH, MD Assistant Professor of Anesthesiology
CHRISTINE GOEPFERT, MD Instructor in Anesthesiology
KONRAD MEISSNER, MBBS Instructor in Anesthesiology
ROBERT PAUL MOORE, MD Instructor in Anesthesiology
JEREMIAH J MORRISSEY, PHD Research Professor of Anesthesiology
DAVID J MURRAY, MD Professor of Anesthesiology
PETER NAGELE, MD Assistant Professor of Anesthesiology
JOAN M NIEHOFF, MD Assistant Professor of Anesthesiology
CARL HELGE NIELSEN, MD Professor of Anesthesiology
DANIEL C NIEVA, MD Instructor in Anesthesiology
MARGARET MARY OAKLEY, MD Assistant Professor of Clinical Anesthesiology
WILLIAM D OWENS, MD Professor Emeritus of Anesthesiology
NIRVIK PAL, MD Instructor in Anesthesiology
ANDREA JO PARSONS Instructor in Anesthesiology
PATRICIA A. PENKOSKE, MD Instructor in Anesthesiology
ALBERTO GIUSEPP PIACENTINI, MBBS Instructor in Anesthesiology
MITCHELL R PLATIN, MD Assistant Professor of Anesthesiology
DEBRA D PULLEY, MD Associate Professor of Anesthesiology
CARLOS ANGEL PUYO, MD Instructor in Anesthesiology
RAHUL RASTOGI, MBBS Associate Professor of Anesthesiology
JEBADURAI RATNARAJ, MD Assistant Professor of Anesthesiology
NICEITA L ROA, MD Associate Professor of Anesthesiology
FRANK EDWARD ROBBINS, MD Assistant Professor of Anesthesiology
PAULA J RUSHING, MD Assistant Professor of Anesthesiology
ADNAN SADIQ, MD Assistant Professor of Anesthesiology (Pending Executive Faculty Approval)
NICOLE MARIE SCACCIA, DOST Instructor in Anesthesiology
CHARLES R SCHROCK, MD Assistant Professor of Anesthesiology
TODD J. SCHWEDT, MD Assistant Professor of Anesthesiology
SONIA MALHOTRA SHAHRAWAT, MD Instructor in Anesthesiology
ANSHUMAN SHARMA, MD Associate Professor of Anesthesiology
JOHN CHARLES SPITLER, MD Instructor in Anesthesiology
JOSEPH H STEINBACH, PHD Russell and Mary Shelden Professor of Anesthesiology
GINA M STORY, PHD Assistant Professor of Anesthesiology
ROBERT A SWARM, MD Professor of Anesthesiology
JENS ANDREAS TAN, MD Instructor in Anesthesiology
RENE TEMPELHOFF, MD Professor of Anesthesiology
RAGHU P TERKONDA, MD Assistant Professor of Anesthesiology
JOSEPH M THORNHILL, MD, BS Assistant Professor of Anesthesiology
SILVESTRE A TOMELDAN, JR, MD Instructor in Anesthesiology
GEORGE S TSENG, MD Assistant Professor of Anesthesiology
ANDREA VANNUCCI, MD Assistant Professor of Anesthesiology
SWARUP VARADAY, MBBS Instructor in Anesthesiology
Department's Web Site

http://www.anest.wustl.edu/

Department of Biochemistry and Molecular Biophysics

The Department of Biochemistry and Molecular Biophysics encompasses research on the structure, chemistry and mechanisms of biological responses, reactions and pathways. Investigators are using experimental techniques such as X-ray crystallography, NMR, optical spectroscopy, thermodynamics and rapid kinetics in combination with computational modeling to unravel the molecular underpinnings of processes of relevance to health and disease (biochem.wustl.edu). New emphasis on single-molecule dissection of protein dynamics and reaction mechanisms achieves deeper understanding of molecular processes. High throughput screening of chemical libraries and synthetic medicinal chemistry to develop small molecule probes of biological systems add strength to our growing efforts toward experimental therapeutics and translational research.

Faculty in the Department of Biochemistry and Molecular Biophysics teach basic science courses in the medical school curriculum, including The Molecular Foundations of Medicine and Principles of Pharmacology. Advanced courses in Molecular Medicine (Bio 5326), Nucleic Acids and Protein Synthesis (Bio548), and Macromolecular Interactions (Bio5312) describe the principles of molecular interactions underlying the biology of health and disease. Students in the School of Medicine and the Graduate School of Arts & Sciences are eligible for these courses and may elect to pursue biomedical research under the direction of our faculty. A full listing of advanced courses topics can be found at biochem.wustl.edu/courses/index.html.

Our faculty members are engaged in a broad spectrum of biomedically relevant research areas, including nucleic acids structure and enzymology, mechanisms of protein folding, misfolding and aggregation, cellular mechanics and signaling across membranes, and hemostasis, thrombosis and vascular biology. The Department offers unique training opportunities at the crossroad of biochemistry, biophysics, systems biology, computational science and pharmacological sciences.

Courses

First Year
M15 502 MOLECULAR FOUNDATIONS OF MEDICINE  
Instructor: Linda J. Pike, PhD, 362-9502  
This course is designed primarily for medical students and will cover fundamental aspects of biochemistry and cell biology. The course begins with a treatment of protein structure and the function of proteins in the cytoskeleton and cell motility. The principles of enzyme kinetics and regulation are then discussed and basic pathways for the synthesis and metabolism of carbohydrates and lipids are introduced. This leads into a discussion of membrane structure and the function of cellular organelles in biological processes including energy production, protein degradation and protein trafficking. Non-medical students should register under L41 (Bio) 5319.

Second Year

M70 670A PRINCIPLES OF PHARMACOLOGY  
Instructors: Tom Ellenberger, DVM, PhD, 362-0287 and Enrico Di Cera, MD, 362-4185  
The purpose of this course is to provide basic information on the underlying principles that apply to pharmacology. Topics addressed include: mechanisms of receptor-mediated drug action, pharmacokinetics, drug metabolism, toxicology, developmental pharmacology and the autonomic nervous system. Students who have not completed the first year of the medical school curriculum must have permission from one of the coursemasters to enroll in this course.

Fourth Year

Electives  
Descriptions of the elective courses are listed under the Division of Biology and Biomedical Sciences. In some instances, these courses are offered in alternate years. The faculty member in charge of the course should be contacted for specific times.

L41 (Bio) 5224 MOLECULAR, CELL AND ORGAN SYSTEMS  
L41 (Bio) 5312 MACROMOLECULAR INTERACTIONS  
L41 (Bio) 5318 DNA REPAIR  
L41 (Bio) 5326 MOLECULAR MEDICINE  
L41 (Bio) 5357 CHEMISTRY AND PHYSICS OF BIOMOLECULES  
L41 (Bio) 5476 MODELING BIOMOLECULAR SYSTEMS I  
L41 (Bio) 5477 MODELING BIOMOLECULAR SYSTEMS II  
L41 (Bio) 548 NUCLEIC ACID AND PROTEIN BIOSYNTHESIS

Note — The number preceding the course title indicates that the course carries credit in the Graduate School of Arts & Sciences.

Research

(M15 900)  
Cross-listed with L41 (Bio) 590  

Peter M. J. Burgers, PhD, 1st Floor South Building, 362-3872. Molecular biology of yeast chromosomal DNA replication and DNA repair.

Peter T. Chivers, PhD, 1st Floor South Building, 362-1496. The biochemistry of metalloregulation and metallophysiology.

Tom Ellenberger, DVM, PhD, 2nd Floor South Building, 362-0287. Structural biology of DNA repair and chemical genetics of DNA damage responses.

Elliot L. Elson, PhD, 2nd Floor McDonnell Medical Sciences Building, 362-3346. Cellular mechanics and cytoskeletal structure and function. Fluctuation spectroscopy.

William A. Frazier, PhD, 1st Floor South Building, 362-3348. CD47 as a regulator of integrins and nitric oxide signaling in vascular cells.

Carl Frieden, PhD, 2nd Floor McDonnell Medical Sciences Building, 362-3344. Protein folding and protein dynamics of intrinsically disordered proteins using NMR and fluorescence methods.

Eric A. Galburt, PhD, 2nd Floor McDonnell Medical Sciences Building, 362-0287. Cooperative transcription dynamics. Several subprojects that all lead toward the ability to perform single molecule fluorescent experiments of bacterial RNA polymerases. Techniques such as protein purification, fluorescent protein labeling and transcription assays will be learned and developed to generate fluorescently labeled RNA polymerases that can be tracked in an assay of cooperative affects during transcription.

Roberto Galletto, PhD, 2nd Floor McDonnell Medical Sciences Building, 362-4368. Mechanistic studies of DNA motor proteins and telomere binding proteins; single-molecule approaches.

Kathleen Hall, PhD, 2nd Floor North Building, 362-4196. RNA structure/function. RNA protein interactions. NMR spectroscopy.


Garland R. Marshall, PhD, 2201 Center for Computational Biology, 362-1567. Molecular recognition, protein engineering, signal transduction-GPCRs, two-component signaling as antibiotic target.

Linda J. Pike, PhD, 2nd Floor Cancer Research Building, 362-9502. EGF receptors and the role of lipid rafts in signal transduction.

Jay Ponder, PhD, 208 Center for Computational Biology, 362-4195. Computational modeling of protein structure and energetics. Protein engineering.

Faculty

THOMAS E ELLENBERGER, DVM, PHD Head of the Department of Biochemistry and Molecular Biophysics, Raymond H. Witcoff Professor of Biochemistry and Molecular Biophysics

SAMUEL I ACHILEFU, PHD Professor of Biochemistry and Molecular Biophysics

CAROLYN J ANDERSON, PHD Professor of Biochemistry and Molecular Biophysics

USHA P ANDLEY, PHD Assistant Professor of Biochemistry and Molecular Biophysics

NATHAN A BAKER, PHD Associate Professor of Biochemistry and Molecular Biophysics

WAYNE MORRIS BARNES, PHD Associate Professor of Biochemistry and Molecular Biophysics

ROBERT E. BLANKENSHIP, PHD Professor of Biochemistry and Molecular Biophysics
THOMAS J. BRETT, PHD  Assistant Professor of Biochemistry and Molecular Biophysics
BARBARA I BROWN, PHD  Professor Emerita of Biological Chemistry
DAVID HENRY BROWN, PHD  Professor Emeritus of Biological Chemistry
PETER M BURGERS, PHD  Professor of Biochemistry and Molecular Biophysics
PETER TRISTRAM CHIVERS, PHD  Assistant Professor of Biochemistry and Molecular Biophysics
SUDHA MAHAJAN COWSIK, PHD  Research Instructor in Biochemistry and Molecular Biophysics
ENRICO DI CERA, MD  Roy and Diana Vagelos Professor of Biochemistry and Molecular Biophysics
ALLAN DOCTOR, MD  Associate Professor of Biochemistry and Molecular Biophysics
GEORGE ROBERT DRYSDALE, PHD  Professor Emeritus of Biochemistry and Molecular Biophysics
SARAH C.R. ELGIN, PHD  Professor of Biochemistry and Molecular Biophysics
ELLIO T L ELSON, PHD  Alumni Endowed Professor of Biochemistry and Molecular Biophysics
WILLIAM A FRAZIER, III, PHD  Professor of Biochemistry and Molecular Biophysics
DAVED H FREMONT, PHD  Associate Professor of Biochemistry and Molecular Biophysics
CARL FRIEDEN, PHD  Professor of Biochemistry and Molecular Biophysics
ERIC A GALBURT, PHD  Assistant Professor of Biochemistry and Molecular Biophysics
ROBERTO GALLETTO, PHD  Assistant Professor of Biochemistry and Molecular Biophysics
GREGORY I GOLDBERG, PHD  Professor of Biochemistry and Molecular Biophysics
DAVID I GOTTLIEB, PHD  Associate Professor of Biochemistry and Molecular Biophysics
KATHLEEN HALL, PHD  Professor of Biochemistry and Molecular Biophysics
WILLIAM F HOLMES, PHD  Associate Professor Emeritus of Biological Chemistry
JAMES W JANETKA, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics
EVAN DAVID KHARASCH, MD, PHD  Professor of Biochemistry and Molecular Biophysics
STUART A KORNFELD, MD  Professor of Biochemistry and Molecular Biophysics
ALEXANDER KOZLOV, PHD  Research Instructor in Biochemistry and Molecular Biophysics.
LINDA C KURZ, PHD  Research Associate Professor Emeritus of Biochemistry and Molecular Biophysics
ELLEN LI, MD, PHD  Associate Professor of Biochemistry and Molecular Biophysics
TIMOTHY M LOHMAN, PHD  Marvin A Brennecke Professor of Biological Chemistry in Biochemistry and Molecular Biophysics
ROBERT H MACH, PHD  Professor of Biochemistry and Molecular Biophysics
PHILIP W MAJERUS, MD  Professor of Biochemistry and Molecular Biophysics
JOHN E MAJORS, PHD  Associate Professor of Biochemistry and Molecular Biophysics
GARLAND R MARSHALL, PHD  Professor of Biochemistry and Molecular Biophysics
F. SCOTT MATHEWS, PHD  Professor Emeritus of Biochemistry and Molecular Biophysics
STEPHEN M MOERLEIN, PHD  Associate Professor of Biochemistry and Molecular Biophysics
ROHIT V. PAPPU, PHD  Assistant Professor of Biochemistry and Molecular Biophysics
LINDA J PIKE, PHD  Professor of Biochemistry and Molecular Biophysics
JAY WILLIAM PONDER, PHD  Associate Professor of Biochemistry and Molecular Biophysics
KATHERINE P PONDER, MD  Professor of Biochemistry and Molecular Biophysics
JOSEPH L ROTI ROTI, PHD  Professor of Biochemistry and Molecular Biophysics
ANA MARIA RUIZ MANZANO, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics
J. EVAN SADLER, MD, PHD  Professor of Biochemistry and Molecular Biophysics
Cell biology is one of the primary disciplines in medical research, influencing all areas of basic and clinical investigation. The future holds great opportunities in cell biology research due to inventories of the genes and proteins from which cells are built, new experimental techniques and various model organisms. Further discoveries about the cell biology of human genes will continue to translate into therapeutics. Also on the horizon is a better understanding of how proteins and sets of proteins (e.g., macromolecular complexes) are assembled and integrated to produce function.

The Department of Cell Biology and Physiology is ranked among the top 10 cell biology departments in the country, and the research carried out by its faculty covers a broad range of fields within cellular physiology and molecular cell biology. A unifying theme is the study of fundamental processes and their regulation. These cellular processes include include genome maintenance, apoptosis, cell cycle control, dynamic cell motility, angiogenesis, signal transduction and membrane trafficking, presynaptic processes, prion protein misfolding, and the structure and function of ion channels. The department's research activities provide a foundation for studies in cancer biology, immunobiology, developmental biology, neurobiology and vascular biology. Its faculty use model organisms as well as human stem cells and a variety of techniques such as deep-etch electron and confocal microscopy to carry out their research. Cellular imaging is a particular strength of the department.

The Department of Cell Biology and Physiology oversees the Cell and Organ Systems course, which is designed to provide first-year medical students with a foundation for their further study of clinical and applied physiology. The Molecular Cell Biology course for first-year graduate students conveys an understanding of fundamental cell biology research strategies and principles. In addition, advanced courses open to medical and graduate students provide for more detailed study of specific areas of cell biology, physiology and cellular biophysics.

Courses

First Year

M75 503 CELL AND ORGAN SYSTEMS BIOLOGY
Instructor: Robert S. Wilkinson, PhD, 362-2300
This course integrates and extends the basic principles of cell biology and physiology to the functions of the major organ systems of the body; i.e., muscle, cardiovascular, renal, respiratory, gastrointestinal and endocrine. Limited space is available for non-medical students with instructor's
permission. This course is cross-listed in the Department of Anatomy and Neurobiology.

**Selectives**

**M04 537 CARDIOVASCULAR CONTROL MECHANISMS**  
Instructors: Jeff Gidday PhD, 286-2795; David Murray MD, 747-2136  
The purpose of this selective is to demonstrate cardiovascular physiologic principles and control mechanisms using interactive patient simulators (computerized mannequins) to replicate common cardiovascular disease conditions and potential treatment modalities. Several clinical scenarios with case histories will be presented to small groups for interpretation and subsequent treatment, thereby providing the opportunity to explore endogenous baroreceptor-mediated reflex responses as well as prototypical pharmacologic interventions undertaken by clinicians. Scenarios may include hypovolemic shock, congestive heart failure, myocardial infarction, valvular diseases, and some “unknowns.” Variables monitored in the patient simulator include ECG, arterial, venous, ventricular, and capillary wedge pressures, cardiac output, stroke volume, heart rate, systemic and pulmonary vascular resistance, and ventilation. A class-wide, follow up discussion and systematic review will follow the individual small group workshops.

**M04 561 BRAIN BLOOD VESSELS**  
Instructor: Thomas A. Woolsey, MD, 362-3601  
This course considers structure, development, flow regulation and disease of cerebral blood vessels. Four general themes are: 1) the architecture of cerebral vessels, 2) regulation of cerebral blood flow during neural activity, 3) the blood-brain barrier, and 4) brain blood vessel development. Students select topics and papers for presentation from a menu. For the final session, students study a clinical problem and present their analysis to the rest of the group.

**M04 5667 MICROCIRCULATION**  
Instructor: Jeffrey M. Gidday, PhD, 286-2795  
The homeostatic functions of the microcirculation include the active regulation of metabolite exchange with parenchymal cells, immune surveillance, and a multifaceted response to injury and disease. This elective provides an overview of the normal and abnormal cell biology and physiology of the microcirculation. Four sessions will be organized around conceptual presentations and laboratory demonstrations by the instructor, and two-part topic presentations by students following independent library research that focuses on basic physiology and clinically relevant pathophysiology. Basic physiology research topics might include: regulation of tissue blood flow and vascular tone, propagated vasodilation, hemodynamics and rheology of erythrocytes and leukocytes, cell biology of the endothelium, control of capillary permeability, and angiogenesis. Common disease entities involving microcirculatory dysfunction include: stroke and myocardial ischemia, diabetes, inflammation, tumor angiogenesis, retinopathy of prematurity, pulmonary edema, various autoimmune diseases, as well as the adaptive cardiovascular responses to exercise or high altitude. This selective is cross-listed in the Department of Neurological Surgery.

**M04 596 ION CHANNELS AND DISEASE**  
Instructor: Colin G. Nichols, PhD, 362-6630  
Ion channels are present in all cells and direct intracellular events by controlling the membrane electrical activity. Many widely used clinical drugs act by altering the behavior of ion channels, and it is now clear that many diseases, including epilepsy, diabetes, cardiac arrhythmias and cystic fibrosis result directly from inherited ion channel mutations. We will consider the basis of ion channel diseases and ion channel modulation therapies. Students will research a topic of choice in the library over two to three weeks and then present their findings to the whole class. After the initial course meeting, we will not meet formally for three weeks, and will then meet once per week for presentations.

**Fourth Year**
Electives
Descriptions of the following courses may be found under Division of Biology and Biomedical Sciences.

L41 (Bio) 5062 CENTRAL QUESTIONS IN CELL BIOLOGY
L41 (Bio) 5068 FUNDAMENTALS OF MOLECULAR CELL BIOLOGY
L41 (Bio) 5122 CELL-MATRIX INTERACTIONS
L41 (Bio) 5132 CELL MOTILITY AND CYTOSKELETON JOURNAL CLUB

Note — The number preceding the course title indicates that the course carries credit in the Graduate School of Arts & Sciences. See course descriptions in the Graduate Programs section of this catalog.

Research

(M75 900)
Cross-listed with L41 (Bio) 590

Dana Abendschein, PhD, 9924 Clinical Sciences Research Building, 362-8925. Responses of arteries to acute injury and coagulation mediators of arterial remodeling after injury.

Kendall Blumer, PhD, 506 McDonnell Medical Sciences Building, 362-1668. Signaling mechanisms in cardiovascular and neurological disorders.

John Cooper, MD, PhD, 416 McDonnell Medical Sciences Building, 362-3964. The roles of actin and microtubules in cell motility and the cell cycle.

Phyllis I. Hanson, MD, PhD, 4625 Cancer Research Building, 747-4233. Study of protein-protein and protein-membrane interactions involved in neuronal and synaptic membrane trafficking using biochemical, biophysical and cell biological techniques.

David A. Harris, MD, PhD, 5508 Cancer Research Building, 362-4690. Molecular and cellular biology of prion diseases.

John Heuser, MD, 4900 South Building, 362-6948. Development of new methods for visualizing cells and molecules in three dimensions by means of electron microscopy, and for capturing macromolecular mechanisms through rapid freezing techniques.

Keith A. Hruska, MD, 5th Floor McDonnell Pediatric Research Building, 286-2772. The research in the laboratory focuses on new therapies for chronic kidney disease, osteoarthritis and their complications. The mechanisms of action of these therapies for nephropathy, vascular calcification and renal bone disease are being analyzed, as are mechanisms enabling cartilage transplantation.

James Huettner, PhD, 6600 Cancer Research Building, 362-6628. Excitatory amino acid receptors and synaptic transmission in the central nervous system; neural differentiation of embryonic stem cells.

Vitaly Klyachko, PhD, 3600 Cancer Research Building, 362-5517. The mechanisms and regulation of neurotransmitter release at individual synapses; the functional roles of presynaptic processes in
synaptic plasticity and information processing.


Robert Mecham, PhD, 4606 Cancer Research Building, 362-2254. Understanding the complex process of extracellular matrix assembly and organization, including studying the intracellular pathways used to transport matrix components to the cell surface and identifying helper or accessory proteins that facilitate trafficking and matrix assembly. Cell-matrix interactions in development and cellular mechanisms associated with connective tissue remodeling in vascular disease and heritable diseases of connective tissues.


Colin Nichols, PhD, 425 McDonnell Medical Sciences Building, 362-6630. Ion channel biology. Multiple levels of analysis from the molecular basis of channel function to in vivo physiology and disease.

Helen Piwnica-Worms, PhD, 554 McDonnell Medical Sciences Building, 362-6812. Cell cycle- and checkpoint-control in normal and cancer cells.

Paul Schlesinger, MD, 406 McDonnell Medical Sciences Building, 362-2223. Molecular mechanism of BCL-2 family protein function, intracellular channels, biophysics of lipids, proteins and their interaction in cells and nanotechnology.

Philip Stahl, PhD, 4929 South Building, 362-6950. Signal transduction, membrane trafficking events and the mechanism of endocytosis and phagocytosis including the role of low molecular weight GTPases Ras and Rab. Studies of a unique set of human-specific genes that promote cell growth.

Sheila A. Stewart, PhD, 514 McDonnell Medical Sciences Building, 362-3934. Molecular mechanisms by which telomerase controls cellular mortality and immortality. Stromal influences on tumorigenesis.

Heather L. True-Krob, PhD, 413 McDonnell Medical Sciences Building, 362-3934. Biological consequences of yeast prions — in both their capacity to function as a novel epigenetic element and in their utility to serve as a tractable model for the analysis of protein misfolding and aggregation that occurs in several neurodegenerative disorders.

Faculty

PHILIP DAMIEN STAHL, PHD  Edward Mallinckrodt Jr Professor of Cell Biology and Physiology, Head of Department of Cell Biology and Physiology
DANA RAY ABENDSCHEIN, PHD  Associate Professor of Cell Biology and Physiology
YOUSEF ABU-AMER, PHD  Associate Professor of Cell Biology and Physiology
NADA A ABUMRAD, PHD  Professor of Cell Biology and Physiology
JEFFREY MICHAEL ARBEIT, MD  Professor of Cell Biology and Physiology
JACQUES ULRICH BAENZIGER, MD, PHD  Professor of Cell Biology and Physiology
STEVEN BASSNETT, PHD  Professor of Cell Biology and Physiology
DAVID C BEEBE, PHD  Professor of Cell Biology and Physiology
CARLOS BERNAL-MIZRACHI, MD  Assistant Professor of Cell Biology and Physiology
KENDALL JAY BLUMER, PHD  Professor of Cell Biology and Physiology
RON BOSE, MD, PHD, BS  Assistant Professor of Cell Biology and Physiology
THOMAS J. BRETT, PHD  Assistant Professor of Cell Biology and Physiology
GEORGE JOHN BROZE, JR, MD  Professor of Cell Biology and Physiology
GUOJUN BU, PHD  Professor of Cell Biology and Physiology
HAROLD BURTON, PHD  Professor of Cell Biology and Physiology
FENG CHEN, PHD  Assistant Professor of Cell Biology and Physiology
ROBERTO CIVITELLI, MD  Professor of Cell Biology and Physiology
F. SESSIONS COLE, MD  Professor of Cell Biology and Physiology
JOHN A COOPER, MD, PHD  Professor of Cell Biology and Physiology
JIANMIN CUI, PHD  Associate Professor of Cell Biology and Physiology
SUSAN K. DUTCHER, PHD  Professor of Cell Biology and Physiology
IGOR R EFIMOV, PHD  Associate Professor of Cell Biology and Physiology
ROBERTA FACCIO, PHD  Assistant Professor of Cell Biology and Physiology
THOMAS W FERKOL, MD  Professor of Cell Biology and Physiology
SIMON FISHER, MD, PHD  Assistant Professor of Cell Biology and Physiology
WILLIAM A FRAZIER, III, PHD  Professor of Cell Biology and Physiology
BRIAN JAMES GALLETTA, PHD  Research Assistant Professor of Cell Biology and Physiology
JEFFREY M. GIDDAY, PHD  Associate Professor of Cell Biology and Physiology
SUSANA GONZALO HERVAS, PHD  Assistant Professor of Cell Biology and Physiology
DENNIS E HALLAHAN, MD  Professor of Cell Biology and Physiology
MARC RANDALL HAMMERMAN, MD, BA  Professor of Cell Biology and Physiology
PHYLLIS I HANSON, MD, PHD  Associate Professor of Cell Biology and Physiology
JAMES WILLIAM HARBOUR, MD  Professor of Cell Biology and Physiology
JOHN E HEUSER, MD  Professor of Cell Biology and Physiology
DIDIER HODZIC, PHD  Assistant Professor of Cell Biology and Physiology
MICHAEL J HOLTZMAN, MD  Professor of Cell Biology and Physiology
KEITH A HRUSKA, MD  Professor of Cell Biology and Physiology
Paul W. Hruz, MD, PhD  Assistant Professor of Cell Biology and Physiology
James E. Huettner, PhD, BS  Associate Professor of Cell Biology and Physiology
Samuel Klein, MD  Professor of Cell Biology and Physiology
Vitaly A. Klyachko, PhD  Assistant Professor of Cell Biology and Physiology
Joseph C. Koster, PhD  Research Assistant Professor of Cell Biology and Physiology
Sandor J. Kovacs, MD, PhD  Professor of Cell Biology and Physiology
Gregory D. Longmore, MD  Professor of Cell Biology and Physiology
Robert H. Mach, PhD  Professor of Cell Biology and Physiology
Elaine Michelle Majerus, MD, PhD, BS  Assistant Professor of Cell Biology and Physiology
Douglas L. Mann  Professor of Cell Biology and Physiology
Bess Adkins Marshall, MD  Assistant Professor of Cell Biology and Physiology
Audrey M. McAlinden, PhD  Assistant Professor of Cell Biology and Physiology
Robert Paul Mecham, PhD  Alumni Endowed Professor of Cell Biology and Physiology
Robert W. Mercer, PhD  Professor of Cell Biology and Physiology
Loren S. Michel, MD  Assistant Professor of Cell Biology and Physiology
Jeffrey H. Miner, PhD  Professor of Cell Biology and Physiology
Stanley Misler, MD, PhD  Associate Professor of Cell Biology and Physiology
Kelle Harbert Moley, MD  Associate Professor of Cell Biology and Physiology
Mike Max Mueckler, PhD  Professor of Cell Biology and Physiology
Anthony Muslin, MD  Professor of Cell Biology and Physiology
Colin G. Nichols, PhD  Professor of Cell Biology and Physiology, Carl F. Cori Professor
Daniel Scott Ory, MD  Professor of Cell Biology and Physiology
Marshall Alan Permutt, MD  Professor of Cell Biology and Physiology
Richard A. Pierce, PhD  Research Associate Professor of Cell Biology and Physiology
Helena Piwnica-Worms, PhD  Professor of Cell Biology and Physiology, Gerty T. Cori Professor, Howard Hughes Medical Institute Investigator in Cell Biology and Physiology
Kenneth S. Polonsky, MBBCH  Professor of Cell Biology and Physiology
Maria Sara Remedi, PhD  Research Instructor in Cell Biology and Physiology
Joseph L. Roti Roti, PhD  Professor of Cell Biology and Physiology
Carl Marx Rovainen, PhD  Professor Emeritus of Cell Biology and Physiology
Yoram Rudy  Professor of Cell Biology and Physiology
Shirley Ann Sahrmann, PhD  Professor of Cell Biology and Physiology
Monica Sala-Rabanal, PhD  Research Instructor in Cell Biology and Physiology
Linda J. Sandell, PhD  Professor of Cell Biology and Physiology
Paul Henry Schlesinger, MD, PhD  Associate Professor of Cell Biology and Physiology
Clay F. Semenovitch, MD  Professor of Cell Biology and Physiology
Robert M. Senior, MD  Professor of Cell Biology and Physiology
Thomas H. Steinberg, MD  Associate Professor of Cell Biology and Physiology
Sheila Stewart-Wigglesworth, PhD  Assistant Professor of Cell Biology and Physiology
Steven M. Strasberg, MD  Associate Professor of Cell Biology and Physiology
The principal research activities of the Department of Developmental Biology are focused on the profoundly complex challenge of attaining a mechanistic understanding of organogenesis, encompassing the earliest developmental processes in the embryo, stem cell biology, organism and cellular physiology, tissue homeostasis and repair, and aging. Students and postdoctoral fellows work closely with faculty and staff on research projects and participate in weekly journal clubs and seminars where recent literature and ongoing research is discussed.

Courses

First Year

Selective

M04 500C DEVELOPMENTAL BIOLOGY AND DISEASE
Instructor: Kerry Kornfeld, MD, PhD, 747-1480
This course presents discoveries arising from research in the broad field of developmental biology and focuses on how these discoveries are contributing to understanding, diagnosis and the treatment of human disease.

Research

FOURTH YEAR

(M70 900)
Cross-listed with L41 (Bio) 590
Irving Boime, PhD, 3rd Floor McDonnell Medical Sciences Building, 362-2556. Secretion, targeting and structure-function of the human placental and pituitary glycoprotein hormones.
Douglas F. Covey, PhD, 3rd Floor McDonnell Medical Sciences Building, 362-1726. Medicinal chemistry of steroids.

Aaron DiAntonio, MD, PhD, 333 McDonnell Medical Sciences Building, 362-9925. Synaptic growth and regeneration in *Drosophila* and mouse.

Gregory A. Grant, PhD, 4th Floor Biotechnology Center, 362-3367. Mechanism of allosteric regulation in enzymes.

Shin-Ichiro Imai, MD, PhD, Room 362A McDonnell Medical Sciences Building, 362-7228. Molecular mechanisms of aging and longevity in mammals, particularly focusing on the tissue-specific functions of the mammalian NAD-dependent deacetylase Sirt1 and the physiological significance of systemic NAD biosynthesis mediated by Nampt (nicotinamide phosphoribosyltransferase) in an intimate connection between metabolism and aging.

Raphael Kopan, PhD, 3600 Cancer Research Building, 747-5520. Notch biology and disease. Students will participate in studies addressing the role of Notch in disease using mouse models of kidney disease (Alagille Syndrome, Congenital Anomalies of the Kidney and Urinary Tract (CAKUT), Renal Hypodysplasia (RHD) and skin abnormalities (alopecia, cancer, ectopic dermatitis) and their link to asthmas. We also use High Throughput Screening to methodically look for integration of Notch with other signaling pathways.


Kristen Kroll, PhD, Room 320 McDonnell Medical Sciences Building, 362-7045. Transcriptional networks that regulate the formation of neurons in early embryos and embryonic stem cells. Role of chromatin regulatory complexes in controlling pluripotency and differentiation.

Craig Micchelli, PhD, Room 328 McDonnell Medical Sciences Building, 362-7036. Biology of adult stem cells; gut development and morphogenesis.

Jeanne M. Nerbonne, PhD, 3rd Floor McDonnell Medical Sciences Building, 362-2564. Structure, function and regulation of voltage-dependent ion channels in the cardiovascular and nervous systems. Regulation of membrane excitability in health and disease.

David M. Ornitz, MD, PhD, 3rd Floor South Building, 362-3908. Regulation of lung, heart, skeletal and neurological diseases by members of the fibroblast growth factor family. Biochemical and genetic analysis of the otopetrin gene family in the mouse vestibular system.

John H. Russell, PhD, 3rd Floor McDonnell Medical Sciences Building, 362-2558. Mechanisms of lymphocyte-mediated inflammation and pathogenesis in the central nervous system.

**Faculty**

**DAVID M ORNITZ, MD, PHD** Alumni Endowed Professor of Developmental Biology, Interim Head of the Department of Developmental Biology

**RAJENDRA APTE, MD, PHD** Assistant Professor of Developmental Biology

**THOMAS J BARANSKI, MD, PHD** Associate Professor of Developmental Biology

**MONICA BESSLER, MD, PHD** Professor of Developmental Biology

**IRVING BOIME, PHD** Professor of Developmental Biology

**WALTER A BOYLE, III, MD** Assistant Professor of Developmental Biology

**SHIMING CHEN, PHD** Associate Professor of Developmental Biology
ZHOUFENG CHEN, PHD  Associate Professor of Developmental Biology
RICHARD A CHOLE, MD, PHD  Professor of Developmental Biology
DOUGLAS FLOYD COVEY, PHD  Professor of Pharmacology in Developmental Biology
PETER A. CRAWFORD, MD, PHD  Assistant Professor of Developmental Biology
CHARLES M CROWDER, MD, PHD  Associate Professor of Developmental Biology
NICHOLAS O DAVIDSON, MD  Professor of Developmental Biology
AARON DIANTONIO, MD, PHD  Associate Professor of Developmental Biology
ALEX S EVERS, MD  Professor of Developmental Biology
JEFFREY I GORDON, MD  Director of the Center for Genome Sciences
JEFFREY I GORDON, MD  Professor of Developmental Biology
GREGORY ALAN GRANT, PHD  Professor of Developmental Biology
RICHARD WARREN GROSS, MD, PHD  Professor of Developmental Biology
ROBERT O HEUCKEROTH, MD, PHD  Associate Professor of Developmental Biology
DAVID MICHAEL HOLTZMAN, MD  Professor of Developmental Biology
RICHARD S HOTCHKISS, MD  Professor of Developmental Biology
JAMES J HSIEH, MD, PHD  Assistant Professor of Developmental Biology
F. EDMUND HUNTER, JR, PHD  Professor Emeritus of Molecular Biology and Pharmacology
MAXENIA GARCIA ILAGAN, PHD  Instructor in Developmental Biology
SHIN-ICHIRO IMAI, MD, PHD  Associate Professor of Developmental Biology
EUGENE MALCOLM JOHNSON, JR, PHD  Professor of Molecular Biology and Pharmacology
RAPHAEL KOPAN, PHD  Professor of Developmental Biology
STEPHEN K KORNFELD, MD, PHD  Professor of Developmental Biology
PAUL THOMAS KOTZBAUER, MD, PHD  Assistant Professor of Developmental Biology
KRISTEN LOUISE KROLL, PHD  Associate Professor of Developmental Biology
FANXIN LONG, PHD  Associate Professor of Developmental Biology
LIANG MA, PHD  Assistant Professor of Developmental Biology
CRAIG ANTHONY MICCHELLI, PHD  Assistant Professor of Developmental Biology
JASON C MILLS, MD, PHD  Assistant Professor of Developmental Biology
AUBREY R MORRISON, MBBS  Professor of Developmental Biology
PHILIP NEEDLEMAN, PHD  Adjunct Professor of Molecular Biology and Pharmacology
JEANNE M NERBONNE, PHD  Alumni Endowed Professor of Molecular Biology and Pharmacology in Developmental Biology
DAVID R PIWNICA-WORMS, MD, PHD  Professor of Developmental Biology
DEBORAH C RUBIN, MD  Professor of Developmental Biology
DAVID RUDNICK, MD, PHD  Assistant Professor of Developmental Biology
JOHN HALL RUSSELL, PHD  Professor of Developmental Biology
SCOTT SAUNDERS, MD, PHD  Associate Professor of Developmental Biology
JEAN E. SCHAFFER, MD  Professor of Developmental Biology
ALAN L SCHWARTZ, MD, PHD  Professor of Developmental Biology
THADDEUS S. STAPPENBECK, MD, PHD  Assistant Professor of Developmental Biology
KAMESWARAN SURENDRAN, PHD  Instructor in Developmental Biology
Department's Web Site

http://molecool.wustl.edu/

James S. McDonnell Department of Genetics

The Department of Genetics is at the forefront in developing new methods for physical and genetic mapping of the human genome and for identifying and isolating genes responsible for a range of human phenotypes, Mendelian traits and common/complex diseases. The department supports a broad program of preclinical and graduate instruction in genetics, with research opportunities ranging from established experimental organisms to humans, and from molecular genetics to population genetics.

A significant portion of the first-year course in basic medical sciences is devoted to human and clinical genetics, with emphasis on the impact of new genetic technologies on the practice of medicine. This includes specialized selective courses in addition to the core genetic curriculum. Advanced training in clinical genetics and in genetic research is available from the faculty in the Department of Genetics and from geneticists with principal appointments in many other departments within the School of Medicine.

The Department of Genetics offers a broad range of training in virtually all major areas of modern genetics. Numbered among the faculty are world leaders in genetic mapping, new methods of DNA manipulation, cloning and sequencing, computational biology, developmental genetics, neurogenetics, human and statistical genetics, and population and evolutionary genetics. Research opportunities with experimental organisms include genetic studies with zebrafish, fruit flies, nematodes, yeast, bacteria and the alga *Chlamydomonas*.

Advanced courses and seminars are offered that focus on the genetics of complex disease, gene expression, genetic mapping, molecular genetics, genetic epidemiology, biostatistics, computational biology, developmental genetics, microbial genetics, immunogenetics, cancer genetics and population and evolutionary genetics. Extraordinary opportunities for research training and experience are available in all of these areas and at all levels. The programs are tailored to meet the needs of medical students, graduate students and both MD and PhD postdoctoral fellows pursuing advanced training in biomedical research.

Courses

**First Year**

**M30 511 MEDICAL GENETICS**
For full description, see Department of Pediatrics.

**Fourth Year**

**Electives**

For complete descriptions, see Division of Biology and Biomedical Sciences.

L41 (Bio) 5235 GENETICS JOURNAL CLUB
L41 (Bio) 5482 HUMAN LINKAGE AND ASSOCIATION ANALYSIS
L41 (Bio) 5484 GENOMICS AND DEVELOPMENT OF C. ELEGANS JOURNAL CLUB
L41 (Bio) 5485 FUNDAMENTALS OF MAMMALIAN GENETICS
L41 (Bio) 5488 GENOMICS
L41 (Bio) 5491 ADVANCED GENETICS
L41 (Bio) 5495 COMPUTATIONAL MOLECULAR BIOLOGY
L41 (Bio) 5911 CLASSICAL EXPERIMENTS IN MOLECULAR GENETICS

Note — The number preceding the course title indicates that the course carries credit in the Graduate School of Arts & Sciences.

Research

(M20 900) Cross-listed with L41 (Bio 590)


Anne Bowcock, PhD, 331 Biotechnology Center, 747-3261. Molecular genetics of human disease.


Susan K. Dutcher, PhD, 875 McDonnell Medical Sciences Building, 362-2765. Studies on the role of centrioles and basal bodies in ciliary signaling, assembly and motility using molecular genetics, computational and biochemical approaches.

Justin Fay, PhD, Room 5526, 4444 Forest Park, 747-1808. Population and evolutionary genetics, evolution of gene regulation in yeast, human evolution.

James Havranek, PhD, 822 McDonnell Medical Sciences Building, 362-2535. Computational and experimental studies of specificity in protein-DNA interactions. We are using computational and experimental approaches to understand the specificity of protein-DNA binding, using the winged helix-turn-helix family of bacterial transcription factors as a model system. We aim to construct structure-based models of transcription factors that enable both the prediction of binding preferences and the design of mutants with altered specificities.

Stephen L. Johnson, PhD, 711 McDonnell Medical Sciences Building, 362-0362. Growth control and morphogenesis in vertebrate development. Focus on genes and mechanisms affecting proportionate fin growth, fin regeneration and pigment stripe patterning in zebrafish.

Michael Lovett, PhD, 331 Biotechnology Center, 747-3261. The molecular basis of human genetic diseases, cDNA and expression profiling technologies. Systems biology of vertebrate craniofacial morphogenesis, inner ear development and hearing loss.

Elaine Mardis, PhD, Room 4122, 4444 Forest Park, 286-1805. Technology development for
second-generation DNA sequencing with an emphasis on methods and applications development. Non-human primate genomics.

Rob Mitra, PhD, Room 4184, 4444 Forest Park, 362-2751. Systems biology and technology development. We are developing tools to make quantitative biological measurements and applying these tools to build mathematical models of biological processes.

Michael A. Province, PhD, Suite 6318, 4444 Forest Park, 362-3616. Development and evaluation of novel statistical genetics methodology, especially as applied to genomic identification and validation of variants for human complex quantitative traits, such as heart disease, cancer, pulmonary function, diabetes and human longevity.

Nancy L. Saccone, PhD, 308 Biotechnology Center, 747-3263. Statistical genetics and psychiatric genetics. Development and application of analysis methods for studying the genetics of human disease and complex traits.

Tim Schedl, PhD, 870 McDonnell Medical Sciences Building, 362-6162. Germ cell development in the model organism Caenorhabditis elegans. The major focuses are: control of the decision to proliferate or enter the meiotic pathway, control and coordination of meiotic prophase progression and gametogenesis, and control of meiotic maturation and ovulation.

James Skeath, PhD, 812A McDonnell Medical Sciences Building, 362-0535. Identification of the genes and the elucidation of the molecular mechanisms that regulate the early events of Drosophila central neurogenesis; illumination of the mechanisms that form, pattern and specify the individual identities of the progenitor cells of the Drosophila embryonic CNS.


George Weinstock, PhD, Room 4121, 4444 Forest Park, 286-1879. Genome and metagenome analysis. Genome sequencing of individual genomes and metagenomes of microbial communities using next generation sequencing platforms; bioinformatic and statistical analysis of data.

Richard K. Wilson, PhD, Room 4122, 4444 Forest Park, 286-1804. Genome research. Large-scale DNA sequence analysis of genomes and expressed genes (cDNAs) from humans, non-human primates, mammals, invertebrates, plants and various bacterial species. Targeted genomic analysis of genes and regulatory elements in human cancers and other hereditary diseases. Development of novel technology for large-scale DNA sequence analysis and genetic analysis.

Faculty

JEFFREY D MILBRANDT, MD, PHD Head of the Dept of Genetics, Professor of Genetics
PING AN, MD Research Assistant Professor of Genetics
LUCINDA L. ANTONACCI-FULTON Research Instructor in Genetics
SWATHI ARUR, PHD Research Instructor in Genetics
Department’s Web Site

http://www.genetics.wustl.edu/

John Milliken Department of Medicine

The Department of Medicine’s general medicine teaching services at Barnes-Jewish Hospital and the Veterans Administration Medical Center (St. Louis) are under the following directors:

Barnes-Jewish Hospital, Kenneth S. Polonsky, MD
(Chairman, Department of Medicine)

Veterans Administration Medical Center, Scot G. Hickman, MD, Chief

In addition, for the purposes of both teaching and research, the Department of Medicine is divided into specialty divisions and sections at Barnes-Jewish Hospital under the following chiefs:

Allergy and Immunology
H. James Wedner, MD, Chief

Bioorganic Chemistry and Molecular Pharmacology
Richard W. Gross, MD, PhD, Chief

Bone and Mineral Diseases
Dwight A. Towler, MD, PhD, Chief

Cardiology/Cardiovascular Diseases
Douglas Mann, MD, Chief

Dermatology
Lynn A. Cornelius, MD, Chief

Endocrinology/Metabolism/Lipid Research
Clay F. Semenkovich, MD, Chief

Gastroenterology
Nicholas O. Davidson, MD, Chief

General Medical Sciences
Bradley A. Evanoff, MD, MPH, Chief

Geriatrics and Nutritional Science
Samuel Klein, MD, Chief

Health Behavior Research
Mario Schootman, PhD, Chief

Hematology
Stuart A. Kornfeld, MD

Infectious Diseases (Clinical)
Victoria J. Fraser, MD, Co-Chief
Instruction in Medicine is provided during all four years of the medical curriculum, beginning with The Practice of Medicine I in the first year. Teaching in the second year has two main objectives: the correlation of the basic sciences with clinical aspects of disease and training in the technical methods of physical examination and laboratory diagnosis. By the beginning of the third year, the student is ready for supervised clinical study of individual patients.

A clinical clerkship of 12 weeks, divided into three four-week periods, is served by third-year students on the medical services of the department. In the final year, students may elect a subinternship in general medicine and a series of elective courses in the medical specialties.

Courses

First Year

M25 507 THE PRACTICE OF MEDICINE I
Instructor: Robert J. Rothbaum, MD, 286-2546
This course employs a variety of teaching techniques, instructors and venues. Some, like lectures, will be familiar. Others, such as one-on-one interviews in the hospital, will be new. Some course material is easily formatted into solid blocks, such as the teaching of statistical methods. Other content streams throughout the course, like interviewing techniques and history interpretation. Particular areas may be stimulating and rewarding, and other areas may seem irrelevant or overemphasized. As with patients, each of you comes with a unique past and active history, previously formed interests, and individual goals. Your prior contacts and personal experiences in science or medicine also influence you. It is impossible to account for all of these unique features, so we designed the course to accommodate a variety of learning interests and styles. Some will resonate with you; others may not. We hope to provide an opportunity for you to hone the skills that you already possess and acquire new skills necessary and important to the practice of medicine.

We intertwine the various content areas to highlight the interrelationships inherent in the practice of medicine. We attempt to relate your basic science course material to the clinical and patient-based information. In particular, the Integrative Cases are designed to mesh basic science content with clinical questions. The practice of medicine is both a science and an art. We hope to demonstrate the complementary nature of these outlooks.

This course unfolds over three years. The first-year course, POM I, contains six sections: Patient/Physician Communication, Clinical Skills, Experience of Illness, Ethics, Scientific Method of Clinical Medicine and Research, and Health Promotion and Disease Prevention.
Objectives for POM I include:

1. Students can describe and analyze the scientific methodology of clinical studies and apply the results to individuals or groups of patients.

2. Students can perform a complete history and physical examination with thoroughness, accuracy, sensitivity and compassion.

3. Students can investigate the influence of culture, religion, ethnicity, socioeconomic factors and politics on the seeking and provision of medical care.

4. Students can examine and analyze their personal and professional competencies, limitations and behaviors.

Sections:

1. Patient-Physician Communication/History-Taking Section
Patient and caregiver engage in an intimate and delicate relationship. Although everyday skills such as listening and asking questions appear easily mastered, compassionate inquiry into confidential areas in an anxiety-laden environment requires a special combination of patience, quiet confirmation and observation. Learning certain guideposts and checkpoints for orientation and direction can prove useful.

2. Clinical Skills
This content area focuses on history-taking, physical examination, presentation of history and physical exam findings, and selected ambulatory skills.

3. Experience of Illness
The Practice of Medicine is an interpretive activity, and while it relies on complex knowledge and sophisticated technology, it is not a science. Medicine's goal is to alleviate suffering and to do so brings a body of practical knowledge to bear in individual cases.

Physicians interpret the symptoms and signs from the patient, who has already interpreted their symptoms into a story of their malady. Thus, while modern medicine is founded on complex knowledge of biological science, attained by arduous work, interpretive skill is required for physicians to function. Medicine begins with the understanding of the patient and continues in therapeutic action on behalf of the patient. To do this requires that we understand how to interpret it, both medically and in a way meaningfully understood by the patient.

4. Ethics
Since the earliest days of medicine, physicians have recognized that they have special ethical responsibilities to their patients. Many medical ethics principles have endured through the centuries, but changing technologies and social conditions require physicians to apply these principles to new situations over time.

5. Scientific Methods of Clinical Medicine and Research
This section delineates the variety of statistical techniques and methodologies of interpretation of clinical and research data.

6. Health Promotion and Disease Prevention
The objectives of this section include: to understand the importance of Health Promotion and Disease Prevention, to understand different levels of prevention and to be familiar with possible preventive interventions.

Selectives
M04 514 CARDIOVASCULAR BIOPHYSICS
Instructor: Sándor J. Kovács, PhD, MD, 454-8146
This elective is intended for students with a background in the physical sciences: physics, mathematics, engineering, computer sciences and comparable fields. Topics covered vary according to the interest of the staff and the clinical spectrum encountered during the course of the elective. Included are quantitative cardiovascular physiology and pathophysiology, nonlinear dynamics and its application to physiology, biophysics, ultrasonics, biomechanics and biomedical engineering. The focus of the elective is the application of quantitative mathematical and engineering principles to solve real problems encountered in clinical practice. Participation in weekly seminars and familiarity with selected topics of current research are included. This course is offered in alternate years (2010-11).

M04 533 TROPICAL MEDICINE
Instructor: Daniel E. Goldberg, MD, 362-1514
Washington University School of Medicine has several faculty members who are actively researching diseases specific to developing countries. This elective is designed to bring these individuals together, in an informal discussion forum with students, to highlight the problems particular to geographical medicine. The elective will cover issues including eradication, prevention and treatment, immunology and vaccine development, as well as descriptions of the different disease syndromes. This selective is cross-listed in the Department of Molecular Microbiology.

Second Year

Teaching by the Department of Medicine is designed to: 1) prepare students for the transition from the preclinical sciences to the study of the sick patient at the bedside, 2) help them analyze the clinical manifestations of disease in terms of the responsible mechanisms, and 3) introduce them to the techniques of examination that are used regularly on all clinical services. This instruction is undertaken jointly with members of other clinical departments and is coordinated with subject matter presented by the Department of Pathology and Immunology.

The major areas of clinical medicine are presented in detail to illustrate the application of biochemical, physiological and anatomical information to the understanding of pathological states. Cardiovascular, renal, neurological, gastrointestinal, pulmonary, hematological, metabolic, nutritional and developmental diseases are discussed. Emphasis is placed on the use of fundamental information in approaching clinical problems as a way of thinking that prepares the student for a lifetime of medicine, during which new information will constantly be acquired.

M25 607 THE PRACTICE OF MEDICINE II
Instructor: Megan E. Wren, MD, 286-2546
Content Area Leaders: Jay F. Piccirillo, MD; Julie K McManemy, MD, MPH; Alan Glass, MD; Rebecca S. Dresser, JD; Stephen S. Lefrak, MD
The goal of The Practice of Medicine (POM) course is to provide students with a set of knowledge, skills and attitudes essential to patient care regardless of specialty. POM II is a continuation of POM I and will continue to address various interfaces between patients, physicians and society and will also introduce approaches to clinical thinking and decision-making in the context of today’s socio-economic and cultural environment. The sections of POM II include Advanced Physical Examination, Case Development, Communication, Ethics and Health Policy, Health Promotion/Disease Prevention, Interpreting Illness, Ophthalmology, Patient Sessions, Radiology and Scientific Methods. The learning objectives for each section of POM II emphasize topics and skills used in all fields of medicine, and the majority of the course work will be taught in small groups or through clinical experiences. 81.25 clock hours.

M25 605A INFECTIOUS DISEASES AND MEDICAL MICROBIOLOGY
Instructor: Nigar Kirmani, MD, 454-8217
The infectious disease pathophysiology course emphasizes both organism-specific and organ-specific approaches to diseases caused by microbes. The course expands on material presented briefly in the
first year concerning bacteria, viruses, fungi and parasites, and their involvement in human disease. Mechanisms of disease production, clinical manifestations and therapy are discussed, along with public health implications. In addition to lectures, small group case discussions enable students to apply the information they learn to clinical situations.

**M25 606A RHEUMATOLOGY**  
Instructor: Leslie E. Kahl, MD, 454-7279  
The rheumatology pathophysiology course begins with an overview of the structure, function and physiology of the normal joint. The pathophysiology of both localized joint disorders such as osteoarthritis and infectious arthritis are presented, along with systemic inflammatory disorders including rheumatoid arthritis, lupus and vasculitis. Diagnosis, pharmacologic management and rehabilitation of these conditions are included. In small group sessions, students interview patients and observe the characteristic physical findings of these disorders.

**M25 611B CARDIOVASCULAR DISEASE**  
Instructor: Dana R. Abendschein, PhD, 362-8909  
The purpose of this course is to consider the mechanisms and manifestations of acquired and congenital cardiovascular disorders as well as their pharmacologic treatment. Lectures and small group discussions that emphasize the major areas of cardiac pathophysiology and pharmacology are provided.

**M25 612B PULMONARY DISEASE**  
Instructor: Michael B. Lippmann, MD, 289-6306  
The objectives of the pulmonary pathophysiology course include review of normal pulmonary physiology as related to specific pulmonary disease states. The focus of the course will largely be upon presentations in lectures concerning pathophysiologic principles of abnormal lung structure and function. In addition, case study problems will be discussed.

**M25 613B RENAL AND GENITOURINARY DISEASES**  
Instructor: Stanley Misler, PhD, MD, 454-7719; David Windus, MD, 362-7261  
This course uses basic principles of renal physiology and ion homeostasis to understand commonly encountered fluid and electrolyte disorders (especially hyper/hypo-natremias, acidoses/alcaloses) and the action of diuretic drugs. The pathophysiology of diabetic kidney disease, glomerular and tubulointerstitial diseases, hereditary kidney diseases, and the relationship between hypertension and the kidney are discussed. It also applies basic principles of urinary system anatomy and physiology to the understanding of kidney stones, disorders of the bladder and prostate, and of micturition. The course also introduces basic principles of dialysis and kidney transplant. Lectures, small group problem-solving and team-based learning sessions focus special attention on: 1) how a working knowledge of fundamentals, diagnostic testing and arithmetic manipulation can have important predictive value; and 2) how the courses of acute and chronic renal failure are both adaptive and maladaptive for the organism.

**M25 614 DERMATOLOGY**  
Instructor: David Sheinein, MD, 996-8005  
The Dermatology second-year course is designed to teach medical students how to describe skin lesions and the pathophysiologic basis and clinical characteristics of major dermatologic diseases. Major categories of clinical skin diseases and their most prominent constituents will be discussed, including papulosquamous diseases, blistering diseases, infectious diseases, and benign and malignant neoplasms.

**M25 615A ENDOCRINOLOGY AND METABOLISM**  
Instructor: William E. Clutter, MD, 362-8094  
This course aims to develop understanding of the pathophysiology, clinical manifestations and
diagnosis of common endocrine disorders. History, physical examination and interpretation of diagnostic laboratory tests are emphasized. Principles of treatment of endocrine disorders and pharmacology of relevant drugs also are discussed. Students are expected to apply their knowledge in clinical case discussions.

M25 620A GASTROINTESTINAL AND LIVER DISEASES/NUTRITION
Instructor: Deborah C. Rubin, MD, 362-8935
This course discusses the pathophysiologic mechanisms related to the diseases of the gastrointestinal tract including esophagus, stomach, small and large intestines, liver, gallbladder and pancreas. The emphasis is on changes that occur in normal physiology, biochemistry, anatomy, immunology and cell biology that result in human gastroenterologic diseases. Included also are lectures on the pharmacology of gastrointestinal drugs and basics of human nutrition in clinical practice. Lectures are supplemented by group seminars that focus on clinical case presentations.

M25 625A HEMATOLOGY AND ONCOLOGY
Instructor: Scot G. Hickman, MD, 289-6308
The hematology and oncology pathophysiology course exposes students to common hematologic disorders and hematologic malignancies. The course uses lectures, clinical case discussions and practical sessions involving microscopy.

Third Year

M25 710 MEDICINE CLERKSHIP
Instructor: Thomas M. De Fer, MD, 362-8050
Family Medicine Site Director: Walton Sumner, MD, 454-8164
VA Site Director: Scot G. Hickman, MD, 289-6308

The medicine clerkship provides supervised study of patients in both inpatient and ambulatory settings. The 12-week clerkship is divided into three four-week rotations: two inpatient and one outpatient. For the inpatient rotations, students are assigned as clinical clerks to patients admitted to the cardiology and general medical teaching services of Barnes-Jewish Hospital and the John Cochran Veterans Administration Medical Center. For the outpatient rotations, students are placed with community-based internal medicine or family practice physicians. Teaching is provided by the chief of service, attending physicians, house staff, consultants, chief residents, community-based preceptors and regularly scheduled conferences. Formal instruction is given regarding core internal medicine topics during the clerkship. Teaching activities include Chief Resident Rounds, Core Lecture Series, Physical Diagnosis Rounds, Radiology Rounds, Professor’s Rounds and other departmentally based conferences.

Clinical Pathological Conference
The clinical course, laboratory and radiologic studies, and pathological findings of a patient are discussed using a problem-solving format at a weekly conference by members of the Departments of Medicine, Pathology and Immunology, and Radiology; Melvin Blanchard, MD, internal medicine; chief residents and medical staff; Louis P. Dehner, MD; and pathology staff.

M25 707 PRACTICE OF MEDICINE III
Instructors: Robert Rothbaum, MD, Megan E. Wren, MD, 286-2546

In this course, themes and topics introduced in POM I and II are revisited and refocused on the students’ ongoing clinical experiences. The course has quarterly sessions. Each session begins with a short talk or panel discussion. Faculty preceptors then facilitate small group discussions as students reflect on their recent clinical experiences and dilemmas. The group develops potential solutions and
Recent topics have included:
1. My most challenging or rewarding clinical experience. Who, what, when, where and why?
2. Medical errors and patient safety: What happens and why?
3. Ethics: What challenges occur? How are decisions made?
4. Doctoring: Am I the doctor that I expected I would be?
5. Family violence: Recognition, investigation and intervention.
6. Interactions with pharmaceutical companies: What is really going on here?
7. How to care when you cannot cure: Treating patients with chronic or terminal illness.

M25 714 AMBULATORY: EMERGENCY MEDICINE
Instructors: Mark Levine, MD, 362-6743
The WUMS III Ambulatory Care Rotation takes place in the main emergency department of Barnes-Jewish Hospital. Three to five students at a time are assigned to this four-week rotation. Students will spend their first day in an orientation session that will include a brief survival in the ED introduction, a suture lab, an airway lab, and a slit lamp lab. Domestic violence is covered during this four-week rotation. A course "text" will be provided for the students on orientation day and is theirs to keep. On day two, students will begin primarily evaluating non-emergent patients in the emergency department (EM 2) and Urgent Care Area and report directly to an attending or senior resident. There are four hours of mandatory conferences per week: 8-10 a.m. on Tuesdays and 8-10 a.m. on Wednesdays. Students can expect to gain a wide range of skills in evaluating a variety of complicated and non-complicated patients. At the end of their rotation, students should be familiar with the approach to complex medical conditions like heart attacks, undifferentiated abdominal pain, and complications of pregnancy as well as the "bread and butter" of complaints of ambulatory medicine such as lacerations, simple respiratory tract infections and minor trauma.

WUMS III will be graded on their ability to make a formal patient presentation during a shift, their clinical skills, and their conference attendance. There will be a written test on the last Friday of the rotation based entirely on the material provided to the students at the start of the rotation.

M26 713 AMBULATORY: FAMILY MEDICINE
Instructor: Walton Sumner II, MD, 454-8164
The Family Medicine clerkship offered in the third and fourth years allows medical students to work one-on-one with board-certified family physicians in outlying areas of Missouri and Illinois, and in other states. Students may review preceptor profiles and comments that previous students made about preceptors. The clerkship makes every effort to accommodate student preferences for working with specific preceptors. Most students will work with a single preceptor for the duration of the four-week rotation. Students may work with small groups, potentially including family medicine residents. The student will work closely with preceptors on a daily basis in the physician's office. Students often accompany their preceptor on nursing home visits, hospital rounds, medical conferences and other educational activities. Housing will be provided to students working outside the immediate St. Louis vicinity. Weekend call schedules are arranged with the preceptor: students can often return to St. Louis on the weekends. Each student will receive a description of the goals and objectives for the four-week rotation. Students maintain patient encounter logs on hand-held computer and receive short e-mail assignments during this rotation. Grades are calculated from preceptors' subjective evaluations (normalized for the preceptor), essay responses and an evaluation of students’ attention to primary care issues.

M25 740 DERMATOLOGY CLERKSHIP
Instructor: Lynn Cornelius, MD, 454-8622
The goal of the dermatology clerkship is to provide a guide for the student to appreciate dermatology within the broader perspectives of medicine and biology. The student will develop familiarity with dermatologic vocabulary, learn to recognize and initiate therapy of common dermatologic disorders and become cognizant of uncommon or complicated dermatologic problems that require specialty care. Emphasis will be placed on careful history taking and physical examination. Students will always
work under the direction of the resident physician and the attending physicians in the clinic setting.

The student will participate in outpatient care at the following hospitals and affiliated clinics: Barnes-Jewish Hospital, St. Louis Children’s Hospital, Barnes-Jewish West County Hospital, the Veterans Administration Medical Center and Connectcare Hospitals. These hospital settings will provide the student with ample exposure to a diverse patient population. Students will attend all clinical teaching rounds and conferences in addition to the basic science and cutaneous histopathology conferences. Normal workday hours are 8 a.m. to 5 p.m. with no night or weekend on-call responsibilities. Each student is provided with copies of the two recommended textbooks, Principles of Dermatology by B. Looking and The Color Atlas and Synopsis of Clinical Dermatology by T.B. Fitzpatrick for use during the clerkship; the textbooks are returned to the clerkship coordinator at the end of the clerkship for use by other students rotating in the dermatology division.

The rotation attending physician and the resident physician will submit an evaluation based on the student’s clinical skills, presentation, attitudes, overall performance and the end-of-rotation written exam score. Students are not eligible to take the fourth-year rotation if they complete this clerkship.

**M25 750 GERIATRICS CLERKSHIP**
Instructor: David B. Carr, MD, 286-2706

The primary goal of the four-week clerkship in Geriatrics is to provide an opportunity for students to gain proficiency in the principles of geriatric evaluation, including the medical, psychological, social and functional assessments of older adults. Direct, hands-on experience with patients is a major feature of the clerkship. Students are expected to participate in the evaluation of three to five patients per week, in a variety of settings including the hospital consult service, geriatric palliative care, geriatric rehabilitation, long-term care and the outpatient geriatric assessment center. Students will also participate in the Alzheimer’s Disease Research Center, hospice and geropsychiatry rounds and attend geriatric conferences while on the rotation.

Students are assigned to a variety of attendings to enhance the experience. There is no night call or call on weekends. Participation on the hospital consult service will occur depending on volume. The day normally begins at 8 a.m. and is usually finished by 5 p.m. There will be time to read the detailed syllabus/bibliography. Students will be asked to present a brief topic of their choice at the end of the rotation and demonstrate knowledge of the geriatric screens and assessments.

**M25 730 PHYSICAL MEDICINE AND REHABILITATION**
Coursemaster: Neringa Juknis, MD, 454-7757

Clerkship in PM&R for third-year medical students provides an opportunity to gain basic knowledge and clinical skills in evaluation and management of a wide range of neurological and musculoskeletal diseases and conditions that require specialized rehabilitative medical and therapeutic care. Students spend two weeks on the Spinal Cord Injury Unit (SCI) and two weeks on the Brain Injury (BI) and Stroke Unit at The Rehabilitation Institute of St. Louis. Students are expected to be a part of the rehabilitation team, follow three to five patients, participate in daily morning rounds, participate in performing consults and attend team meetings and family conferences.

Students are required to attend several outpatient clinics such as SCI, BI, Amputee and Stroke. During the entire rotation, students work with PM&R residents and fellows, and under direct guidance of the NeuroRehabilitation faculty. The usual duty hours are 7:30 a.m. to 5 p.m. weekdays and 8 a.m. to noon on Saturdays. There is no night call.

Students are required to attend all PM&R curriculum lectures and conferences. On the first day of rotation, students meet with the PM&R program director to go over goals, objectives and schedules. Upon completion of the rotation, students are required to fill out the evaluation form to provide feedback regarding rotation experience.
Fourth Year

Electives

M25 801 HONORS MEDICINE-GENERAL MEDICINE
Instructor: Thomas De Fer, MD, 362-8050
Location: Barnes-Jewish Hospital
Elective Contact: Christine McIntosh, 362-8050
Other Information: Students will receive e-mail communication regarding where to report on the first
day prior to the beginning of the period.

Enrollment limit per period: Limit 6/period for Weeks 1, 5, 9; 2/period for Weeks 13, 17, 21; and
1/period for Weeks 25, 29, 33, 37 and 41.
Valid start weeks for 4-weeks blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The purpose of the "Honors Medicine" elective (subinternship) is the development of expertise in the
care of hospitalized patients in a well-supervised teaching environment. Subinterns act as their
patients' interns under the supervision of residents and attending physicians. Subinterns have the
same on-call and admitting schedules as the interns on their teams and are assigned up to two new
patients on each admitting day. Subinterns are not required to spend call nights in the hospital.
Except in emergencies, subinterns are the first individuals to evaluate patients admitted to medical
service teams. A diagnostic and therapeutic approach to the patient is planned in consultation with the
resident. Subinterns assume primary responsibility for the daily care of their patients, under the
supervision of resident and attending physicians. This includes evaluation on daily rounds, scheduling
and obtaining results of diagnostic studies, planning therapy, making arrangements for care after
discharge and communicating with patients and their families. Subinterns attend the same
conferences as the house staff.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Primary Care 50%,
Subspecialty Care 50%
Major teaching responsibility: Attending, chief resident and resident
Patients seen/weekly: 8-12
On call/weekend responsibility: Yes

M25 805 RHEUMATOLOGY
Instructors: Richard Brasington, MD; Leslie Kahl, MD; and Prabha Ranganathan, MD, 454-7279
Location: Barnes-Jewish Hospital, 5C Center for Advanced Medicine
Elective Contact: Department secretary, 454-7279
Other Information: Students should contact the Rheumatology office, 454-7279 prior to first day for
assignment.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will be involved in the diagnostic workup and management of patients with rheumatic
illnesses including systemic lupus erythematosus, rheumatoid arthritis, vasculitis (polyarteritis,
Wegener’s, temporal arteritis), spondyloarthropathies (ankylosing spondylitis, reactive arthritis),
osteoarthritis, gout and regional musculoskeletal problems. By working closely with a faculty member,
fellows and medical residents, students become integral and active members of the rheumatology
service for inpatient consultations and outpatient clinics at Barnes-Jewish Hospital. An emphasis is
placed on the physical examination of joints and the musculoskeletal system, synovial fluid analysis
and interpretation of diagnostic tests and radiographs. Students attend a rheumatology conference
held weekly. An extensive collection of self-study materials, including reprints, textbooks, slides and
CD-ROM discs is available.

Student time distribution: Inpatient 40%, Outpatient 50%, Conferences/ Lectures 10%; Subspecialty
Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: ~25 per student
On call/weekend responsibility: None

**M25 807 HONORS MEDICINE — VA MEDICAL CENTER**
Instructor: Scot Hickman, MD, 289-6308
Location: St. Louis Veterans Affairs Medical Center
Elective Contact: Scot Hickman, MD, 289-6308
Other Information: Students meet in A701 VA Medical Center, 7:30 a.m. first day of elective.

Enrollment limit per period: Limit 3/period for Weeks 1, 5, 9; 1/period for Weeks 13, 17, 21, 25, 29, 33, 37 and 41.
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Subinternship in medicine offers practical experience in the care of patients. Subinterns are an integral part of the house staff team, working under the supervision of a resident and attending physician. Their responsibilities for patients assigned to them are similar to those of interns. Patients are followed by the subintern throughout all levels of care including ICU, telemetry, stepdown and general wards. Subinterns take call with their team and participate in the teaching conferences of the Department of Medicine.

Student time distribution: Inpatient 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Single attending, chief resident and team resident
Patients seen/weekly: 6.8 on average
On call/weekend responsibility: Every fourth night

**M25 809 HYPERBARIC MEDICINE AND PROBLEM WOUND MANAGEMENT**
Instructors: John D. Davidson, MD, and staff, 205-6818
Location: St. Luke's Hospital, Barnes-Jewish Hospital
Elective Contact: John D. Davidson, MD, 205-6818 or pager, 424-2626
Other Information: Interested students should contact Dr. John D. Davidson to discuss in what way this elective can be tailored to their particular interests and goals. Mini-electives of one to two weeks duration can be arranged. (PLEASE contact Dr. Davidson at 205-6818 three weeks prior to the first date of elective to try to tailor the elective as much as possible to your primary interests.)

Enrollment limit per period: 2
Valid start weeks for 2- and 4-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41 and 43.

The specialty of hyperbaric medicine centers on the use of oxygen under increased atmospheric pressure as a drug for the treatment of many disparate diseases and clinical problems. This elective allows a student to have an acquaintance with this technology, which has a definite role in a wide range of differing specialties including emergency medicine, otolaryngology, plastic and reconstructive surgery, military medicine, rheumatology, dermatology, oral surgery, radiation oncology, internal medicine, neurology and psychiatry, to name a few.

Since students going into these specialties do not need to learn about hyperbaric medicine in depth, but nevertheless would benefit by some exposure to it, we can arrange a mini-elective of one to two weeks duration. This "exposure elective" can be tailored to a student’s special field of interest just as we attempt to do in the usual four-week program. Please call Dr. John D. Davidson for more information.

Student time distribution: Inpatient 3%, Outpatient 92%, Conferences/ Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: John A. Davidson, MD, and Jane Kelly, Supervisor
Patients seen/weekly: 20
On call/weekend responsibility: Attending physician will call student regarding select cases
**M25 810 GERIATRIC MEDICINE**
Instructor: David Carr, MD, 286-2700, press option 1  
Location: Washington University, Health Key Building, Third floor, Room 360  
Elective Contact: David Carr, MD, 286-2700, press option 1  
Other Information: Meet at the Division of Geriatrics office, Health Key Building, 4488 Forest Park Blvd., Suite 201, 8:30 a.m. first day of elective.

Enrollment limit per period: 1  
Valid start weeks for 4-week blocks are: Weeks 5, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will participate in patient care at the rehabilitation center, the skilled nursing facility Barnes-Jewish Extended Care in Clayton, the inpatient geriatric consultation service, the outpatient primary care and geriatric consultation center, and palliative care. Attendance at scheduled research and clinical conferences in geriatric medicine, memory and aging, geropsychiatry and hospice meetings is also required.

Student time distribution: Inpatient 20%, Outpatient 80%; Primary Care 20%, Subspecialty Care 80%  
Major teaching responsibility: Attendings  
Patients seen/weekly: 10-15  
On call/weekend responsibility: None

**M25 814 CLINICAL EMERGENCY MEDICINE, BARNES-JEWISH HOSPITAL**
Instructor: Mark Levine, MD, 362-6743  
Location: Wohl Clinic  
Elective Contact: Mary Hummert, 747-4156  
Other Information: Contact Emergency Medicine Division office at 747-4156 for scheduling one week prior to the rotation.

Enrollment limit per period: 6  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This rotation offers practical experience in the evaluation and management of acutely sick and injured patients. Students will function as subinterns, initially evaluating their assigned patients and developing a plan for further diagnostic studies and therapy. They will report to a senior level resident or an attending physician. The student can expect to get an opportunity to perform a wide variety of procedural skills such as suturing, splinting, peripheral and central venous access, and cardiopulmonary resuscitation. Shifts will be eight hours and students will rotate between day, evening and night shifts, including weekend shifts, in order to gain maximum exposure to all types of emergencies. A core content of lectures will be provided. Students are offered the opportunity to ride with EMS, though this is optional and not required or evaluated. Students desiring a letter of recommendation from Dr. Larry Lewis, Director of Research, or any other EM attending should take this WUMS IV Emergency Medicine rotation. Students will be scheduled for required weekend and overnight shifts and changes will not be allowed to the schedule unless approved prior to the start of the rotation by the course coordinator. Please be advised that there is a limit of a total of five days off of this rotation during interview season; otherwise, students should arrange to take the elective at a different time during the year. Days off during the rest of the year will conform to university policy. Days off should be requested from Mary Hummert one month prior to the beginning of the rotation for scheduling purposes.

Student time distribution: Outpatient 80%, Conferences/Lectures 20%; Primary Care 40%, Subspecialty Care 60%  
Major teaching responsibility: Attendings and senior residents (PGY 3 & 4)  
Patients seen/weekly: ~5 per shift  
On call/weekend responsibility: Evenings and weekends; no on call

**M25 821 INPATIENT CARDIOLOGY**
Instructors: Andrew Kates, MD, 362-1297; David Schwartz, MD; Arthur Halle, MD; Sudhir Jain, MD; Benico Barzilai, MD; Keith Mankowitz, MD; and Joshua Stolker, MD
Location: 13th Floor, Northwest Tower
Elective Contact: Andrew Kates, MD, 362-1297
Other Information: Students meet on the 13th Floor, Northwest Tower, 9 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will participate as members of the Barnes-Jewish Cardiology at Washington University Consultative Team. They will be part of a team composed of faculty members, fellows, residents and nurse specialists that sees a large population of cardiac patients and follows them through all aspects of their in-hospital care. Emphasis will be placed on physical examination and the interpretation of modern cardiac diagnostic tests including electrocardiograms, echocardiograms and coronary angiograms and their role in clinical decision making.

Student time distribution: Inpatient 75%, Outpatient 15%, Conferences/Lectures 10%; Primary Care 5%, Subspecialty Care 95%
Major teaching responsibility: Attending and fellow
Patients seen/weekly: 10-15
On call/weekend responsibility: None

**M25 822 HONORS MEDICINE — CARDIOLOGY**
Instructor: Thomas De Fer, MD, 362-8050
Location: Barnes-Jewish Hospital
Elective Contact: Christine McIntosh, 362-8050
Other Information: Students will receive e-mail communication regarding when/where to report on the first day prior to the beginning of the period.

Enrollment limit per period: Limit 2/period for Weeks 1, 5, 9, 13, 17 and 21 and 1/period for Weeks 25, 29, 33, 37 and 41.
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The structure and functioning of the "Honors Medicine — Cardiology" elective (subinternship) is very similar to the general medicine subinternship (M25 801). The basic purpose is to develop expertise in the care of hospitalized patients in a well-supervised teaching environment. The majority of patients admitted to the service will have a cardiology diagnosis as the main reason for admission. Some general medical problems will also be seen. All attendings on the service are cardiology subspecialists. Cardiology fellows act as the chief resident for the service on a monthly basis. Subinterns act as their patients’ interns under the supervision of residents and attending physicians. Subinterns have the same on-call and admitting schedules as the interns on their teams and are assigned up to two new patients on each admitting day. Subinterns are not required to spend call nights in the hospital. Except in emergencies, subinterns are the first individuals to evaluate patients admitted to medical service teams. A diagnostic and therapeutic approach to the patient is planned in consultation with the resident. Subinterns assume primary responsibility for the daily care of their patients, under the supervision of resident and attending physicians. This includes evaluation on daily rounds, scheduling and obtaining results of diagnostic studies, planning therapy, making arrangements for care after discharge and communicating with patients and their families. Subinterns attend the same conferences as the internal medicine house staff. There are also several conferences specific to the cardiology service.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Primary Care 25%, Subspecialty Care 75%
Major teaching responsibility: Attending, chief resident and resident
Patients seen/weekly: 8-12
On call/weekend responsibility: Yes
M25 823 CLINICAL CARDIOLOGY — VA HOSPITAL
Instructor: Wade Martin, MD, 289-6329
Location: John Cochran VA Hospital
Elective Contact: Wade Martin, MD, 289-6329
Other Information: Students should meet in Room B206, 2nd Floor, VA Hospital.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The major purpose of this elective in clinical cardiology at the John Cochran VA Hospital is to improve evaluation and management skills for diagnosis and treatment of important cardiovascular conditions such as coronary artery disease including acute myocardial infarction, congestive heart failure, hypertension and valvular heart disease. The rotation is designed to be flexible enough to accommodate a wide variety of course objectives but includes the opportunity to participate in 1-3 outpatient clinics per week; 1-4 weeks of inpatient intensive care, telemetry or cardiology consultation rounds; and ECG, stress testing, nuclear imaging, or echocardiographic reading sessions, cardiac catheterization and electrophysiologic procedures. The emphasis will be on improvement of the ability to diagnose and treat cardiovascular disease on the basis of information obtained from a thorough history and physical examination that is integrated with data from appropriate highly targeted laboratory studies in a manner that optimizes patient outcome and minimizes risk and costs.

Student time distribution: Inpatient 45%, Outpatient 55%, Conferences/Lectures 5-10%; Primary Care 25%, Subspecialty Care 75%
Major teaching responsibility: Attendings and fellows
Patients seen/weekly: 20
On call/weekend responsibility: Varies

M25 825 CARDIAC ARRHYTHMIAS AND ELECTROPHYSIOLOGY
Instructors: Timothy Smith, PhD, MD, 454-7834
Location: Barnes-Jewish Hospital, North Campus
Elective Contact: Timothy Smith, PhD, MD, or Yvonne O’Connell, 454-7834
Other Information: Students meet in the Cardiology Division, 4th Floor Kingshighway Building, Barnes-Jewish Hospital, North Campus, 8 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective provides the student with exposure and teaching in the diagnosis and treatment of complex cardiac rhythm disturbances. Specifically, the student is expected to evaluate patients referred for evaluation and treatment of complex or life-threatening rhythm disturbances, unexplained syncope or sudden cardiac death. Rounds are made daily on hospitalized patients, and students are welcome to observe electrophysiologic studies or implantation of pacemakers and defibrillators. This elective also provides an intensive opportunity to learn clinical electrocardiography and the systematic use of anti-arrhythmic drugs. Finally, since patients with chronic, complex rhythm disturbances frequently have organic heart disease, a broad-based exposure to general cardiology is also part of this elective.

Student time distribution: Inpatient 80%, Outpatient 10% (optional), Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending physician
Patients seen/weekly: 2 new consults/day
On call/weekend responsibility: None

M25 827 HEART FAILURE/CARDIAC TRANSPLANTATION
Instructors: Gregory Ewald, MD, 454-7009
Location: Barnes-Jewish Hospital, North Campus, Suite 4455
Elective Contact: Gregory Ewald, MD, 454-7009
Other Information: Students should page the attending physician, 8 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This rotation is intended to provide trainees with a comprehensive experience managing patients with advanced heart failure. In addition to daily rounds, trainees are invited to attend both heart failure and transplant clinics. Further, the curriculum is supplemented by a comprehensive syllabus that contains the critical literature pertinent to this patient population. The trainees will also have experience with the evaluation of patients for operative heart failure therapies and will have the opportunity to observe these surgical procedures.

Student time distribution: Inpatient 70%, Outpatient 20%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 30
On call/weekend responsibility: None

M25 830 DERMATOLOGY
Instructor(s): Dermatology staff, 454-8622
Location: 7705 Wohl Hospital
Elective Contact: Rosemarie Brannan, 454-8622
Other Information: Students should contact the Dermatology office (454-8622) prior to first day for room assignment.

Enrollment limit per period: 4
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The aim of this elective is to provide a guide for the student so that s/he is able to appreciate dermatology within the broader perspectives of medicine and biology. Emphasis will be placed on the dermatologic variations encountered in a normal physical examination of the skin, the identification of common skin diseases, dermatologic clues to systemic disease, as well as those dermatologic conditions that are life-threatening. The student will participate in outpatient care in Barnes-Jewish Hospital and affiliated clinics. Students will attend all clinical teaching rounds and conferences in addition to the basic science and cutaneous histopathology conferences. **M25 830 is essentially the same as the 3rd Year Dermatology Clerkship. Students are limited to taking either one or the other — NOT BOTH. Students are also limited to taking either M25 830/Dermatology or M25 831/Pediatric Dermatology fourth-year electives — NOT BOTH.**

Student time distribution: Inpatient 25%, Outpatient 50%, Conferences/Lectures 25%; Specialty Care 100%
Major teaching responsibility: Coursemaster for rotation, private attending and senior resident
Patients seen/weekly: 25-50
On call/weekend responsibility: None

M25 831 PEDIATRIC DERMATOLOGY
Instructors: Susan J. Bayliss, MD, 454-2714
Location: 3N48 Children’s Hospital
Elective Contact: Rosemarie Brannan, 454-8622
Other Information: Call 454-2714 prior to first day of elective. Reporting time is 7:30 a.m. first day of elective

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical rotation will be available to students interested in dermatology, pediatrics or both. Students will follow the dermatology rotation (M25 830) with an emphasis on pediatric dermatology by
attending pediatric dermatology clinics, seeing consults, etc. Enthusiastic students will have an opportunity to write up a case report if they wish, but need to notify Dr. Bayliss before the course. **Students can take either this elective or M25 830/Dermatology — NOT BOTH.**

Student time distribution: Inpatient 1%, Outpatient 74%, Conferences/Lectures 25%; Subspecialty Care 100%
Major teaching responsibility: Single attending
Patients seen/weekly: 50-100
On call/weekend responsibility: None

**M25 836 CLINICAL GASTROENTEROLOGY AND HEPATOLOGY**
Instructors: Mauricio Lisker-Melman, MD, 454-8141
Location: Barnes-Jewish Hospital, East Pavilion
Elective Contact: Mauricio Lisker-Melman, MD, 454-8141
Other Information: Students meet in the Digestive Disease Clinical Center, street level East Pavilion, Barnes-Jewish Hospital, 8 a.m. first day of elective.

Enrollment limit per period: 4
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The GI Hepatology elective is integrated into a very active inpatient/outpatient and endoscopy service at Barnes-Jewish Hospital. Students will participate in the evaluation of inpatients and outpatients with a spectrum of gut and liver disorders, will make patient rounds with the faculty and fellows and will have responsibility for patients on whom consultations have been requested. In addition, they will observe biopsy, endoscopic and intubation techniques and participate in outpatient clinic and GI conferences.

Student time distribution: Inpatient 65%, Outpatient 25%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending and fellows
Patients seen/weekly: 12 new
On call/weekend responsibility: None

**M25 837 MED ED — CREATION OF CLINICAL CASES**
Instructors: Thomas M. De Fer, MD, 747-4366
Location: 6604 Wohl Hospital
Elective Contact: Thomas M. De Fer, MD, 747-4366
Other Information: Location and time to report on first day of elective to be arranged with coursemaster.

Enrollment limit per period: 6
Valid start weeks for 2- or 4-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41 and 43.

OPEN TO WUSM STUDENTS ONLY. The aim of this elective is to expose medical students, in an in-depth manner, to a handful of clinical presentations which occur on a routine basis in medicine. The student will work with a previously approved faculty member to compile information regarding five cases including, but not limited to: radiographs, setting in which one would encounter the issue, risk factors, typical history, physical exam findings, laboratory values, diagnostic test results, professional society recommendations, research, treatments, complications and prognosis. This information will then be standardized and entered into an online database of case-studies that can be accessed by future medical student for the purpose of self-teaching. The course is intended to provide motivated students the opportunity to work closely with a faculty member in their area of interest, building a knowledge base related to the most common or unique presentations of illness. STUDENTS WILL NOT BE ALLOWED TO TAKE MORE THAN 4 WEEKS OF THIS ELECTIVE PER ACADEMIC YEAR.

Student time distribution: Conferences/Lectures 100%
**M25 838 MEDICINE CONSULT SERVICE**

Instructors: Christopher Gutjahr, MD, 362-1707  
Location: Barnes-Jewish Hospital, South Campus  
Elective Contact: Mary Russell, 362-1707  
Other Information: Students should meet in the Division of Hospital Medicine office, Room 16-420, 8:30 a.m. first day of elective.

Enrollment limit per period: 1  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. Two-week rotations are also available.

The focus of the Medicine Consult Service elective is the evaluation and management of medically complex patients admitted to the hospital on non-medicine services. The issues involved with perioperative management are particularly stressed. The student will function as a member of the consult service team. Duties will include performing initial consultations and follow-up care under the supervision of a Hospital Medicine attending and a senior medical resident. Attendance at Department of Medicine and division conferences is encouraged.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Primary Care 100%  
Major teaching responsibility: Consult Service attending (from the Division of Hospital Medicine)  
Patients seen/weekly: 10-15  
On call/weekend responsibility: None

**M25 839 DOCTORS ON FILM: THEMES RELEVANT TO POM**

Instructor: Thomas M. De Fer, MD, 747-4366  
Location: 6604 Wohl Hospital  
Elective Contact: Thomas M. De Fer, MD, 747-4366  
Other Information: Location and time to report on first day of elective to be arranged with coursemaster.

Enrollment limit per period: 6  
Valid start weeks for 4-week blocks are: Weeks 29 and 37.

OPEN TO WUSM STUDENTS ONLY. This course will explore the relevant social themes of films in which physicians and/or the medical profession are the main focus. There are countless portrayals of physicians in the cinema. There are also many films that deal extensively with various features of health care delivery. For good or for bad, viewers of these films outside our profession are influenced by these portrayals. Common stereotypes are perpetuated —"If it’s in the movies there must be some truth to it." Depictions of physicians and major themes have evolved with time and under the influence of social and scientific developments. The course will investigate these depictions and themes using a selection of films to provoke thought and discussion. Each student will select a film from a list provided and preview it. They will introduce the film to the group and lead the discussion after the group viewing. Each student will complete an approximate 1,000-word essay regarding the relevant themes in the film and how they relate to the medical profession. All meetings will be arranged with the coursemaster.

Student time distribution: Conferences/Lectures 100%  
Major teaching responsibility: Thomas M. De Fer, MD  
Patients seen/weekly: N/A  
On call/weekend responsibility: None

**M25 844 HEMATOLOGY AND HEMOSTASIS**
Instructors: Philip Majerus, MD, Morey Blinder, MD, and Stuart Kornfeld, MD, 362-8801
Location: 8441 Clinical Sciences Research Building
Elective Contact: Morey Blinder, MD, 362-8857
Other Information: Students meet in Barnes-Jewish Hospital North, 7900 Nursing Division, 8 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Activities planned include workup of patients at Barnes-Jewish Hospital under the supervision of the hematology fellow and his staff consultant; attendance at clinical rounds three to five hours weekly; participation in outpatient clinics; experience in various procedures, especially blood and bone marrow morphology and in interpretation of coagulation tests. Weekly student rounds with a senior staff person.

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending and fellow
Patients seen/weekly: 3-5
On call/weekend responsibility: None

M25 847 BONE AND MINERAL DISEASES
Instructors: Michael Whyte, MD; Kathryn Diemer, MD; Roberto Civitelli, MD; Reina Villareal, MD; and Dwight Towler, MD, PhD
Location: Barnes-Jewish Hospital
Elective Contact: Michael Whyte, MD, 872-8305
Other Information: Please contact Dr. Whyte a week before elective for instruction and meeting location.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 17, 21, 25, 29, 33, 37 and 41.

The course is designed to acquaint the student with the clinical, radiological and pathological manifestations of disorders of bone and mineral metabolism as well as their etiology and pathogenesis, and to expose him/her to current concepts of therapy. The student will see patients at Barnes-Jewish Hospital, St. Louis Children’s Hospital and Shriners Hospital for Children.

Acquired and heritable bone diseases will be studied in the context of derangements of mineral homeostasis with emphasis on vitamin D and peptide hormone metabolism and skeletal formation and remodeling. The role of noninvasive methods for measuring bone mass in the diagnosis and management of skeletal diseases also will be stressed.

While students rotate through the Division of Bone and Mineral Metabolism, they will be asked to participate in the weekly divisional conferences. Faculty and medical students will present interesting cases for discussion, or the students can present a pertinent topic they have researched during their rotation presenting the recent medical literature on topics related to bone metabolism, bone densitometry, and patient care issues involving osteoporosis, metabolic bone disease, Paget’s disease, congenital bone diseases or other topics encountered during their clinical experience.

Responsibilities: Shriners Hospital Wednesday a.m./p.m. (Dr. Whyte); CAM BMD teaching service, Thursday; Bone Research Conference Friday 9 a.m. Brown Room; Bone Health Case Conference, 7101 Steinberg conference room, North Campus, Friday 11 a.m. or 3 p.m.
Student time distribution: Inpatient 5%, Outpatient 80%, Conferences/Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: ~20
On call/weekend responsibility: None
M25 850 HEMATOLOGY AND ONCOLOGY IV
Instructors: Scot Hickman, MD; Vorachart Auethavekiat, MD; David Kuperman, MD, and Daniel Morgenszttern, MD, 289-6308
Location: John Cochran VA Hospital
Elective Contact: Scot Hickman, MD, 289-6308
Other Information: Students should contact Dr. Hickman prior to first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will have major inpatient and outpatient exposure to the management of the following: non-small cell and small cell lung cancer, carcinoma of the colon, prostate cancer, anemia, lymphoma and leukemia. A wide variety of more esoteric tumors and hematological pathology may be encountered. In addition to diagnosis, staging and management, general oncological topics such as pain management, hypercalcemia of malignancy and malignant effusions will be discussed. The weekly schedule includes morphology sessions, multidisciplinary conferences and tutorial sessions with the student alone, which will require prior literature review.

Student time distribution: Inpatient 25%, Outpatient 70%, Conferences/Lectures 5%; Primary Care 25%, Subspecialty Care 75%
Major teaching responsibility: Attendings and some fellow teaching input as well
Patients seen/weekly: 25
On call/weekend responsibility: None

M25 856 INFECTIOUS DISEASE: CARE OF HIV-INFECTED PATIENTS
Instructor: Turner Overton, MD, 747-1929
Location: St. Louis Children's Hospital, Barnes-Jewish Hospital, plus other ambulatory sites
Elective Contact: Dawn-Michele Cannon, 454-8225
Other Information: Students should contact Dr. Overton one week prior to the start of rotation.
Students report to the ID Clinic/ACTU, Storz Building, 4570 Children’s Place, 9 a.m. first day of elective.

Enrollment limit per period: 4
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to introduce students to the care of HIV-infected individuals (adults, adolescents and children) and of HIV-exposed infants. Care of the HIV-infected patient encompasses not only the medical aspects, but also the psychosocial aspects of care. The elective will involve rotation through several clinics including the maternal-HIV clinic, pediatric and adolescent HIV clinics, and several adult HIV clinics, along with participation in community-wide social service meetings, home visits and exposure to the Retrovirus laboratory and the AIDS Clinical Trials unit. In addition, the student will spend part of his/her time rotating in the general ambulatory infectious diseases clinics (pediatric and adult ID).

Student time distribution: Outpatient 65%, Conferences/Lectures 15%, Other 20%; Subspecialty Care 100%
Major teaching responsibility: Attendings listed above as course instructors
Patients seen/weekly: 20
On call/weekend responsibility: None

M25 857 INFECTIOUS DISEASE INPATIENT CONSULT
Instructor: Victoria Fraser, MD, 454-8214
Location: Barnes-Jewish Hospital, North Campus
Elective Contact: Cindy Waterman, 454-8214
Other Information: Students should contact Cindy Waterman at 454-8214 first morning of elective.
Enrollment limit per period: 8
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Study of patients with infectious diseases. The elective is designed to teach students the fundamentals of evaluating clinical problems in infection and formulating plans for workup and therapy. Students see consultations in infectious diseases in every part of Barnes-Jewish Hospital under the supervision of a faculty member who rounds with them every day. They work closely with medical residents and infectious disease fellows, follow their own patients and play an important role in their management. They are expected to read the literature about their patients and participate in clinical conferences. They attend teaching rounds and conferences and lectures in infectious diseases. They also learn appropriate use of antibiotics, antifungal and antiviral agents. A wide distribution of infectious diseases is covered including opportunistic infections, community acquired acute and chronic infections, and hospital acquired infections.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Single attending and fellow
Patients seen/weekly: 15 new consults
On call/weekend responsibility: None

M25 861 ONCOLOGY-INPATIENT
Instructor: Alex Denes, MD, 362-4803
Location: Division 7900, 7th Floor CAM
Elective Contact: Helen Black, 747-5677
Other Information: Students meet on the 7th Floor CAM, POD B, Medical Oncology Outpatient Area, 8 a.m. first day of elective.

Enrollment limit per period: 6 students per block, on average one per attending
Valid start weeks for 4-weeks blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Medical Oncology is a complex subspecialty that is undergoing a rapid evolution as a result of new systemic treatment approaches that stem from biological insights into the nature of cancer. During the course of the elective medical students will be able to interact with attending physicians and patients for bedside teaching and attend tumor boards and lectures focused on the care of patients with solid tumors. At the end of the rotation the students will appreciate the principles of our approach to cancer patients and should have gained insights into the pharmacological basis for systemic cancer treatment. The ethical and medical challenges of caring for patients with advanced incurable malignancies will also be an important theme, as well as the conduct of clinical research in this patient population. Students will learn to care for hospitalized patients suffering from complications from their cancer or from toxicities due to treatments. Oncologic emergencies will be covered. Issues such as palliative care treatment options and end-of-life decision making will be explored as well.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: All Medical Oncology Attendings
Patients seen/weekly: 50
On call/weekend responsibility: None

M25 862 INPATIENT INTERNAL MEDICINE/ONCOLOGY-FIRM
Instructors: Anna Roshal, MD, and Alex Denes, MD, 362-5677
Location: North Campus, 7900 Inpatient Floor
Elective Contact: Helen Black, 362-5677
Other Information: Students meet in North Campus, 7900 Inpatient Floor, 7:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will function as subinterns on the resident and intern team, supervised by attending Medical
Oncologist. The will see patients who have a cancer diagnosis and are admitted for either treatment, or complications of their disease, including complicated symptom control issues. Most common cancers that are seen are lymphoma, lung cancer, GI malignancies, sarcomas and breast cancer. Students will also be exposed to complex psychosocial issues surrounding end-of-life discussions with patients and their families and will learn about managing complex symptomatology frequently encountered in this population. There are scheduled twice-weekly formal teaching lectures on oncologic emergencies, and other topics such as neutropenic fever, pain management and management of specific cancer types.

Major learning goals:
(1) Become familiar with frequent complications of cancer treatment such as neutropenic fever, nausea/vomiting, diarrhea and infectious complications and their management.
(2) Become familiar with oncologic emergencies (spinal cord compression, hypercalcemia, neutropenic sepsis) and their management.
(3) Become more comfortable handling patients and families requiring difficult psychosocial and end-of-life discussions.

Student time distribution: Inpatient 100%; Subspecialty Care 100%
Major teaching responsibility: Dr. Denes and Dr. Roshal
Patients seen/weekly: 50
On call/weekend responsibility: One-in-four call

M25 865 INTENSIVE CARE MEDICINE — BARNES-JEWISH NORTH
Instructors: Warren Isakow, MD, and staff, 454-8762
Location: Barnes-Jewish Hospital, North Campus
Elective Contact: Lisa Wetzel, 454-8762
Other Information: Students meet at the MICU (8th Floor Barnes-Jewish Hospital, North Campus), 9 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective in intensive care is offered in the Intensive Care Unit at Barnes-Jewish Hospital, North Campus. This unit has 10 intensive care beds providing intensive nursing care and life-support technology. The patients represent a mixture of patients with primarily medical problems. Patient care responsibility includes night call. In addition to patient responsibility, there are regularly scheduled conferences and attending rounds.

Student time distribution: Inpatient 100%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 8
On call/weekend responsibility: Every third night

M25 867 MEDICAL INTENSIVE CARE
Instructors: Marin Kollef, MD, 454-8764
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Rebecca Light, 454-8764
Other Information: Students report to the Medical Intensive Care Unit, 8300 Barnes-Jewish Hospital, South Campus, 7:30 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is offered as an opportunity to gain additional experience in acute, primary care medicine. The elective is an advanced course in patient care involving complex medical problems. Responsibilities involve working up new patients with the MICU team, case presentations and attendance at conferences. Conferences consist of attending rounds Monday through Saturday,
radiology rounds Monday through Saturday, pulmonary conference and medical grand rounds on Thursday, and critical care conference once each month. Call schedule is every third night.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 10%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 3
On call/weekend responsibility: Yes

M25 869 PALLIATIVE MEDICINE
Instructor: Maria Dans, MD, 362-5800, mdans@dom.wustl.edu
Location: 3320 Suite, Kingshighway Building, North Campus
Elective Contact: Maria Dans, MD, 362-5800, mdans@dom.wustl.edu
Other Information: Please email coursemaster at least one week before start of elective. Reporting time is 9:15 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The Palliative Medicine elective will focus on the care of patients with life-threatening or debilitating illness throughout the course of their care. Skills in symptom management, communication and interdisciplinary team-based care will be the focus. Students will spend the majority of their time on the BJH Palliative Care Service. Based on the individual student’s interest, there will also be opportunities to work with the BJC Hospice Team and the St. Louis Children’s Hospital WINGS program.

Students will learn to assess and treat refractory symptoms, participate in complicated advanced care planning and gain an understanding of rational polypharmacy through consultation on end-of-life issues and symptom management. While in the hospital, students will be responsible for seeing patients upon initial assessment as well as delivering follow-up care with the team. Patients will be seen for both end-of-life care as well as symptom management. Students will participate in conversations with patients regarding goals of care, delivering bad news and withholding/withdrawing care. Students will attend interdisciplinary team meetings and make home visits with hospice care providers. Emphasis will also be placed on observing and understanding the psychosocial and spiritual needs of the patients, as well as the impact of the burden on caregivers.

Student time distribution: Inpatient 75%, Outpatient 15%, Conferences/Lectures 10%; Subspeciality Care 100%
Major teaching responsibility: Attendings (Maria Dans, MD; Bernie Shore, MD; Elliot Gellman, MD)
Patients seen/weekly: 10
On call/weekend responsibility: None

M25 870 ENDOCRINOLOGY, DIABETES AND METABOLISM
Instructors: Clay F. Semenkovich, MD, and staff, 362-7617
Location: 8th Floor Southwest Tower, Barnes-Jewish South Campus
Elective Contact: Karen Muehlhauser, 362-7617
Other Information: Students meet on 8th Floor Southwest Tower, Barnes-Jewish South Campus, 8:15 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

In general, the four-week rotation will be divided into two weeks for general endocrinology and two weeks for diabetes. Students taking this elective see patients with endocrine and metabolic diseases in the Outpatient Consultation offices and inpatients at Barnes-Jewish Hospital. They will present these cases at formal rounds. They will also participate in informal rounds with the division and at divisional seminars. Extensive interaction with patients with diabetes and a diabetes education program are included, as is involvement with patients with thyroid, pituitary, adrenal, gonad, metabolic bone
disease and lipid disorders. Ample opportunities will be provided for discussions of patient problems with the members of the division.

Student time distribution: Inpatient 20%, Outpatient 70%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Faculty consultant for inpatients, individual faculty one-on-one for outpatients and program director for both
Patients seen/weekly: 8-10
On call/weekend responsibility: Elective for students

M25 871 ONCOLOGY-OUTPATIENT
Instructors: Steven Sorscher, MD, 362-9319
Location: Siteman Cancer Center, CAM Building
Elective Contact: Michael McKenzie, 362-5654
Other Information: Students meet on the 7th Floor, Siteman Cancer Center, CAM Building, 4921 Parkview Place, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will acquire skills in the evaluation and management of patients with pulmonary diseases and in the interpretation of pulmonary function tests. They will gain experience in outpatient Lung Center and attend regular pulmonary and critical care medicine conferences.

Student time distribution: Inpatient 60%, Outpatient 20%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Multiple attendings, fellows and residents
Patients seen/weekly: 20
On call/weekend responsibility: None

M25 882 PULMONARY MEDICINE — VA HOSPITAL
Instructor: Carlos Daughaday, MD, 289-6306
Location: John Cochran VA Hospital
Elective Contact: Carlos Daughaday, MD, 289-6306
Other Information: Students meet in 6C-MICU John Cochran VA Hospital, 7:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will participate in several ambulatory care activities of the Pulmonary Section, including outpatient consultations of common respiratory disorders such as COPD, obstructive sleep apnea, lung cancer and tuberculosis, and follow-up of primary care patients with pulmonary disease. In addition, students will round in medical intensive care units, interpret pulmonary function tests, participate in bronchoscopy and attend scheduled teaching conferences of the Pulmonary Division.

Student time distribution: Inpatient 30%, Outpatient 50%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Several attendings
Patients seen/weekly: 6-10 (by student)
On call/weekend responsibility: None

M25 883 TRANSFUSION MEDICINE
Instructor: Douglas Lublin, MD, PhD, 747-0687
Location: Barnes-Jewish Hospital
Elective Contact: Mary Madden, 747-0687
Other Information: Students should discuss their rotation with Dr. Lublin and staff in advance.
Students should meet the team at the Center for Pheresis on the 4th floor of the CAM at 9:30 a.m. first day of the elective. Contact resident on beeper 424-1154 if you have questions.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to introduce the student to the clinical aspects of blood banking and transfusion medicine. The four-week elective will consist of regular didactic sessions with senior staff, teaching conferences and participation in daily clinical rounds. The student will develop clinical skills in areas related to transfusion practice, blood conservation and evaluation of transfusion reactions. Complex hematologic diseases such as the coagulopathies and diseases that require pheresis will serve to instruct in current clinical practice along with evolving applications of interventional hematology, such as photopheresis and peripheral stem cell harvest for marrow transplantation.

Student time distribution: For July, November and March: Inpatient 30%, Outpatient 30%, Conferences/Lectures 40%; For remainder of year: Inpatient 40%, Outpatient 40%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 40-60
On call/weekend responsibility: None

M25 884 BONE MARROW TRANSPLANTATION AND STEM CELL BIOLOGY
Instructor: John F. DiPersio, MD, PhD, 362-9339
Location: Bone Marrow Transplant Unit 13-100
Elective Contact: John F. DiPersio, MD, PhD, or Kimberly Kuehler, 454-8306
Other Information: Students meet in the Bone Marrow Transplant Unit, 8:30 a.m. first day of elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Intense four-week clinical rotation exposing interested fourth-year medical students to the clinical world of bone marrow transplantation and to the basic science of hematopoiesis, leukemia and stem cell biology. Students will be primarily responsible for the care of autologous and allogeneic BMT recipients and those patients being treated for a variety of hematologic malignancies such as AML, ALL, multiple myeloma and Non-Hodgkin’s Lymphoma. In addition they will be exposed to methods of stem cell harvest, cryopreservation and immunophenotyping. This rotation plans to provide motivated students with an ideal mix of clinical medicine and basic science.

Student time distribution: Inpatient 60%, Outpatient 20%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attending on service as well as all BMT physicians
Patients seen/weekly: 10-20
On call/weekend responsibility: None

M25 885 OCCUPATIONAL/ENVIRONMENTAL MEDICINE
Instructor: Bradley Evanoff, MD, MPH, 454-8638
Location: 1st Floor, Wohl Hospital
Elective Contact: Bradley Evanoff, MD, MPH, 454-8638
Other Information: Students should meet at 1st Floor, Wohl Hospital, 9 a.m. first day of elective.

Enrollment limit per period: 1 (2, by special arrangement)
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. (Students may take this elective for up to 12 weeks.)

This elective is designed to introduce students to both the clinical treatment and the prevention of work-related injuries and illnesses. Clinical activities will include the diagnosis and treatment of workers with illnesses due to chemical exposure and repetitive motion, as well as acute injuries. Preventive activities will include work site visits and intervention projects, as well as involvement with work site health promotion and policy making. Specific activities are flexible depending on the students’ interests. Students are also urged to contact Dr. Evanoff if they wish to participate in research projects concerning the epidemiology of work-related diseases.

Students may elect to participate in the Interdisciplinary Environmental Clinic at Washington University. Based in the law school, the clinic involves interdisciplinary teams of students (law, engineering, environmental science) taking principal responsibility, under faculty supervision, for cases and projects on behalf of environmental and community organizations. The medical student(s) would assist clinic students by evaluating the human health impacts involved in one or more of the clinic’s cases, and presenting such information to the client organization(s) and others. Among the cases on which medical students might participate are: (1) air pollution associated with proposed cement plant upwind of the St Louis metropolitan area; (2) lead poisoning of children in the City of St. Louis; (3) lead poisoning of children and long-term exposure of adults to lead and possibly other metals in Herculaneum, Missouri; (4) air and water pollution caused by concentrated animal feeding operations (factory farms) in northern Missouri. Students choosing this option will work with the Environmental Clinic staff and with Dr. Evanoff to evaluate and present evaluations of human health impacts of environmental exposures.

Student time distribution: Outpatient 20%, Conferences/Lectures 10%, Reading/Research 70%; Subspecialty Care 100%
Major teaching responsibility: Attending
Patients seen/weekly: 10
On call/weekend responsibility: None

M25 887 CLINICAL CARDIOVASCULAR MEDICINE
Instructors: Thomas F. Martin, MD; and Timothy J. Martin, MD, (573) 308-1301
Location: Phelps County Regional Medical Center, Rolla, MO
Elective Contact: Annette Wells, (573) 308-1301, awells@im.wustl.edu
Other Information: Students should meet at Phelps County Regional Medical Center, 1000 W. 10th Street, Rolla, MO, 8 a.m. first day of elective. Ask Intensive Care Unit secretary to page Dr. Martin.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 25, 29, 33 and 37.
Clinical cardiology with some internal medicine in a rural setting. Room and board provided.
Student time distribution: Inpatient 50%, Outpatient 50%; Subspecialty Care 100%
Major teaching responsibility: Attending
Patients seen/weekly: 80
On call/weekend responsibility: None

M25 890 CLINICAL NEPHROLOGY
Instructor: Aubrey R. Morrison, MBBS, 362-7211
Location: Chromalloy American Kidney Center, Barnes-Jewish Hospital
Elective Contact: Ene Stubenrouch, 362-7211
Other Information: Students meet in the Acute Dialysis Center, Division 14300, Barnes-Jewish Hospital, 8 a.m. first day of elective. Ask for the Renal Fellow on the Consult Service.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.
Students assist in both the inpatient and outpatient areas to diagnose patients with acute and chronic renal failure, glomerulonephritis and electrolyte disorders. The student is a full member of the inpatient renal consult service, diagnosing and treating patients with acute and chronic renal disease and electrolyte disorders. Students will learn electrolyte management, drug dosing, dialysis procedures and complications, kidney biopsy reading, and the management of acute and chronic renal failure. Students are also encouraged to spend two or three half-days in the outpatient center rotating to the General Renal Clinics and the Transplant Clinic. Throughout the rotation, students work closely with two attendings and two renal fellows.
Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Primary Care 20%, Subspecialty Care 80%
Major teaching responsibility: Two attendings and three renal fellows
Patients seen/weekly: Four consults per week
On call/weekend responsibility: Saturday a.m. rounds desirable but not required

M25 893 ADULT ALLERGY AND CLINICAL IMMUNOLOGY
Instructor: H. James Wedner, MD, 454-7377
Location: 15th Floor, Northwest Tower
Elective Contact: Kristy Smith, 454-7377
Other Information: Students meet Kristy Smith in the Allergy and Immunology division office, 15th Floor, Northwest Tower, 8 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.
Students will participate in the allergy consult service at Barnes-Jewish Hospital, North and South Campus. The student will serve as the primary allergy consult for inpatient and Emergency Room consultation and present each patient to the allergy fellows on call and the attending physician. Students will attend The Adult Allergy Clinic, Pediatric Allergy Clinic and the outpatient clinics at The Asthma & Allergy Center at Barnes-Jewish West County Hospital. Conferences on selected topics in allergy and clinical immunology will be held with the attending staff two to three afternoons a week.
Student time distribution: Inpatient 10%, Outpatient 75%, Conferences/Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Attending and staff
Patients seen/weekly: 12
On call/weekend responsibility: Optional

M80 809 AMBULATORY CARE — JACQUELINE MARITZ LUNG CTR
Instructor: Daniel Rosenbluth, MD, 454-8762
Location: Barnes-Jewish Hospital, North Campus, Lung Center, 8th Floor CAM
Elective Contact: Lisa Wetzel, 454-8762
Other Information: Students meet in the Lung Center, 8th Floor CAM, Barnes-Jewish Hospital, North Campus, 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 17, 21, 25, 29, 33, 37 and 41.

The Jacqueline Maritz Lung Center houses the ambulatory care activities of the Divisions of Pulmonary Medicine, Thoracic Surgery and Allergy/Immunology, as well as the pulmonary function laboratory. The student will rotate through (1) both general pulmonary and subspecialty clinics in Pulmonary Medicine (cystic fibrosis, transplantation, emphysema, etc.), (2) Thoracic Surgery clinic, (3) Allergy/Immunology clinic and (4) interpretation of pulmonary function tests. Chest imaging is also emphasized in the evaluation process. The rotation can be streamlined to meet areas of emphasis desired by individual students.

Student time distribution: Outpatient 100%, Conferences/Lectures 3-5 wk; Primary Care 15%, Subspecialty Care: 85%
Major teaching responsibility: Multiple attendings
Patients seen/weekly: >20
On call/weekend responsibility: None

Research

(M25 900)

Dana R. Abendschein, PhD, 9924 Clinical Sciences Research Building, 362-8925. Research in this basic science laboratory is focused on responses of the arterial wall to injury and on mediators of coagulation that may contribute to acute rethrombosis after coronary fibrinolysis and accelerated restenosis after coronary angioplasty. Current studies are designed to define the time after vessel injury that the luminal surface remains procoagulant, to define the molecular expression of determinants of procoagulant activity associated with the site of injury and their changes with time, and to determine whether agents that inhibit the activity of procoagulant moieties can alter vascular remodeling leading to decreased acute thrombosis and subsequent restenosis in animal models of vascular injury. Students will be expected to observe procedures in experimental animals, to participate in analyses of procoagulant moieties and vascular wall proteins, and to participate in weekly laboratory meetings.

John P. Atkinson, MD, 10th Floor Clinical Sciences Research Building, 362-8391. A clinical research elective is offered in evaluation of patients with complement deficiency states and complex rheumatic disease syndromes.

Roberto Civitelli, MD, 502-3 Yalem, and 7th Floor Steinberg Building, North Campus, 454-8408. The biology of cell-cell interactions and communication in bone via gap junctions and cell adhesion molecules. Function of connexins and cadherins in transcriptional control of osteoblast differentiation, osteoclastogenesis and mechanotransduction. Modulation of mesenchymal lineage allocation and
osteoogenic differentiation by cadherins and beta-catenin signaling.

Philip E. Cryer, MD, 552 Barnard Hospital, 362-7635. Studies of the physiology and pathophysiology of metabolic regulation in normal humans and patients with diabetes mellitus with a focus on hypoglycemia.

Nicholas O. Davidson, MD, 910 Clinical Sciences Research Building North Tower, 362-2027. Genetic pathways for nonalcoholic fatty liver disease (NAFLD) and colorectal cancer development. We have two major areas of research interest. Our laboratory is interested, first, in the molecular mechanisms of hepatic steatosis and the pathogenesis of NAFLD. This is the most prevalent liver disease in the US, likely affecting a quarter of the population. We have generated genetically manipulated mouse strains that offer insights into the mechanisms of hepatic steatosis. The student would work as part of a team, designing and conducting experiments that will test hypotheses concerning the mechanisms and consequences of hepatic steatosis. These studies will primarily involve mouse genetics, examining the expression of candidate genes under a variety of nutritional and pharmacologic settings that modulate hepatic lipid metabolism. In addition we are using microarrays to study the spectrum of genetic changes that may predict the extent of hepatic lipid accumulation in patients with steatohepatitis. Our goal is to test hypotheses using mouse genetics and to extend these studies to examine the same pathways in humans with NAFLD. Our second area of interest concerns the genetic pathways involved in colorectal cancer, the second leading cause of cancer-related deaths. We have developed a novel strain of mice in which the dominant effects of mutations in the APC tumor suppressor gene have been abrogated through deletion of an RNA binding protein, apobec-1. This deletion has a major effect on the expression of cox-2, abrogating the increase in expression seen in human colonic adenomas and wild type mouse intestinal adenomas. These findings suggest that apobec-1 is a genetic modifier of colon cancer development. We will study the importance of apobec-1 expression in human colon cancer specimens and continue our murine genetic studies of this novel pathway for modulating colon cancer development and progression.

Thomas M. DeFer, MD, tdefer@dom.wustl.edu, 6604 Wohl Hospital Building, 362-8050, Special Projects in Medical Education. Through special arrangement with and approval by the coursemaster, fourth-year students will participate in special projects in medical education. Typical projects will require approximately four weeks to complete. These four weeks can occur consecutively (preferred) or be spread out somewhat as needed. Medical education projects should be aimed at improving the curriculum, student experience and/or administration of the Internal Medicine Clerkship or the Subinternship. Interested students should contact the coursemaster via phone or e-mail to discuss the proposed project. Those who are interested but would like guidance in designing a project should also contact the coursemaster. This is open only to Washington University School of Medicine students.

Matthew Ellis, MBBCH, PhD, Room 724, Southwest Tower, 747-3613. Genomics of breast cancer. The demonstration that the HER2 gene was amplified in breast cancer heralded the "genomic era" for this disease, which ultimately led to major clinical advances for HER2-positive disease. The HER2 discovery was based on a search for cancer specific anomalies in the cellular homologs of the acutely transforming retroviral oncogenes described in birds and mammals. However HER2 gene amplification is now recognized to be only one of a large number of somatic mutations that occur in breast cancer, most of which have been identified through genomic screening techniques. Large-scale tumor DNA resequencing projects, focused on a small number of tumors and the analysis of many genes, suggest that by the time breast cancer enters the terminal phase, approaching 100 individual somatic mutations may have accumulated. Similarly, array comparative hybridization experiments have uncovered multiple gene amplification and deletion events. The complexity of these changes has given rise to the concept of a "cancer genome atlas" in which all the recurring mutations in cancer are documented in publicly available databases to assist clinical investigation and translational medicine. Understanding the clinical and biological significance of these somatic changes must represent one of the most important challenges facing breast cancer researchers today, because when complete, a functionally annotated breast cancer genome atlas will provide predictive/prognostic biomarkers and therapeutic opportunities that will transform our approach to this common disease.
In the last 10 years my clinical and laboratory efforts have therefore focused on the development of a luminal (hormone receptor positive) breast cancer genome atlas. During these efforts we established a body of work on the practice of treating postmenopausal women with large palpable hormone receptor rich tumors with four months of an aromatase inhibitor. The ultimate scientific goal of these efforts is to create specimen banks and biomarker data from thousands of patients to create sufficient statistical power to robustly link genomic screens to clinical outcomes so we can eventually focus our basic science efforts on the most lethal genetic events.

Over the last year, we have completing a comprehensive analysis of the tumor samples accrued, including "whole genome" gene expression chips, high resolution array comparative hybridization analysis and candidate gene sequencing. The gene lists we are currently generating, particularly those from the marriage of expression profiling and array comparative hybridization, suggest a host of new therapeutic targets are ready to be exploited. Functional characterization of these genes has begun, and this effort is a major focus in my laboratory. Elective students will focus on projects that relate to individual oncogene candidates, including interpretation of genomic data, confirmatory studies on gene overexpression in cell lines and tissues and functional studies using gene transfer, gene knock-down and pharmacological targeting to verify the identity of bone fide therapeutic targets for further investigation.

Bradley Evanoff, MD, MPH, 454-8638. Occupational medicine epidemiology research. My research involves the use of epidemiology methods to characterize associations between diseases and work-related exposures. I am also doing studies that evaluate the detection and treatment of work-related musculoskeletal diseases. During an elective in occupational medicine epidemiology research, students will learn how to use epidemiologic methods to investigate disease processes by working on a mutually agreed-on topic of interest related to occupational diseases. Other activities can include work site visits and intervention projects, as well as involvement with work site health promotion and policy making. Elective length is variable depending on individual circumstances. Please contact Dr. Evanoff to discuss this research.

Gregory I. Goldberg, PhD, 7740 Barnard Hospital, 362-8172. Role of secreted extracellular matrix metalloproteases in tissue remodeling. Structure and function of the metalloproteases.

Richard W. Gross, MD, PhD, 4525 Scott Avenue, East Building, 362-2690. Lipid mediators of signal transduction in the cardiovascular system. Characterization of regulatory mechanisms responsible for the liberation of lipid second messengers during cellular activation.

Marc R. Hammerman, MD, 7704 Wohl Clinic, 362-8233. Studies characterizing the transplantation of kidney and pancreatic anlage as a means to "grow new organs" in the settings of end-stage chronic renal failure and diabetes mellitus.

John O. Holloszy, MD, 2nd Floor West Building, 362-3506. The research in our laboratory deals with the roles of exercise in the prevention and reversal of abdominal obesity, insulin resistance and diabetes. Much of our research is directed to elucidation of the mechanisms by which exercise activates glucose transport and enhances insulin sensitivity in muscle. Our current research is focused on the signaling pathways by which exercise activates glucose transport and enhances insulin sensitivity in muscle.

Keith A. Hruska, MD, 5th Floor McDonnell Pediatric Research Building, 286-2772. The research in the laboratory focuses on new therapies for chronic kidney disease, osteoarthritis and their complications. The mechanisms of action of these therapies for nephropathy, vascular calcification and renal bone disease are being analyzed, as are mechanisms enabling cartilage transplantation.
Robyn S. Klein, MD, PhD, 7273 McDonnell Pediatric Research Building, 286-2140. Co-localization of chemokine and glutamate receptors in cultured neurons. The student will join a neuroimmunology laboratory engaged in understanding the role of neuronal chemokine receptors in glutamate signaling. The project will entail using immunohistochemical techniques and confocal microscopy to co-localize chemokine and glutamate receptors on a variety of subtypes of neurons that have been grown in vitro.

Stuart A. Kornfeld, MD, 8th Floor Clinical Sciences Research Building, 362-8803. Synthesis, processing and sorting of glycoproteins, including lysosomal enzymes. Intracellular protein trafficking.

Sandor J. Kovacs, PhD, MD, 4428 Kingshighway Building, 454-8097. For students with math, physics and engineering background. Cardiovascular biophysics research elective concentrates on physiologic modeling and comparison of model predictions to in vivo human data. Minimum of eight weeks of elective time.

Jack Ladenson, PhD, 454-8436. Development of monoclonal and single-chain antibodies for use in research and in diagnostic testing.

Marc S. Levin, MD, Deborah C. Rubin, MD, 922 Clinical Sciences Research Building, 362-8933, 362-8935. Students will be members of a collaborative research team headed by Drs. Levin and Rubin (Department of Medicine) investigating the mechanisms underlying the intestinal adaptive response that occurs to compensate for loss of functional small intestine. Specific mechanisms under investigation include the role of retinoids and nuclear receptor signaling and mesenchymal-epithelial interactions on adaptation. The student will have the opportunity to learn basic molecular biology and physiology as it relates to small intestinal growth, development and function. Examples of techniques that are used in these studies include small animal surgery (mice and rats), molecular biological techniques including PCR, Northern blotting, vector construction for production of transgenic and knockout mouse models, in situ hybridization and immunohistochemistry.

Philip W. Majerus, MD, 8th Floor Clinical Sciences Research Building, 362-8801. Biochemistry of platelets, regulation of lipid metabolism in tissue culture; mechanism of platelet thrombus formation.

Jeffrey D. Milbrandt, MD, PhD, 101 Biotechnology Center, 362-4650. We have several ongoing projects in our laboratory. (1) The biological function of the GFL family of neurotrophic factors (GDNF, neurturin, persephin and artemin) that signal through a receptor complex containing the Ret tyrosine kinase. These factors promote survival of multiple neuronal populations including dopaminergic neurons, which degenerate in Parkinson’s disease, motor neurons, which are affected in Lou Gehrig’s disease and most neurons of the peripheral nervous system. (2) The biological roles of Egr2/Nab2 in regulating the Schwann cell myelination program and how abnormal function of these transcription factors result in peripheral neuropathies. (3) The development of prostate cancer, especially the role of Egr1 in regulating the PIN to invasive carcinoma transition and the role of the Nkx3.1 homeodomain protein in tumor initiation.

Stanley Misler, MD, PhD, 815 Yalem Research Building, Barnes-Jewish Hospital, 454-7719. Stimulus-secretion coupling in endocrine cells (B-islet cells and adrenal chromaffin cells) examined using single-cell assays of secretion (capacitance measurements, amperometry).

Michael Mullins, MD, and Lawrence M. Lewis, MD, mullinsm@wusm.wustl.edu, 747-5585 or Michelle Roberts, robertsm@wusm.wustl.edu, 362-4362. Emergency medicine clinical research. Emergency medicine clinical research involves the gamut of research designs ranging from retrospective cohort
studies (The Use of B Hydroxy Butyrate Point-of-Care Testing in Diabetic Ketoacidosis), to prospective clinical trials (Biomarkers in Traumatic Brain Injury), to the evaluation of healthcare systems and Emergency Department processes (A Comparison of the Canadian Triage Acuity Scale to the Emergency Severity Index to Detect Serious Time-sensitive Medical Conditions), to analyzing health policy issues (Rate of Follow-up to a Primary Care Clinic and Subsequent Emergency Department Utilization among an Urban ED Population). Students will learn the basic clinical research designs and will be able to articulate the benefits and drawbacks of each. They will be involved in hypothesis generation and study design for projects that are at that stage. For ongoing projects, they will learn about the informed consent process and be involved in screening for study subjects and subject selection and enrollment. They will be allowed to consent for studies judged to be minimal risk. Students will be taught important rules regarding data acquisition and entry, particularly as it relates to standards that have been set for the medical literature. They will learn about bias and inter-rater reliability. Students will participate in data entry, data analysis and subsequent abstract/manuscript preparation based on their level of interest and ability for time commitment. Students will meet weekly with one of the course masters to discuss study progress and to identify any roadblocks to study completion. These meetings will also serve as a forum for one-on-one education of the student regarding study methodology, ethical issues in research and various resources available to the clinical researcher at Washington University.

John W. Newcomer, MD, 4412 Renard Hospital, 362-5939. Clinical research concerning substrate (glucose and lipid) metabolism and the regulation of weight and body composition in persons with mental illness, particularly concerning the effect of psychotropic medications. Clinical research on the regulation of cognitive function. This elective offers the student a broad exposure to clinical research protocols, including protocols in patients with schizophrenia. Students will have an opportunity to focus on a particular project of interest.

Richard E. Ostlund, MD, 8804 Wohl Hospital, 362-8286. Our laboratory focuses on the prevention and treatment of coronary heart disease by studying cholesterol absorption, detoxification and elimination from the body. Direct patient studies that use new stable isotopic cholesterol tracers and mass spectrometry techniques complement in vitro work on the biochemistry of cholesterol transport in cultured cells.

Curtis A. Parvin, PhD, Room 2435 Kingshighway Building, Barnes-Jewish Hospital, North Campus, 454-8436. The application of biostatistical theory to data analysis issues in laboratory medicine, with particular emphasis on statistical approaches to characterizing the performance and quality of laboratory tests.

M. Alan Permutt, MD, 5th Floor Wohl Hospital, 362-8680 or 249-8683. Studies are being conducted to define the genetic susceptibility to diabetes in humans and experimental animal models. Lab methods include DNA sequencing, genotyping genetic variants in genomic DNA, creation of transgenic animals and characterization of expression levels in various tissues through analysis of RNA and protein. Another important activity is the elucidation of mechanisms involved in pancreatic islet beta cell failure to produce insulin in type 2 diabetes. Here we study insulinoma cells in culture, isolated islets and mice created to overexpress or eliminate critical genes involved in insulin production and secretion.

Katherine Ponder, MD, 8818 Cancer Research Building, 362-5188. Gene therapy for genetic diseases. Our laboratory is interested in using gene therapy to treat genetic deficiencies such as lysosomal storage diseases and hemophilia A and B. We have developed a retroviral vector that can be efficiently delivered to the liver of mice and dogs, and results in expression that is sufficient to reduce most of the clinical manifestations of these genetic diseases. Current studies focus upon assessing the immunological consequences of gene therapy, and devising ways to block immune responses to the therapeutic gene when and if they occur. In addition, we are further testing the clinical effect of this gene therapy approach in these and other models of disease.
Fatty acid metabolism and its role in atherosclerosis, diabetes, hypertension and obesity. The modulation of respiratory uncoupling for the treatment of aging, obesity and vascular disease.

Dr. Stanley's lab is interested in the host response to pathogens, including potential bioterroism agents. Work in the laboratory has focused on developing models to better understand the immunopathogenesis of *E. histolytica* and shigella infections, and the design and evaluation of recombinant-antigen based vaccines to stimulate mucosal and parenteral immune responses against enteric pathogens. More recently, the laboratory has begun new studies focusing on poxvirus infections, performing translational research looking at the genetic basis for susceptibility to poxvirus infections.

Phyllis K. Stein, PhD, Suite 402, Bank of America Building, 4625 Lindell Blvd (Lindell and Euclid), 286-1350. Clinical significance of heart rate variability and ECG-derived waveform parameters obtained from continuous ambulatory monitoring. This elective affords the opportunity to perform research in heart rate variability or in other measurements, like QT variability or T-wave alternans that can be derived from continuous ECG monitoring from Holter recordings or polysomnography recordings in the sleep lab. Data are also available from mice. Many possible projects are available using our many large existing datasets, using the thousands of stored studies in the sleep lab or involving *de novo* data collection in a clinical or animal population. Also, many possible directions for this research are available from applying traditional and non-linear HRV to different populations, developing methods to quantify ultradian heart rate variability patterns, to developing novel ECG analysis techniques, etc. Also, we are involved with the Cardiovascular Health Study (CHS), a large population-based longitudinal study of risk factors for heart disease and stroke among community-dwelling people >65 years old. There is a subset of this population who had Holter recordings (~1400 at baseline, ~800 of the same people five years later, and ~370 minority subjects recorded at the same time as the second CHS recording). These recordings have already been analyzed by us, so there is a large amount of heart rate variability data available. There is also a subset of the CHS which is known to have died suddenly, and we have developed a matched control group. We also have electronic sleep studies at two time points for about 300 of the same people who also participated in the Sleep Heart Health Study. Thus, there is also an opportunity in the CHS dataset for studies on the relationship of heart rate variability (and QT variability) and a huge number of clinical and demographic factors among the elderly. Currently we are studying the relationship of Holter-based HRV and sleep apnea patterns to the development of atrial fibrillation post-cardiac surgery.

Thomas H. Steinberg, MD, 7105 McDonnell Pediatric Research Building, 362-9218. We study cell-cell communication mediated by gap junction proteins and P2 (purinergic) receptors. Specific models include bone cells (osteoblasts and osteoclasts), pancreatic islet cells, and macrophages. In addition we are investigating the mechanisms by which gap junction proteins and P2 receptors are involved in the coordination of calcium signaling among cells.

John Turk, MD, PhD, 8th Floor Southwest Tower, 362-8190. Phospholipid signaling mechanisms in pancreatic islets. Experience in mass spectrometric analysis of complex lipids is available.

Asthma Care in the Inner City. Students will participate in ongoing studies of the delivery of asthma care to inner-city children and adults. The emphasis will be on direct contact between the asthmatic patients and the student, along with an asthma counselor.

H. J. Wedner, MD, 5002 Steinberg Pavilion, Barnes-Jewish Hospital, North Campus, 454-7937 or 454-7377. Asthma Care in the Inner City. Students will participate in ongoing studies of the delivery of asthma care to inner-city children and adults. The emphasis will be on direct contact between the asthmatic patients and the student, along with an asthma counselor.
454-7377. Biology of pollen and fungal allergens. Our laboratory has been characterizing the important allergenic proteins from molds and pollen. The allergens are identified using skin test sensitive individuals, and the proteins are isolated and characterized by a combination of physiochemical and molecular biological techniques. These studies should lead to better forms of allergy immunotherapy. Students will participate in the isolation, characterization and modification of major allergens from a number of molds including *Stachybotrys atra*, *Epicoccum nigrum* and several pollens including those from white oak and *Parthenium hysterophoros*, a newly recognized allergen.

**Faculty**

KENNETH S POLONSKY, MBBCH  Busch Professor of Medicine, Head of the Department of Internal Medicine

ELLIOIT EFREM ABBEY, MD  Professor of Clinical Medicine

CAMILLE N. ABOUD, MD  Professor of Medicine

SHADI ABDELNOUR  Instructor in Clinical Medicine

CHARLES C ABEL, MD  Assistant Professor of Clinical Medicine

DANA RAY ABENDSCHEIN, PHD  Associate Professor of Medicine

BARRY K ABRAMSON, MD  Instructor in Clinical Medicine

NADA A ABUMRAD, PHD  Robert C Atkins Professor of Obesity Research in Medicine

JOSEPH J.H. ACKERMAN, PHD  Research Professor of Chemistry in Medicine

TRACY ADAIR-KIRK, PHD  Research Instructor in Medicine

SUSAN R ADAMS, MD  Instructor in Clinical Medicine

DOUGLAS R ADKINS, MD  Associate Professor of Medicine

ANN C AGNEW, MD  Assistant Professor of Clinical Medicine

GAIL G AHUMADA, MD  Associate Professor Emerita of Clinical Medicine

ABDULLA AKFALY  Instructor in Clinical Medicine

INGRID RENEE ALBERT, MD  Assistant Professor of Clinical Medicine (Dermatology)

JORGE M ALEGRE, MD  Instructor in Clinical Medicine

MORRIS ALEX, MD  Assistant Professor Emeritus of Clinical Medicine

MUHAMMAD A ALI, MD  Instructor in Clinical Medicine

DAVID HERSHEL ALPERS, MD  William B Kountz Professor of Gerontology in Medicine

ANASTASSIA AMARO, MD  Research Instructor in Medicine (Pending Dean's Approval)

MILAN J. ANAKAT, MD  Assistant Professor of Medicine (Dermatology)

FRANK KIM ANDERSON, MD  Instructor in Clinical Medicine (Dermatology)

SCOTT J ANDERSON, MD, PHD  Instructor in Clinical Medicine

ANNA MARIA ARROYO, MD  Instructor in Medicine

PHILLIP V. ASARO  Assistant Professor of Emergency Medicine in Medicine

FRANK ASHALL, MD, PHD  Instructor in Clinical Medicine

JEFFREY JAY ATKINSON, MD, BS  Assistant Professor of Medicine

JOHN PATTERSON ATKINSON, MD  Samuel Grant Professor of Medicine

CHANDRA AUBIN, MD  Assistant Professor of Emergency Medicine in Medicine

VORACHART AUETHAVEKIAT, MD  Assistant Professor of Medicine

JAMES G AVERY, MD  Assistant Professor of Clinical Medicine
DOROTHY JEAN CLINE, MD  Instructor in Clinical Medicine (Dermatology)
JAMES CLOSE, MD  Instructor in Clinical Medicine
WILLIAM EDWARD CLUTTER, MD  Associate Professor of Medicine, Associate Director of the House Staff Training Program, Department of Internal Medicine
SHARI J COHEN, MD  Assistant Professor of Clinical Medicine
BRIAN G COHN  Instructor in Emergency Medicine in Medicine
SUSAN R COLBERT-THREATS, MD  Assistant Professor of Clinical Medicine
GRAHAM A COLDITZ, MD, PHD  Professor of Medicine
BRENT K COLE, MD  Instructor in Clinical Medicine
DANITA L COLE, MD  Instructor in Clinical Medicine
PATRICIA L COLE, MD  Associate Professor of Clinical Medicine
LLOYD W COLEMAN, PHD  Research Instructor in Medicine
IVAN E COLLIER, PHD  Retiree - Research Assistant Professor of Medicine (Dermatology)
MARCO COLONNA, MD  Professor of Medicine
ARTHUR HAMILTON COMBS  Associate Professor of Clinical Medicine
PHILLIP COMENS, MD  Assistant Professor of Clinical Medicine
JONAS AARON COOPER, MD  Assistant Professor of Medicine
RALPH COPP, JR, MD  Assistant Professor of Clinical Medicine
LYNN ANNE CORNELIUS, MD  Associate Professor of Medicine (Dermatology)
JOHN BERNARD COSTELLO, MD  Instructor in Clinical Medicine
MICHAEL R COURTOIS, MA, BS  Research Assistant Professor of Medicine
DANIEL W COYNE, MD  Professor of Medicine
JOHNETTA M CRAIG, MD  Instructor in Clinical Medicine
JOHN JEFFREY CRAS, MD  Instructor in Medicine
PETER A. CRAWFORD, MD, PHD  Assistant Professor of Medicine
CHARLES CRECELIUS, MD, PHD  Instructor in Clinical Medicine
SHARON CRESCI, MD  Assistant Professor of Medicine
STEPHEN R CRESPIN, MD  Associate Professor of Clinical Medicine
JEFFREY S CRIPPIN, MD  Professor of Medicine
PHILIP E CRYER, MD  Irene E and Michael M Karl Professor of Endocrinology and Metabolism in Medicine
PHILLIP S. CUCULICH, MD  Assistant Professor of Medicine
MARY K CULLEN, MD  Instructor in Clinical Medicine (Dermatology)
ROBERT CULVERHOUSE, PHD  Assistant Professor of Medicine
WILLIAM H DANFORTH, MD  Professor of Medicine
ERIK D. DANIELS, MD  Instructor in Clinical Medicine
JOHN S DANIELS, MD  Associate Professor of Clinical Medicine
RAND E DANKNER, MD  Associate Professor of Clinical Medicine
MARIA CRISTINA DANS, MD  Assistant Professor of Medicine
MOHAMMAD KHALED DARDARI, MD  Instructor in Clinical Medicine
LAKSHMAN DARSI, MD  Assistant Professor of Medicine (Pending Executive Faculty Approval)
THEMISTOCLES DASSOPOULOS, MD  Associate Professor of Medicine
CARLOS COLTON DAUGHADAY, MD  Professor of Medicine
WILLIAM H DAUGHADAY, MD  Irene E and Michael M Karl Professor Emeritus of Endocrinology and Metabolism in the John Milliken Department of Medicine
JOHN D DAVIDSON, MD  Professor of Clinical Medicine
NICHOLAS O DAVIDSON, MD  Professor of Medicine
VICTOR G DAVILA-ROMAN, MD  Professor of Medicine
DAVID S DAVIS  Instructor in Emergency Medicine in Medicine
THOMAS M DE FER, MD  Associate Professor of Medicine
LISA DE LAS FUENTES, MD  Assistant Professor of Medicine
VINCENT R DE MELLO, MD  Assistant Professor of Clinical Medicine
ANNE V DEAN, MD  Instructor in Clinical Medicine
JENNIFER A. DELANEY, MD  Instructor in Clinical Medicine
JAMES ALBERT DELMEZ, MD  Professor of Medicine
ALEX EUGENE DENES, MD  Associate Professor of Medicine
SUNNY DESAI  Instructor in Clinical Medicine
ANJALI DESAI DESHPANDE, PHD  Research Assistant Professor of Medicine (Pending Executive Faculty Approval)
ROBERT H DEUSINGER, PHD  Associate Professor of Medicine
ENRICO DI CERA, MD  Professor of Medicine
MICHAEL DIAMOND, MD, PHD  Professor of Medicine
BRIAN K DIECKGRAEFE, MD, PHD  Associate Professor of Medicine
KATHRYN M DIEMER, MD  Assistant Professor of Medicine
JAMES A DIESTELHORST, MD  Instructor in Clinical Medicine
JOHN F DIPERSIO, MD, PHD  Lewis T and Rosalind B Apple Professor of Medicine
MARILYN DISCH, MD  Instructor in Clinical Medicine
RICHARD M DIVALERIO, MD  Instructor in Clinical Medicine
ABHINAV DIWAN, MD  Assistant Professor of Medicine
MARTIN A DOCHERTY, MD  Assistant Professor of Emergency Medicine in Medicine
IRL JOSEPH DON, MD  Associate Professor of Clinical Medicine
JAMES W DONNELLY, MD  Instructor in Clinical Medicine (Dermatology)
BALRAJ DORAY, PHD  Research Instructor in Medicine
GERALD W. DORN, II, MD  Philip and Sima K Needleman Professor of Medicine
REBECCA SUSAN DRESSER, JD  Professor of Ethics in Medicine
WILLIAM H DRIBBEN, MD  Assistant Professor of Emergency Medicine in Medicine
ERIK R DUBBERKE, MD  Assistant Professor of Medicine
MARIA C DUMADAG-SABIO, MD  Instructor in Clinical Medicine
WILLIAM C DUNAGAN, MD  Professor of Medicine
WILLIAM MICHAEL DUNNE, JR., PHD  Professor of Medicine
ADRIANA S DUSSO, PHD  Research Associate Professor of Medicine
JOSEPH C. DWYER  Assistant Professor of Medicine (Pending Executive Faculty Approval)
WILLIAM CHARLES EADES, JR Research Assistant Professor of Medicine
DAYNA S EARLY, MD Associate Professor of Medicine
ROYAL J EATON, MD Instructor in Clinical Medicine
CHARLES S EBY, MD Associate Professor of Medicine
STEVEN A. EDMUNDOWICZ, MD Professor of Medicine
CHARMAINE E. EDWARDS, MD Instructor in Clinical Medicine
TATIANA EFIMOVA, PHD Research Assistant Professor of Medicine (Dermatology)
RUSSELL E EGGEBRECHT, MD Associate Professor of Clinical Medicine
ALI A EHSANI, MD Professor of Medicine
ZAMIR EIDELMAN, MD Instructor in Clinical Medicine
ARTHUR Z EISEN, MD The Winfred A and Emma R Showman Professor of Dermatology in Medicine
SETH A EISEN, MD Professor of Medicine
LINDA G EISSENBERG, PHD Research Instructor in Medicine
JOHN ELLENA, MD Assistant Professor of Clinical Medicine
MATTHEW JAMES ELLIS, MBBCH, PHD Professor of Medicine
JAMES MICHAEL EPSTEIN, MD Instructor in Clinical Medicine
NEIL A ETTINGER, MD Instructor in Clinical Medicine
BRADLEY A EVANOFF, MD Richard A and Elizabeth Henby Sutter Professor of Occupational, Industrial, and Environmental Medicine in Medicine
ALEX S EVERS, MD Professor of Medicine
CAROL JANE EVERS, MD Instructor in Clinical Medicine
GREGORY A EWALD, MD Associate Professor of Medicine
ELISA FABBRINI, MD, PHD Research Assistant Professor of Medicine
MITCH N FADDIS, MD, PHD Associate Professor of Medicine
AKINRINOLA FATOKI Instructor in Clinical Medicine
TODD A FEHNIGER, MD, PHD Assistant Professor of Medicine
DAVID FELDMAN, MD Instructor Emeritus in Clinical Medicine
HERMAN L FERRELL, MD Instructor in Clinical Medicine
JOSHUA JEFFREY FIELD, MD Instructor in Medicine
BRIAN N. FINCK, PHD Research Assistant Professor of Medicine
LEWIS CONRAD FISCHBEIN, MD Associate Professor of Clinical Medicine
PETER UWE FISCHER, D SC Visiting Associate Professor of Medicine
SIMON FISHER, MD, PHD Assistant Professor of Medicine
NORMAN FISHMAN, MD Assistant Professor of Clinical Medicine
SEAN C. FITZMAURICE, MD Instructor in Emergency Medicine in Medicine
ISRAEL JEROME FLANCE, MD Professor of Clinical Medicine
NORMA A FLETCHER, PHD Research Associate Professor Emerita of Medicine
GREGORY DEWITT FOLKERT Instructor in Emergency Medicine (Pending Dean's Approval)
LUIGI FONTANA, MD, PHD Research Associate Professor of Medicine
COREY G FOSTER, MD Instructor in Medicine
VICTORIA J FRASER, MD  J William Campbell Professor of Medicine
JAMES MATTHEW FREER, MD  Instructor in Medicine
DEBORAH FRENCHIE, MD  Instructor in Clinical Medicine
BRIAN R. FROELKE, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval)
BRIAN M FULLER, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval)
MICHAEL PAUL FULLER, MD  Assistant Professor of Clinical Medicine
SUZANNE FURESZ  Instructor in Clinical Medicine
BRIAN F GAGE, MD  Associate Professor of Medicine
DANIEL GAITAN, MD  Assistant Professor of Clinical Medicine
ARTHUR H GALE, MD  Associate Professor of Clinical Medicine
UMESH INDERLAL GANDHI, MBBS, MD  Instructor in Medicine
PRATEEK CHANDRA GANDIGA, MD  Instructor in Medicine (Pending Dean's Approval)
JACOB M GANDLMAYR, MD  Instructor in Medicine
WEIQIANG GAO, MD, PHD  Research Instructor in Medicine
JANE M. GARBUTT, MBCHB  Research Associate Professor of Medicine
KATHLEEN M GARCIA, MD  Instructor in Clinical Medicine
BERNARD T GARFINKEL, MD  Professor of Clinical Medicine
JACQUELYN B GARRETT, MD  Instructor in Clinical Medicine (Dermatology)
FRANCISCO J GARRIGA, MD  Instructor in Clinical Medicine
BEN M GASIROSKI, MD  Assistant Professor of Emergency Medicine in Medicine
FELICITAS Z GATACHALIAN, MD  Instructor in Clinical Medicine
JOSEPH H GATEWOOD, MD  Instructor in Emergency Medicine in Medicine
ELAINE Y GEE, MD  Instructor in Medicine
WILLIAM M GEE, MD  Instructor in Clinical Medicine
EDWARD M GELTMAN, MD  Professor of Medicine
KENNETH W GENTSCH, MD  Instructor in Clinical Medicine
CONNIE F GIBSTINE, MD  Instructor in Clinical Medicine (Dermatology)
STEPHEN JAMES GIDDINGS, MD, PHD  Associate Professor of Medicine
RALPH V GIESELMAN, MD  Howard Hughes Medical Institute Investigator in Medicine, Professor of Medicine
WILLIAM SCOTT GILMORE  Instructor in Emergency Medicine in Medicine
MARYE J GLEVA, MD  Associate Professor of Medicine
ANDREW S GOLD, MD  Instructor in Clinical Medicine
ANNE CAROL GOLDBERG, MD  Associate Professor of Medicine
DANIEL E GOLDBERG, MD, PHD  Howard Hughes Medical Institute Investigator in Medicine, Professor of Medicine
GREGORY I GOLDBERG, PHD  Professor of Medicine (Dermatology)
EDWARD M GELTMAN, MD  Assistant Professor of Medicine
JASON S GOLDFEDER, MD  Assistant Professor of Medicine
ARNOLD M GOLDMAN, MD  Assistant Professor of Clinical Medicine
BENJAMIN M GOLDSTEIN, MD  Associate Professor of Clinical Medicine
BOONE WILDER GOODGAME, MD  Assistant Professor of Medicine
KRISTINA LOUISE HENDERSON, MD Instructor in Clinical Medicine
SCOT G HICKMAN, MD Professor of Medicine
THOMAS C HILL Instructor in Emergency Medicine in Medicine (Pending Dean's Approval)
ELIZABETH HILLIKER, MD Assistant Professor of Emergency Medicine in Medicine
RACHEL D HINDIN, MD Instructor in Medicine
PAUL FLACK HINTZE, MD Assistant Professor of Clinical Medicine
AMY L HOERR, MD Instructor in Clinical Medicine
J. LANGSTON HOFFMAN, MD Instructor in Clinical Medicine
SANDRA S HOFFMANN, MD Instructor in Clinical Medicine
JOHN OTTO HOLLOSZY, MD Professor of Medicine
CHRISTOPHER VIN HOLTHAUS Instructor in Emergency Medicine in Medicine
MICHAEL J HOLTZMAN, MD Selma and Herman Seldin Professor of Medicine
NEAL HOLZUM Instructor in Clinical Medicine
BARRY ALLEN HONG, PHD Professor of Medicine
JOSHUA L. HOOD, MD Research Instructor in Medicine
BRUCE JAY HOOKERMAN, MD Assistant Professor of Clinical Medicine (Dermatology)
BARBRA A HORN, MD Instructor in Clinical Medicine
IAN KERST HORNSTRA, MD, PHD Assistant Professor of Medicine (Dermatology)
RICHARD S HOTCHKISS, MD Professor of Medicine
JIANGHUI HOU, PHD Assistant Professor of Medicine
DENNIS EMIL HOURCADE, PHD Research Associate Professor of Medicine
JACQUELINE HOWARD Instructor in Clinical Medicine
RANDALL A HOWELL, MD Assistant Professor of Emergency Medicine in Medicine
KEITH A HRUSKA, MD Professor of Medicine
CHYI-SONG HSIEH, MD, PHD Assistant Professor of Medicine
JAMES J HSIEH, MD, PHD Assistant Professor of Medicine
FONG FU HSU, PHD Research Professor of Medicine
RAYMOND J HU, MD Instructor in Clinical Medicine
HOWARD JENG HUANG Instructor in Medicine
JOHN W HUBERT, MD Assistant Professor of Clinical Medicine
MICHAEL S. HUGHES, PHD Research Associate Professor of Medicine
EVA A HURST, MD Assistant Professor of Medicine (Dermatology)
MARK ALBERT HURT, MD Instructor in Clinical Medicine (Dermatology)
RICHARD G. IHNAT, MD Instructor in Clinical Medicine
SHIN-ICHIRO IMAI, MD, PHD Associate Professor of Medicine
WARREN ISAKOW, MD Assistant Professor of Medicine
DANISH A. JABBAR, MBBS Instructor in Medicine
CAROLYN M JACHNA Instructor in Clinical Medicine
DARYL JACOBS, MD Instructor in Clinical Medicine
MYRON H JACOBS, MD Instructor in Clinical Medicine
STEVEN JACOBSON, MD Instructor in Clinical Medicine
SANJAY JAIN, MD, PHD Assistant Professor of Medicine
SUDHIR KUMAR JAIN, MBBS Associate Professor of Medicine
TIMOTHY BOCK JANG, MD Instructor in Emergency Medicine in Medicine
GEORGE JARAD, MD Instructor in Medicine
DANIEL RAGIN JASPER, MD Instructor in Clinical Medicine
DONNA BETH JEFFE, PHD Research Associate Professor of Medicine
RACHEL BROWN JEFFERSON Instructor in Emergency Medicine in Medicine
CHRISTOPHER M. JENKINS, PHD Research Instructor in Medicine
DAOJUN JIANG, PHD Research Instructor in Medicine
XUNTIAN JIANG, PHD Research Instructor in Medicine (Pending Dean's Approval)
DAVID JICK, MD Instructor in Clinical Medicine
SIDNEY JICK, MD Associate Professor of Clinical Medicine
MORRIS JOFTUS, MD Assistant Professor of Clinical Medicine
SREENIVASA JONNALAGADDA, MD Professor of Medicine
SHIRLEY SERAN JOO, MD Assistant Professor of Medicine
AMY M. JOSEPH, MD Associate Professor of Medicine
SUSAN M. JOSEPH, MD Assistant Professor of Medicine
BHAGAVAN V. JOSYULA, MD Instructor in Clinical Medicine
RANDALL S. JOTTE Associate Professor of Emergency Medicine in Medicine
WILLIAM G. JUERGENS, JR, MD Associate Professor Emeritus of Clinical Medicine
LESLIE E. KAHL, MD Professor of Medicine
DAYAKAR KANCHELRA, MBBS Instructor in Medicine
MADHAVI KANDULA, MD Instructor in Clinical Medicine (Dermatology)
ROBERT S. KARSH, MD Adjunct Professor of Medicine, Professor of Clinical Medicine
VICTORIA KASKUTAS Instructor in Medicine
ANDREW M. KATES, MD Associate Professor of Medicine
RYOTARO KATO, MD, JD Instructor in Medicine
DAVID A. KATZMAN, MD Instructor in Clinical Medicine
ROBERT L. KAUFMAN, MD Assistant Professor of Clinical Medicine
DANIEL P. KELLY, MD Professor of Medicine
JOHN J. KELLY, MD Associate Professor of Clinical Medicine
CHARLOTTE J. KENNEDY, MD, PHD Assistant Professor of Clinical Medicine
JOSEPH L. KENZORA, MD Associate Professor of Medicine
THOMAS ARCHIBALD KERR Instructor in Medicine
MARY KIEHL, MD, AS Assistant Professor of Clinical Medicine
CHARLES JOHN KILO, MD Instructor in Clinical Medicine
CHARLES KILO, MD Professor of Medicine
HELEN YOUNG KIM-JAMES, MD Instructor in Clinical Medicine
ROSA ANNE KINCAID, MD Instructor in Clinical Medicine
DONALD KEVIN KING, MD Assistant Professor of Clinical Medicine
TINNA P KING Instructor in Clinical Medicine
DAVID M KIPNIS, MD Distinguished University Professor Emeritus of Medicine
NIGAR KIRMANI, MD Professor of Medicine
JOHN H KISSEL, MD Assistant Professor of Clinical Medicine
MARINA K KISSELEVA, PHD Research Instructor in Medicine
MICKI KLEARMAN, MD Associate Professor of Clinical Medicine
MICHAEL K KLEBERT, PHD, BN Research Instructor in Medicine
ROBERT E KLEIGER, MD Professor of Medicine
CHRISTINA L KLEIN Assistant Professor of Medicine
ROBYN SUE KLEIN, MD, PHD Associate Professor of Medicine
SAMUEL KLEIN, MD Danforth Professor of Medicine
ALLEN P KLIPEL, MD Assistant Professor Emeritus of Medicine
LINDA MARIE KLUTHO, MD Instructor in Clinical Medicine
ERIC KNOCHE, MD Instructor in Medicine
NORMAN P KNOWLTON, JR, MD Professor Emeritus of Clinical Medicine
DALE K KOBAYASHI Research Instructor in Medicine
ISMAIL KOLA, PHD Adjunct Professor of Medicine
MARIN H KOLLEF, MD Professor of Medicine
HERMANN M KOLLER, MD Instructor in Emergency Medicine in Medicine
MARY E. KOLY, MD Instructor in Clinical Medicine
KEVIN L KONZEN, MD Assistant Professor of Clinical Medicine
RAPHAEL KOPAN, PHD Professor of Medicine (Dermatology)
KEVIN MARC KORENBLAT, MD Associate Professor of Medicine
PHILLIP E KORENBLAT, MD Professor of Clinical Medicine
STUART A KORNFELD, MD David C and Betty Farrell Professor of Medicine
ALEX H KOSLOFF, MD Instructor in Clinical Medicine
ATTILA KOVACS, MD Associate Professor of Medicine
SANDOR J KOVACS, MD, PHD Professor of Medicine
MARK S KRASNOFF, MD Instructor in Clinical Medicine
RONALD J KRONE, MD John E Simon Scholar in Medicine, Professor of Medicine
ELAINE SUSAN KRUL, PHD Adjunct Associate Professor of Medicine
THOMAS KUCIEJCZYK-KERNAN, MD Instructor in Clinical Medicine
RALPH F KUHLMAN, MD Assistant Professor of Clinical Medicine
ANTHONY KULCZYCKI, JR, MD Associate Professor of Medicine
ROBIN A. KUNDRA, MD, PHD, BS Instructor in Clinical Medicine
DAVID I. KUPERMAN, MD Instructor in Medicine
HOWARD I. KURZ, MD, BS Associate Professor of Medicine
JACK H LADENSON, PHD Professor of Clinical Chemistry in Medicine
ROOP LAL Instructor in Clinical Medicine
JANE LOITMAN, MD | Instructor in Clinical Medicine
WARREN M LONERGAN, MD, BA | Assistant Professor Emeritus of Clinical Medicine
FANXIN LONG, PHD | Associate Professor of Medicine
GREGORY D LONGMORE, MD | Professor of Medicine
JAMES F LOOMIS, JR, MD | Instructor in Clinical Medicine
LATISHA D LOVE-GREGORY, PHD | Research Instructor in Medicine
RONALD J LUBELCHEK, MD | Instructor in Clinical Medicine
DOUGLAS M LUBLIN, MD, PHD | Associate Professor of Medicine
HERBERT LUBOWITZ, MD | Associate Professor of Clinical Medicine
PHILIP A LUDBROOK, MBBS | Professor of Medicine
KENNETH M LUDMERER, MD | Professor of Medicine
BARBARA A LUTEY, MD | Instructor in Medicine (Pending Dean's Approval)
JOHN P LYNCH, MD | Associate Chair for Clinical Programs, Department of Internal Medicine, Professor of Medicine
ALAN P LYSS, MD | Associate Professor of Clinical Medicine
CARL A LYSS, MD, BS | Assistant Professor of Clinical Medicine
CYNTHIA XIUGUAN MA, MD, PHD | Assistant Professor of Medicine
LIANG MA, PHD | Assistant Professor of Medicine (Dermatology)
VINAY D. MADAN, MD | Instructor in Medicine
WILLIAM EDWIN MAGEE, MD | Associate Professor of Clinical Medicine
LEONARD B MAGGI, JR, PHD, BA | Research Instructor in Medicine
ROBERT JOHN MAHONEY, MD | Assistant Professor of Medicine
ELAINE MICHELLE MAJERUS, MD, PHD, BS | Assistant Professor of Medicine
PHILIP W MAJERUS, MD | Professor of Medicine
SURAJIT MAJUMDAR, MD | Instructor in Clinical Medicine
MAJESH MAKAN, MD | Associate Professor of Medicine
DAVID JON MANCUSO, PHD | Research Instructor in Medicine
KEITH MANKOWITZ, MD | Assistant Professor of Medicine
CAROLINE MANN, MD | Assistant Professor of Medicine (Dermatology)
DOUGLAS L. MANN | Tobias and Hortense Lewin Professor of Medicine
MORRIS D MARCUS, MD | Professor Emeritus of Clinical Medicine (Dermatology)
CHRISTOPHER R MARET, MD | Instructor in Clinical Medicine
SARAH K MARGOLIS, MD | Assistant Professor of Clinical Medicine
JAY MICHAEL MARION, MD | Assistant Professor of Clinical Medicine
IDA KOZAK MARIZ | Research Assistant Professor Emerita of Medicine
DAVID BRADLEY MARRS, MD | Instructor in Clinical Medicine (Dermatology)
JONAS MARSCHALL, MD | Instructor in Medicine (Pending Dean's Approval)
JAY PHILLIPS MARSHALL, II, MD | Assistant Professor of Clinical Medicine
ANN G MARTIN, MD | Associate Professor of Medicine (Dermatology)
DANIEL RICHARD MARTIN | Research Instructor in Medicine
NATHAN RUSSELL MARTIN, MD | Instructor in Medicine
THOMAS F MARTIN, MD Associate Professor of Medicine
TIMOTHY J. MARTIN, MD Assistant Professor of Medicine
WADE H MARTIN, III, MD Associate Professor of Medicine
JERALD ARTHUR MASLANKO, MD Instructor in Clinical Medicine
MARY VEST MASON, MD Instructor in Clinical Medicine
PHILIP JOHN MASON, PHD Professor of Medicine
JOAN ALICE MASS, MD Assistant Professor of Clinical Medicine
ANTHONY J-P MATTALINE, DOST, BS Assistant Professor of Clinical Medicine
HENRY E MATTIS, MD Instructor in Clinical Medicine
KAREN GOELTZ MAURY Instructor in Emergency Medicine in Medicine
GABRIEL MBALAVIELE, PHD Adjunct Research Assistant Professor of Medicine
MICHAEL E MCCADDEN, MD Instructor in Clinical Medicine (Dermatology)
CHRISTOPHER E MCCARTHY, MD Instructor in Clinical Medicine
DONTE D MCCLARY, MD Instructor in Clinical Medicine
JAY R. MCDONALD, MD, BS Assistant Professor of Medicine
CHERYL RIDDLE MCDONOUGH, MD Instructor in Medicine
JANET B MCGILL, MD Professor of Medicine
OLIVER MCKEE, MD Instructor in Clinical Medicine (Dermatology)
CLARK R MCKENZIE, MD Instructor in Clinical Medicine
FRANCES T MCKINNEY Instructor in Clinical Medicine
HOWARD LAWRENCE MCLEOD, PHS Adjunct Professor of Medicine
AMY MCQUEEN, PHD Research Assistant Professor of Medicine
ROBERT PAUL MECHAM, PHD Professor of Medicine
GERALD MEDOFF, MD Lecturer in Medicine, Professor Emeritus of Medicine
PAUL T MEHAN, MD Instructor in Medicine
GARY JAY MELTZ, MD Instructor in Clinical Medicine
ROBERT S MENDELSON, MD Associate Professor of Clinical Medicine
PAUL A MENNES, MD Professor of Clinical Medicine
RONALD L MERA, MD Instructor in Clinical Medicine
AMARTEJ MERLA, MBBS Instructor in Medicine
GINA MICHAEL, MD Instructor in Clinical Medicine
LOREN S. MICHEL, MD Assistant Professor of Medicine
JEFFREY D MILBRANDT, MD, PHD Professor of Medicine
BRENT WILLIAM MILLER, MD Associate Professor of Medicine
CHARLES WILLIAM MILLER, MD Assistant Professor of Clinical Medicine (Dermatology)
JAMES G. MILLER, PHD Professor of Medicine
LARA ELIZABETH MILLER Instructor in Clinical Medicine
JEFFREY H MINER, PHD Professor of Medicine
STANLEY MISLER, MD, PHD Associate Professor of Medicine
NEVILLE FAROOKH MISTRY, MD Instructor in Medicine
BETTINA MITTENDORFER, PHD  Research Associate Professor of Medicine  
BALSAMANIRINA S MOHAMMED, MD, PHD  Research Assistant Professor of Medicine  
THALACHALLOUR MOHANAKUMAR, PHD  Professor of Medicine  
C. SCOTT MOLDEN, MD  Instructor in Clinical Medicine  
HECTOR D MOLINA-VICENTY, MD  Associate Professor of Medicine  
AUSTIN F MONTGOMERY, MD, BS  Instructor in Clinical Medicine  
DANIEL MORGENSTERN, MD  Assistant Professor of Medicine  
DONALD G MORRIS, MD  Instructor in Clinical Medicine  
AUBREY R MORRISON, MBBS  Professor of Medicine  
RICHARD GERARD MRAD  Instructor in Clinical Medicine  
MIKE MAX MUECKLER, PHD  Professor of Medicine  
DANIEL KAST MULLADY, MD  Assistant Professor of Medicine  
MICHAEL E MULLINS, MD  Assistant Professor of Emergency Medicine in Medicine  
STEVEN ROBERT MUMM, PHD  Research Associate Professor of Medicine  
FARIS MOHAMMED MURAD  Assistant Professor of Medicine  
ANTHONY MUSLIN, MD  Langenberg Distinguished Professor of Medicine  
NICOLA NAPOLI  Adjunct Research Assistant Professor of Medicine  
FATIHA NASSIR, PHD  Research Assistant Professor of Medicine  
MICHAEL J. NAUGHTON, MD  Assistant Professor of Medicine  
ROSANNE S NAUNHEIM, MD  Associate Professor of Emergency Medicine in Medicine  
ROBERT F NEASE, JR, PHD  Adjunct Associate Professor of Medicine  
BURTON M NEEDLES, MD  Instructor in Clinical Medicine  
J. ROGER NELSON, MD  Assistant Professor Emeritus of Clinical Medicine  
JEANNE M NERBONNE, PHD  Professor of Medicine  
ELIZABETH P. NEWBERRY, PHD  Research Assistant Professor of Medicine  
RODEY D NEWBERRY, MD  Associate Professor of Medicine  
JOHN W NEWCOMER, MD  Professor of Medicine  
AMY C NEY  Instructor in Clinical Medicine  
NGUYET MINH NGUYEN, MD, BS  Assistant Professor of Medicine  
SCOTT MONROE NORDLICHT, MD  Professor of Medicine  
CHARLES C NORLAND, MD  Professor Emeritus of Clinical Medicine  
DEBORAH J NOVACK, MD, PHD  Associate Professor of Medicine  
KARA STERNHELL NUNLEY, BS  Assistant Professor of Medicine (Dermatology) (Pending Executive Faculty Approval)  
DIANA ROBERTOVN NURUTDINOVA, MD  Instructor in Medicine  
SAMUEL R NUSSBAUM, MD  Professor of Clinical Medicine  
MUHAMMAD AKRAM NYAZEE  Instructor in Clinical Medicine  
G PATRICK O'DONNELL, MD  Instructor in Clinical Medicine  
LAMAR H OCHS, MD  Instructor Emeritus in Clinical Medicine  
ADEWOLE L. OKUNADE, PHD  Research Assistant Professor of Medicine  
GEORGE CHARLES OLIVER, MD  Professor Emeritus of Clinical Medicine
MARGARET OLSEN, PHD  Research Assistant Professor of Medicine
ROBERT F ONDER, JR, MD  Assistant Professor of Clinical Medicine
NUR FIONA ONEN, MD  Instructor in Medicine (Pending Dean's Approval)
S. MICHAEL ORGEL, MD  Instructor in Clinical Medicine
MATTHEW J ORLAND, MD  Associate Professor of Clinical Medicine
DAVID WILLIAM ORTBALS, MD  Assistant Professor of Clinical Medicine
DANIEL SCOTT ORY, MD  Professor of Medicine
RICHARD E OSTLUND, JR, MD  Professor of Medicine
THEODORE OTTI  Instructor in Clinical Medicine
EDGAR TURNER OVERTON, MD  Assistant Professor of Medicine
ROBERT F OWEN, MD  Instructor Emeritus in Clinical Medicine
PAMELA L OWENS, PHD  Research Assistant Professor of Medicine (Pending Executive Faculty Approval)
VANI PACHALLA, MD  Instructor in Clinical Medicine
ROBERT C PACKMAN, MD, BS  Professor of Clinical Medicine
ROBERT PAINE, MD  Professor of Clinical Medicine
DIPANJAN PAN, PHD  Research Instructor in Medicine
JEN-JUNG PAN  Assistant Professor of Medicine
PETER D PANAGOS, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval)
INNA LEE PARK, MD  Instructor in Clinical Medicine
CHARLES W PARKER, MD  Professor Emeritus of Medicine
MARY L. PARKER, MD  Associate Professor Emerita of Clinical Medicine
DAVID A PARKS, MD  Assistant Professor of Clinical Medicine
DEBORAH L PARKS, MD  Professor of Clinical Medicine
KETAN J PATEL, MD  Instructor in Emergency Medicine in Medicine
AMANULLAH PATHAN  Instructor in Clinical Medicine
BRUCE PATTERSON, PHD  Research Associate Professor of Medicine
SUSAN E PEARSON, DOST, PHD  Instructor in Clinical Medicine
REBECCA D PECK, MD  Instructor in Clinical Medicine (Dermatology)
WILLIAM A PECK, MD  Alan A and Edith L Wolff Distinguished Professor, Professor of Medicine
PARVIN FATHEDDI PEDDI, MD  Instructor in Medicine
MARYBETH PEREIRA, MD  Associate Professor of Clinical Medicine
JULIO E PEREZ, MD  Professor of Medicine
LAURENCE F PERLSTEIN, MD  Instructor in Clinical Medicine
MARSHALL ALAN PERMUTT, MD  Professor of Medicine
LINDA R PETERSON, MD  Associate Professor of Medicine
CHRISTINE T PHAM, MD  Associate Professor of Medicine
WILLIAM J PHILLIPS, MD  Assistant Professor of Clinical Medicine
JAY FRANCIS PICCIRILLO, MD  Professor of Medicine
JOEL PICUS, MD, BS  Associate Professor of Medicine
STEPHEN J PIEPER, MD  Instructor in Clinical Medicine
CRAIG K REISS, MD  Sam and Marilyn Fox Distinguished Professor of Medicine
JACQUELINE LEVY REISS, MD  Instructor in Clinical Medicine
HILARY ELIZABET RENO, MD, PHD  Instructor in Medicine
MICHAEL P RETTIG, PHD  Research Assistant Professor of Medicine
MICHAEL W RICH, MD  Professor of Medicine
LOIS F. RICHARD, MD, PHD  Instructor in Medicine
TERRENCE E RIEHL, PHD  Research Assistant Professor of Medicine
ROBERT D RIFKIN, MD  Professor of Medicine
CARON E RIGDEN, MD  Assistant Professor of Medicine
JOAN K. RILEY, PHD  Instructor in Medicine
DANIEL S RING, MD  Instructor in Clinical Medicine (Dermatology)
LISA B RING, MD  Instructor in Clinical Medicine (Dermatology)
SYED MOHSAN RIZVI, MBBS  Assistant Professor of Medicine (Pending Executive Faculty Approval)
CLIFTON A ROBINSON, MD  Instructor in Emergency Medicine in Medicine (Pending Dean's Approval)
PAUL ARTHUR ROBIOLIO, MD  Assistant Professor of Clinical Medicine
H. BRYAN ROGERS  Instructor in Clinical Medicine
SHARON ALICIA ROGERS  Research Instructor in Medicine
FELICE A ROLNICK, MD  Instructor in Clinical Medicine
DANIEL B ROSENBLUTH, MD  Professor of Medicine
ANNA ROSHAL, MD  Assistant Professor of Medicine
WILLIE RAY ROSS, MD  Assistant Professor of Medicine
MARCOS ROTHSTEIN, MD  Professor of Medicine
ERNEST TUTTLE ROUSE, III, MD  Instructor in Clinical Medicine
JEREMY ROWER, MD  Instructor in Clinical Medicine
DEBORAH C RUBIN, MD  Professor of Medicine
MYRA L. RUBIO, MD  Assistant Professor of Medicine
YORAM RUDY  Professor of Medicine
BRENT E RUOFF, MD  Associate Professor of Emergency Medicine in Medicine
TONYA D RUSSELL, MD, BS  Associate Professor of Medicine
JOSEPH F RUWITCH, JR, MD  Professor of Clinical Medicine
KENNETH J RYBICKI, MD, PHD  Instructor in Clinical Medicine
GEORGES SAAB, MD  Assistant Professor of Medicine
ROSHAN I SABAR  Instructor in Clinical Medicine
J. EVAN SADLER, MD, PHD  Professor of Medicine
IBRAHIM MUHAMMA SAEED, MD  Assistant Professor of Medicine
MEHRDAD SAEED-VAFA, MD  Instructor in Clinical Medicine
SHABBIR H SAFDAR  Professor of Clinical Medicine
KAORI A. SAKURAI  Instructor in Clinical Medicine
LLEWELLYN SALE, JR, MD, BA  Professor Emeritus of Clinical Medicine
CHRISTINE JOAN SALTER, MD, DC  Instructor in Clinical Medicine
ROBERT J SALTMAN, MD Associate Professor of Clinical Medicine
NANDAKUMAR SAMBANDAM, PHD Research Assistant Professor of Medicine
JOHN MARK SAMET, MD Instructor in Clinical Medicine
CHRISTOPHER S. SAMPSON, MD Instructor in Emergency Medicine in Medicine
LAWRENCE E SAMUELS, MD Instructor in Clinical Medicine (Dermatology)
GUADALUPE SANCHEZ, MD Instructor in Clinical Medicine (Dermatology)
MARK STEVEN SANDS, PHD Professor of Medicine
DANIEL JOSE SANTA CRUZ, MD Instructor in Clinical Medicine (Dermatology)
CARLOS SANTOS, MD Instructor in Medicine (Pending Dean's Approval)
RICHARD ALBERT SANTOS, MD, PHD Instructor in Medicine
EVELIO E. SARDINA, MD, PHD Instructor in Clinical Medicine
GREGORY STEPHEN SAYUK, MD Assistant Professor of Medicine
LAWRENCE R SCHACHT, MD Instructor in Clinical Medicine
JEAN E. SCHAFFER, MD Virginia Minnich Distinguished Professor of Medicine
RICHARD O. SCHAMP, MD Instructor in Clinical Medicine
KENNETH B SCHECHTMAN, PHD, MS Research Associate Professor of Medicine
MARK SCHEPERLE, MD Instructor in Clinical Medicine
ALVIN K SCHERGEN, MD Instructor in Clinical Medicine
JOEL D. SCHILLING, MD, PHD Instructor in Medicine
TANIA L SCHMID, MD Instructor in Clinical Medicine
ROBERT JAY SCHNEIDER, MD Assistant Professor of Clinical Medicine
GUSTAV SCHONFELD, MD Samuel E Schechter Professor of Medicine
MARIO SCHOOTMAN, PHD Associate Professor of Medicine
MARK ANDREW SCHROEDER, MD Research Instructor in Medicine
ALEXANDER E SCHUETZ, MD Instructor in Clinical Medicine
PAUL SCHULTZ, MD Instructor in Clinical Medicine
BENJAMIN D SCHWARTZ, MD, PHD Adjunct Professor of Medicine, Professor of Clinical Medicine
DAVID B SCHWARTZ, MD, PHD Associate Professor of Medicine
MITCHELL G SCOTT, PHD Clinical Research Assistant Professor of Medicine
LYNNE M SEACORD, MD Assistant Professor of Medicine
SUSUMU SEINO, MD, PHD Adjunct Professor of Medicine
DAVID SELTZER, MD Assistant Professor of Emergency Medicine in Medicine
JAY R SELTZER, MD Assistant Professor of Clinical Medicine
CLAY F SEMENKOVICH, MD Herbert S Gasser Professor, Professor of Medicine
ALOK SENGUPTA Instructor in Emergency Medicine in Medicine
ROBERT M SENIOR, MD Dorothy R and Hubert C Moog Professor of Pulmonary Diseases in Medicine
JOSEPH MICHAEL SERIA, MD Instructor in Clinical Medicine
JAMES F SERTL, MD Instructor in Clinical Medicine
JEFFERY SCOTT SHAFER Instructor in Emergency Medicine in Medicine
ATUL S SHAH Instructor in Clinical Medicine
ANISA SHAKER Instructor in Medicine
WILLIAM D SHANNON, PHD Associate Professor of Biostatistics in Medicine
JIAN-SU SHAO, MD Research Instructor in Medicine
JOHN B SHAPLEIGH, II, MD Instructor in Clinical Medicine
SHIVAK SHARMA, MD Instructor in Medicine
GERALD STEPHEN SHATZ, MD Assistant Professor of Clinical Medicine
VIDAL T. SHEEN, MD Instructor in Clinical Medicine
DAVID M. SHEINBEIN, MD Assistant Professor of Medicine (Dermatology)
AMY LYNN SHELDahl, MD Instructor in Medicine
MOUNIR M SHENOUDA Instructor in Clinical Medicine
ADRIAN SHIFREN, MBBCH Instructor in Medicine
JAHANSOUZ SHOKRI Instructor in Clinical Medicine
BERNARD L SHORE, MD Professor of Clinical Medicine
ROBERT B SHUMAN, MD Associate Professor of Clinical Medicine
SHERRY E SHUMAN, MD Associate Professor of Clinical Medicine
LABROS SIDOSSIS, PHD, MS, MA Adjunct Research Associate Professor of Medicine
ANDREW M SIEDLECKI, MD Instructor in Medicine
BARRY ALAN SIEGEL, MD Professor of Medicine
CHRISTINE A SIGMAN, MD Instructor in Clinical Medicine
RANDY B SILVERSTEIN, MD Instructor in Clinical Medicine
DAVID R SINACORE, PHD Professor of Medicine
ROBERT W SINDEL, MD Instructor in Clinical Medicine
SANFORD S SINEFF, MD Assistant Professor of Emergency Medicine in Medicine
GARY SINGER, MD Assistant Professor of Clinical Medicine
JASVINDAR SINGH, MD Associate Professor of Medicine
JAMES C SISK, MD Associate Professor Emeritus of Clinical Medicine (Dermatology)
DONALD A SKOR, MD Associate Professor of Clinical Medicine
EDUARDO SLATOPOLSKY, MD Joseph Friedman Professor of Renal Diseases in Medicine
JAMES L. SMITH, MD Instructor in Medicine
RAYMOND P SMITH, MD Instructor in Clinical Medicine
TIMOTHY W. SMITH, MD, PHD Associate Professor of Medicine
ALLEN D SOFFER, MD Instructor in Clinical Medicine
RAND WASHBURN SOMMER, MD Associate Professor of Clinical Medicine
STEVEN M. SORSCHER, MD Assistant Professor of Medicine
PABLO SOTO, MD, BS Assistant Professor of Medicine
HANI CHARLES SOUDAH, MD, PHD Assistant Professor of Clinical Medicine
WILLIAM F SOUTHWORTH, MD Assistant Professor of Clinical Medicine
MICHAEL L SPEARMAN, MD Instructor in Clinical Medicine
JOHN SPERTUS Adjunct Professor of Medicine
ALAN R SPIVACK, MD Assistant Professor of Clinical Medicine
ERIK CHRISTIAN STABELL, MD Instructor in Clinical Medicine
PAUL M STEIN, MD Professor of Clinical Medicine
PHYLLIS K STEIN, PHD Research Associate Professor of Medicine
RICHARD IAN STEIN, PHD Research Assistant Professor of Medicine
THOMAS H STEINBERG, MD Associate Professor of Medicine
WILLIAM F STENSON, MD Dr Nicholas V Costrini Professor of Medicine
SHEILA STEWART-WIGGLESWORTH, PHD Assistant Professor of Medicine
KEITH EVAN STOCKERL-GOLDSTEIN, MD Associate Professor of Medicine
JAMES ANDREW STOKES, MD Instructor in Clinical Medicine
CHRISTIAN D STONE, MD Associate Professor of Medicine
BRADLEY P STONER, MD, PHD Associate Professor of Medicine
GREGORY A STORCH, MD Professor of Medicine
STEPHEN P STORFER, MD Instructor in Clinical Medicine
XIONG SU, PHD Research Assistant Professor of Medicine
HAMSA SUBRAMANIAN Instructor in Clinical Medicine
SHELBY A SULLIVAN, MD Instructor in Medicine
KAHARU SUMINO, MD Assistant Professor of Medicine
WALTON SUMNER, II, MD Associate Professor of Medicine
RAMA SURESH, MBBS Instructor in Medicine
RUDEE SUWANNASRI, MD Instructor in Clinical Medicine
ELZBIETA ANNA SWIETLICKI, PHD Research Instructor in Medicine
BENJAMIN R TAN, MD Assistant Professor of Medicine
DAVID TAN, MD Assistant Professor of Emergency Medicine in Medicine
NADINE D. TANENBAUM, MD Assistant Professor of Medicine
KONGSAK TANPHAICHITR, MD Professor of Clinical Medicine
RICHARD S TAO, MD Instructor in Emergency Medicine in Medicine
HAIBING TENG, PHD Research Assistant Professor of Medicine
ARNOLD S TEPPER, MD Instructor in Clinical Medicine
WANDA T TERRELL, MD Assistant Professor of Clinical Medicine
SHILPA THAKUR Instructor in Clinical Medicine
DANIEL LEONIDAS THEODORO, MD Assistant Professor of Emergency Medicine in Medicine
J. ALLEN THIEL, MD Associate Professor of Clinical Medicine
MARK S THOELKE, MD, PHD Associate Professor of Medicine
ERIK P THYSSEN, MD Assistant Professor of Clinical Medicine
ALAN JAMES TIEFENBRUNN, MD Professor of Medicine
SHARON F TIEFENBRUNN, MD Instructor in Clinical Medicine (Dermatology
LAWRENCE S TIERNEY, MD Instructor in Clinical Medicine
JEFFREY P TILLINGHAST, MD Associate Professor of Clinical Medicine
GARRY S TOBIN, MD Associate Professor of Medicine
DOUGLAS M TOLLEFSEN, MD, PHD Professor of Medicine
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>JASON DEAN WEBER, PHD</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>H. JAMES WEDNER, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>GARY J WEIL, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>KATHERINE N WEILBAECHER, MD</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>CARLA JOY WEINHEIMER</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>LEONARD B WEINSTOCK, MD</td>
<td>Associate Professor of Clinical Medicine</td>
</tr>
<tr>
<td>STEVEN JAY WEINTRAUB, MD</td>
<td>Instructor in Medicine</td>
</tr>
<tr>
<td>EDMOND WEISBART</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>ALAN N WEISS, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>EDWARD P WEISS, PHD</td>
<td>Adjunct Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>PETER DOUGLAS WEISS, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>JOHN SUTTON WELCH, MD, PHD</td>
<td>Research Instructor in Medicine</td>
</tr>
<tr>
<td>ALVIN S WENNEKER, MD</td>
<td>Professor of Clinical Medicine</td>
</tr>
<tr>
<td>ROSEMARY KATHLE WENSLEY</td>
<td>Instructor in Emergency Medicine in Medicine</td>
</tr>
<tr>
<td>PETER WESTERVELT, MD, PHD</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>DARREN E WETHERS, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>ALISON J WHELAN, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>DOUGLAS WILLIAM WHITE, MD, PHD</td>
<td>Instructor in Medicine</td>
</tr>
<tr>
<td>NEIL HARRIS WHITE, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>MICHAEL PETER WHYTE, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>BURTON M WICE, PHD</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>CYNTHIA A WICHELMAN, MD</td>
<td>Assistant Professor of Emergency Medicine in Medicine</td>
</tr>
<tr>
<td>SAMUEL A WICKLINE, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>JOHN F WIEDNER, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>DEBORAH A WIENSKI, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>TANYA M WILDES, MD</td>
<td>Instructor in Medicine</td>
</tr>
<tr>
<td>JENNIFER LYNN WILER, MD</td>
<td>Assistant Professor of Emergency Medicine in Medicine</td>
</tr>
<tr>
<td>DENISE WILFLE, PHD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>CONSUELO WILKINS, MD</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>MICHAEL P WILLIAMS, PHD</td>
<td>Adjunct Instructor in Medicine</td>
</tr>
<tr>
<td>MONIQUE MARIE WILLIAMS, MD</td>
<td>Assistant Professor of Medicine</td>
</tr>
<tr>
<td>NANCY J WILLIAMS, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>WENDELL WILLIAMS, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>GEORGE A WILLIAMS, III, MD</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>R. JEROME WILLIAMS, JR, MD</td>
<td>Associate Professor of Clinical Medicine</td>
</tr>
<tr>
<td>CHRISTINE E WILMSEN CRAIG, MD</td>
<td>Instructor in Clinical Medicine</td>
</tr>
<tr>
<td>MONITA ELAINE WILSON, PHD</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>DAVID WILLIAM WINDUS, MD</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>PATRICK M WINTER, PHD</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>KAREN WINTERS, MD</td>
<td>Assistant Professor of Medicine</td>
</tr>
</tbody>
</table>
Department's Web Site

http://internalmed.wustl.edu/

Department of Molecular Microbiology

The Department of Molecular Microbiology teaches introductory courses in microbiology and pathogenic microorganisms for first-year medical students and graduate students. The department also offers a number of advanced courses, primarily designed for graduate students, but open to medical students. Advanced elective research activities are offered by faculty in the department.

Courses
First Year

M30 526 MICROBES AND PATHOGENESIS
Instructor: Henry V. Huang, PhD, 362-2755
The challenge of this course is to emphasize the importance of understanding molecular and cellular paradigms of how pathogenic microbes interact with their hosts and cause disease. Selected pathogenic microbes, including bacteria, viruses, parasites and fungi, will be utilized as models to explain general principles of host-pathogen interactions and their consequences. Mechanisms by which microbes evade host defenses to cause acute and chronic infections will be highlighted. Problems facing the medical community in the 21st century such as rising antibiotic resistance and tropical diseases will be addressed. The main objective of this course is to teach students how to think about microbial pathogenesis in a way that will provide them a conceptual framework that relates mechanisms of pathogenesis to symptomology and pathophysiology.

Selectives

M04 533 TROPICAL MEDICINE
Instructor: Daniel E. Goldberg, MD, PhD, 362-1514
This elective is designed to bring faculty members actively researching diseases specific to developing countries together with students in an informal discussion forum. The course will highlight the problems particular to tropical medicine including pathogenesis, eradication, prevention and treatment. This selective is cross-listed in Department of Medicine.

Fourth Year

Electives

At present, the primary enrollees in the following courses are students working for a Ph.D. degree in one of the basic sciences. However, these courses are recommended for interested medical students, especially those who may be considering a career in medical research, such as MSTP students. Emphasis is placed on the organization and function of living systems at the molecular level. The courses combine formal lectures with student-directed seminars. Course descriptions are presented under Division of Biology and Biomedical Sciences.

L41 (Bio) 5217 SPECIAL TOPICS IN MICROBIAL PATHOGENESIS
L41 (Bio) 5392 MOLECULAR MICROBIOLOGY AND PATHOGENESIS

Note — The number preceding the course title indicates that the course carries credit in the Graduate School of Arts & Sciences.

Research

(M30 900)
Cross-listed with L41 (Bio) 590

John P. Atkinson, MD, 10th Floor Clinical Sciences Research Building, 362-8391. Basic and clinical investigations of complement receptors and regulatory proteins including their roles in protecting self-tissue from damage, serving as a receptor for pathogens and inducing T regulatory cells.

Douglas E. Berg, PhD, 8th Floor McDonnell Pediatric Research Building, 362-2772. Helicobacter pylori: mechanisms of gastric colonization and disease; drug resistance; molecular epidemiology and
Stephen M. Beverley, PhD, 9th Floor McDonnell Pediatric Research Building, 747-2630. Molecular genetics of protozoan parasites and tropical diseases; biosynthesis of the parasite surface, genomics, virulence and drug action or resistance.

Keril Blight, PhD, 9th Floor McDonnell Pediatric Research Building, 286-0065. Molecular Biology of Hepatitis C Virus. We are studying the molecular mechanisms of HCV replication and the determinants of the virus-host interaction.

Michael Caparon, PhD, 10th Floor McDonnell Pediatric Research Building, 362-1485. Molecular genetics and pathogenicity of the *streptococci* and other pathogenic gram positive bacteria.

Michael S. Diamond, MD, PhD, 7th Floor McDonnell Pediatric Research Building, 362-2842. The research in our laboratory focuses on the interface between viral pathogenesis and the host immune response. Three globally important mosquito-borne RNA viruses are studied, the West Nile encephalitis and Dengue hemorrhagic fever viruses, and hepatitis C virus. Studies with Dengue virus (DV) have focused on identifying the host and viral factors that modulate the severity of an infection. Another direction for the laboratory is the investigation of the pathogenesis of West Nile virus infection (WNV) and the immune system response that prevents dissemination in the central nervous system. By infecting genetically and functionally immunodeficient mice with WNV, cells and molecules of the immune system are identified that are essential to the resolution of viral infection. A more recent avenue of interest in our laboratory is identifying the structural basis of antibody neutralization of hepatitis C virus. Overall, our studies straddle the interface between viral pathogenesis and the host immune response.

Tamara L. Doering, MD, PhD, 10th Floor McDonnell Pediatric Research Building, 747-5597. The Doering lab studies the opportunistic fungal pathogen, *Cryptococcus neoformans*. Focus is on synthesis of the main virulence factor of this organism, its polysaccharide capsule, with the dual motivations of elucidating basic biology and identifying potential drug targets. Current approaches include those of biochemistry, cell and molecular biology, and genetics; a new emphasis is on high-throughput approaches to host-pathogen interactions.

M. Wayne Flye, MD, PhD, 5108 Queeny Tower, 362-7145. Biochemical and gene regulation of local and systemic immune responses by the environment and cells of the liver and gastrointestinal tract with particular attention to the Kupffer cell.

Daniel Goldberg, MD, PhD, 9th Floor McDonnell Pediatric Research Building, 362-1514. Biochemistry of malaria.


David B. Haslam, MD, 6th Floor McDonnell Pediatric Research Building, 286-2888. Our laboratory is investigating the trafficking of shiga toxin within human cells. In particular, we are searching for small molecules that inhibit toxin trafficking. These will be used as tools to study the pathway, and some might be developed as potential therapeutic agents.

Scott Hultgren, PhD, 10th Floor McDonnell Pediatric Research Building, 362-6772. We use a multidisciplinary approach to study the molecular basis of gram positive and gram negative bacterial urinary tract infections; delineating bacterial virulence mechanisms and host defense responses which determine the outcome of infection. One major focus of the lab is on the assembly of bacterial fibers important in disease including adhesive pili formed through the chaperone/usher pathway and bacterial amyloid (curl) formation by the nucleation/precipitation pathway. We are also studying the role of biofilms in disease and investigating vaccine and drug targets for the treatment of disease.

David A. Hunstad, MD, Room 6106 McDonnell Pediatric Research Building, 286-2710. The laboratory studies the molecular mechanisms by which conserved, general periplasmic chaperones, such as SurA, contribute to the assembly and presentation of surface virulence factors by Gram-negative pathogens. In addition, we are evaluating the utility of novel silver-based antimicrobial compounds in special populations with UTI. Our goals are to discover novel targets for interventions that will prevent and treat Gram-negative infections of the urinary tract, gastrointestinal tract and central nervous system.

David Leib, PhD, 1108 McMillan Hospital Building, 362-2689. Molecular biology and latency of herpes simplex virus.

Lee Ratner, MD, PhD, 562 McDonnell Medical Sciences Building, 362-8836. Structure and function of human retroviruses, including HTLV-I, a cause of leukemia, and HIV, the cause of AIDS. The major focus is in studying the regulation of virus infectivity, replication, assembly and pathogenicity.

Robert Schreiber, PhD, Room 7749, 7th Floor Clinical Sciences Research Building, 362-8747. Tumor immunology focusing on mouse models of cancer and cancer immunoediting. Biochemistry and biology of cytokines, their receptors and cytokine receptor signaling with particular emphasis on IFNα/β and IFNγ.

L. David Sibley, PhD, 9th Floor McDonnell Pediatric Research Building, 362-8873. We are studying the intracellular survival mechanisms of protozoan parasites. Current approaches include high-resolution real-time microscopy, genetic mapping and genomic analyses.

Samuel L. Stanley Jr., MD, 7th Floor, McDonnell Pediatric Research Building, 362-1070. We study the protozoan parasite Entamoeba histolytica, the cause of amebic dysentery and amebic liver abscess, focusing on developing models to better understand the pathogenesis of amebic infection, novel targets for anti-amebic drug design, and the nature of the host immune and inflammatory response to enteric pathogens. We are also interested in the immunogenetics of infectious diseases and how genetic factors increase susceptibility or resistance to select agents and emerging infections.

Gregory Storch, MD, 2N52 St. Louis Children’s Hospital, 454-6079. In this elective, the student will participate in a research project involving the application of techniques of molecular biology, especially the polymerase chain reaction and nucleotide sequencing, to the diagnosis of the infectious diseases. Infectious agents currently under investigation include human cytomegalovirus, Epstein-Barr virus, BK polyoma virus, Ehrlichia and respiratory viruses. Studies are also directed at molecular detection and analysis of resistance to antimicrobial agents.

Patrick M. Stuart, PhD, 1217B McMillan, 362-9336. Virology. Investigate the role viral-induced immune responses play in corneal pathology seen in both primary and recurrent herpes infections of
the eye. Characterize the role that apoptotic pathways play in herpetic diseases of the eye. To develop and characterize anti-herpetic vaccines as well as immunologically-based tolerance procedures that are effective in preventing recurrent herpetic keratitis.

Herbert Virgin, MD, PhD, 1754 West Building, 362-9223. We work on issues at the interface of virology and immunology by analyzing aspects of immunity that control infection and aspects of viral structure/genetics that contribute to virulence, disease and oncogenesis. We study the pathogenesis and latency of the dsDNA enveloped murine gammaherpesvirus 68 as well as RNA viruses MNV-1 and Sindbis virus.

Joseph P. Vogel, PhD, 10th Floor McDonnell Pediatric Research Building, 747-1029. Legionella pneumophila, the causative agent of Legionnaires’ pneumonia, replicates inside alveolar macrophages by preventing phagosome-lysosome fusion.

Dong Yu, PhD, 9220D McDonnell Pediatric Research Building, 362-7367. Human cytomegalovirus (HCMV) is an important human pathogen that causes severe and life-threatening disease in people with a compromised immunity, is the most common infectious cause of birth defects in newborns, and has been associated with various vascular diseases. In my laboratory, students have opportunities to use genetic, biochemical, genomic and cell biology approaches to study key viral and cellular processes that are pivotal to HCMV biology and pathogenesis. In particular, they will investigate the role of viral genes in HCMV infection, decipher the unique molecular biology of HCMV clinical isolates, and use mouse model of mouse CMV infection as a surrogate model for dissecting the mechanism of HCMV infection and pathogenesis in vivo.

Faculty

STEPHEN M BEVERLEY, PHD Marvin A Brennecke Professor of Molecular Microbiology, Head of the Department of Molecular Microbiology

NATALIA S AKOPYANTS, PHD, MS Research Instructor in Molecular Microbiology

JOHN PATTERSON ATKINSON, MD Professor of Molecular Microbiology

WANDY L. BEATTY, PHD Research Assistant Professor of Molecular Microbiology

DOUGLAS E BERG, PHD Alumni Professor of Molecular Microbiology

KERIL J. BLIGHT, PHD, BS Assistant Professor of Molecular Microbiology

TAMARA L. BRENT, MD, PHD Associate Professor of Molecular Microbiology

MICHAEL G CAPARON, JR., PHD Professor of Molecular Microbiology

SWAINE L CHEN, MD, PHD Research Instructor in Molecular Microbiology

SUSAN E CULLEN, PHD Adjunct Professor of Molecular Microbiology

MICHAEL DIAMOND, MD, PHD Professor of Molecular Microbiology

DEBORAH E DOBSON, PHD Research Associate Professor of Molecular Microbiology

KAREN W DODSON, PHD Research Instructor in Molecular Microbiology

WILLIAM MICHAEL DUNNE, JR., PHD Professor of Molecular Microbiology

JULIAN B FLEISCHMAN, PHD Associate Professor Emeritus of Molecular Microbiology

M. WAYNE FLYE, MD, PHD, MA Professor of Molecular Microbiology

DANIEL E GOLDBERG, MD, PHD Professor of Molecular Microbiology

EDUARDO GROISMAN, PHD Howard Hughes Medical Institute Investigator in Molecular Microbiology, Professor of Molecular Microbiology
Department's Web Site
http://www.microbiology.wustl.edu/

Department of Neurological Surgery

Instruction in neurological surgery begins with an introduction to the anatomy and physiology of the nervous system presented in the first-year course in neural sciences directed by the Department of Anatomy and Neurobiology with participation of the neurosurgery faculty. In the second year, the Department of Neurological Surgery presents the course in Diseases of the Nervous System in conjunction with the Departments of Neurology, Pathology, Molecular Biology and Pharmacology, Medicine and Pediatrics. The course emphasizes how knowledge derived from basic or clinical investigations leads to improvements in clinical care. In the third year, students may elect to participate in a four-week Neurosurgery clerkship which introduces them to the clinical care of patients
with diseases of the nervous system. Neurosurgical faculty members work with the neurologists in providing lectures, demonstrations and teaching exercises in patients with neurological diagnoses as part of the Clinical Medicine course. Students may elect to fulfill their Neurology requirement by rotating on the neurosurgery service. Students may also choose neurosurgery as part of the Surgical Specialty rotations. Neurosurgical diagnosis, critical care, operative treatment and ethical issues in patient management are emphasized. In the fourth year, students may choose from several advanced electives including clinical externships in neurosurgery and experiences in basic or clinical/translational research.

Neurological Surgery Divisions

The Division of Pediatric Neurosurgery: Jeffrey R. Leonard, MD; Matthew D. Smyth, MD; Tae Sung Park, MD; David D. Limbrick Jr., MD, PhD.
Based in St. Louis Children’s Hospital, the Division of Pediatric Neurosurgery of the Department of Neurosurgery provides neurosurgical care for the many disorders that are unique to the developing nervous system, from the premature infant to the young adult. Subspecialty areas include pediatric neuro-oncology, spastic cerebral palsy, craniofacial disorders, obstetrical brachial plexus injuries and epilepsy surgery. Active areas of clinical and basic research include pediatric head trauma, brain tumors, epilepsy and neonatal brain injury and hydrocephalus.

The Center for Innovation in Neuroscience and Technology: Eric C. Leuthardt, MD (director)
The multidisciplinary center is based in the Department of Neurosurgery with participation from multiple departments in the medical school and across the University campus. Current active participants include neurosurgery faculty members Ralph G. Dacey Jr., MD, chairman; Colin Derdeyn, MD, with the Division of Neuroradiology; Steve Peterson, MD, with the Department of Neurology/Neurobiology; Frank C-P Yin, PhD, chairman and Daniel Moran, PhD, with the Department of Biomedical Engineering; Philip Bayly, PhD, and Guy Genin, PhD, with the Department of Mechanical Engineering; Bill Smart, PhD, with the Department of Computer Science; F. Scott Kieff, JD, with the School of Law and adjunct professor in the Department of Neurosurgery; and Michael Marrah with the Office of Technology Management.

The James L. O'Leary Division of Experimental Neurology and Neurological Surgery: Thomas A. Woolsey, MD (director)
The O'Leary Division was created in 1980 to formalize a long-standing tradition of providing unique opportunities for residents, fellows and others to engage in basic research as part of this academic training program. The division pioneered techniques to study brain structure and activity, with a focus on developmental and adult nervous system plasticity. Trainees have published fundamental work on mechanisms of activity-based changes to cerebral blood flow, a novel stroke model, new understanding of impacts of glioblastoma growth on cortical structure and function, and novel approaches to visualizing and analyzing dynamic changes in structure and function. The division currently collaborates widely on projects conducted in and outside WUSM including: faculty in this Department and the departments of Neurology, Anatomy and Neurobiology, Biomedical Engineering, Earth and Planetary Sciences, Electrical and Systems Engineering, Pediatrics, Otolaryngology and Radiology.

Areas of neurosurgical specialization include:

Cerebrovascular Surgery: Michael R. Chicoine, MD; Ralph G. Dacey Jr., MD; Robert L. Grubb Jr., MD; Keith M. Rich, MD; Gregory J. Zipfel, MD

Cranial Base Surgery: Michael R. Chicoine, MD; Robert L. Grubb Jr., MD; Gregory J. Zipfel, MD

Epilepsy Surgery: Joshua L. Dowling, MD; Eric C. Leuthardt, MD

Neuro-Oncology: Michael R. Chicoine, MD; Ralph G. Dacey Jr., MD; Keith M. Rich, MD; Eric C. Leuthardt, MD

Pediatric Neurosurgery: Jeffrey R. Leonard, MD; Matthew D. Smyth, MD; Tae Sung Park, MD; David D. Limbrick Jr., MD, PhD
Courses

First Year

Selectives

M04 5667 MICROcirculation
Instructor: Jeffrey M. Gidday, PhD, 286-2795
The homeostatic functions of the microcirculation include the active regulation of metabolite exchange with parenchymal cells, immune surveillance and a multifaceted response to injury and disease. This elective provides an overview of the normal and abnormal cell biology and physiology of the microcirculation. Four sessions will be organized around conceptual presentations and laboratory demonstrations by the instructor, and two-part topic presentations by students following independent library research that focuses on basic physiology and clinically relevant pathophysiology. Basic physiology research topics might include: regulation of tissue blood flow and vascular tone, propagated vasodilation, hemodynamics and rheology of erythrocytes and leukocytes, cell biology of the endothelium, control of capillary permeability and angiogenesis. Common disease entities involving microcirculatory dysfunction include: stroke and myocardial ischemia, diabetes, inflammation, tumor angiogenesis, sickle cell anemia, retinopathy of prematurity, pulmonary edema, various autoimmune diseases, as well as the adaptive cardiovascular responses to exercise or high altitude. (This selective is cross-listed in the Department of Cell Biology and Physiology.)

M04 5878 INTRODUCTION TO CLINICAL NEUROSURGERY
Instructor: Jeffrey Leonard, MD, 454-4630
The objective for this selective course is to expose students to the various fields of neurosurgery. Students attend X-Ray/Case Management conferences and Grand Rounds. There are nine sessions for the semester: two case management conferences, two Grand Rounds and five discussions. Students (discussion leaders) are assigned to relevant literature to present. Discussion dates and discussion leaders are chosen at the introductory meeting. The course also exposes students to tools they can use in critical reading of medical literature. During the semester, as opportunities allow, patients with the disease processes being discussed are brought to class, and students are lead on rounds to discuss the various patients in the hospital at that time.

Third Year

Third-Year Clerkship Opportunities
Students may elect to obtain their neurology clerkship experience on the neurosurgery service, or they can choose neurosurgery as part of the surgical specialty rotations. Third-year students participate with the residents and attendings on hospital rounds, evaluate patients in the neurosurgery outpatient department and participate in the neurosurgical operating room. The main objectives of the rotation include: 1) the evaluation of comatose or head-injured patients; 2) clinical presentation, diagnostic work-up and treatment of cervical and lumbar disc disease; and 3) evaluation and
treatment of patients with hemorrhagic and ischemic stroke.

**Fourth Year**

**Elective**

**M40 805 NEUROSURGERY**
Instructor: David Limbrick, MD, PhD, 454-2810
Location: McMillan Hospital
Elective Contact: David Limbrick, MD, PhD, 454-2810
Other Information: Students should contact instructor prior to the first day of the elective.

Enrollment limit per period: 7
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The goal is to provide an overview of neurological surgery. The fourth-year medical student will participate in patient work-ups; pre-, intra- and postoperative care; and diagnostic procedures. Students will also scrub in cases with senior level and chief residents assisting with neurosurgical procedures and observing the more critical portions of these procedures. It is expected that they will learn how to perform basic neurosurgical procedures such as lumbar punctures, ICP monitor placement and ventricular drain placement. Fourth-year medical students are encouraged to participate in Grand Rounds, Neurosurgery Resident Curriculum conference and Journal Club with the neurosurgery residents. At least one day per week is spent in an outpatient neurosurgery office setting. A week spent on the pediatric service at St. Louis Children’s Hospital is also strongly encouraged as a component of this fourth-year elective.

Student time distribution: Inpatient 60%; Outpatient 30%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: N/A
Patients seen/week: 125
On call/weekend responsibility: None

**Research**

**(M40 900)**

Michael R. Chicoine, MD, 5th Floor McMillan Hospital Building, 362-4313. The biology of brain tumors. Many aspects of brain tumor biology are under study including the anti-tumoral effects of lipopolysaccharide using rodent models of brain tumors and cell cultures of human tumor specimens obtained from the operating room. Further characterization of laboratory models of brain tumors are in progress with correlations being made between biological activity of brain tumors in culture and the clinical behavior of these tumors in patients as recorded in a patient database.

Ralph G. Dacey Jr., MD, 5th Floor McMillan Hospital Building, 362-3571. Research on the cerebral microcirculation and ischemia/reperfusion: Our studies focus on examination of molecular mechanisms in the endothelial cells and smooth muscle cells in the intracerebral microcirculation and the contribution of glial cells to their impairment after hypoxia/reoxygenation. In vitro techniques for studying isolated perfused microvessels are used to examine questions centered on endothelial smooth muscle and glial cell integration of cerebral blood flow responses.

Hans H. Dietrich PhD, 5th Floor McMillan Hospital Building, 362-3656. Pathophysiology of the cerebral microcirculation in Alzheimer’s disease and diabetes: Alzheimer’s disease and diabetes impair the vascular function of the cerebral microcirculation. We use in vitro techniques for studying isolated perfused microvessels from genetic models of the respective diseases to examine the impairment of molecular mechanisms involved in endothelial and smooth muscle integration of cerebral blood flow.
regulation. Based on our studies, we devise and test treatments to alleviate the observed microvascular dysfunction.

Jeffrey M. Gidday, MD, 286-2795. Research in our laboratory is aimed at elucidating the mechanisms responsible for the promotion of robust neuronal and vascular protection against ischemic injury in CNS tissues (a phenotype called “ischemic tolerance”) in response to sublethal hypoxic “preconditioning” stress. (See Gidday, Nat. Neurosci. Rev. 7: 437, 2006). Our current focus is on vascular mechanisms of ischemic tolerance and anti-inflammatory responses that may underlie it. We also investigate the molecular mechanisms of vascular dysfunction in brain and retina in response to ischemia. Our studies employ videomicroscopic methods in transgenic mice and other animals to directly visualize oxidative (oxygen and nitrogen radicals), inflammatory (polymorphonuclear leukocytes) and proteolytic (matrix metalloproteinases and neutrophilic proteases) injury processes in the CNS microcirculation. Cerebral and retinal endothelial cell cultures are also used concomitantly as in vitro models of microvascular injury and protection.

Robert L. Grubb Jr., MD, 5th Floor McMillan Hospital Building, 362-3567. Research on cerebral circulation and metabolism, utilizing short-lived cyclotron produced isotopes of oxygen, carbon and nitrogen is performed in humans. Positron emission tomography is used to measure cerebral circulation and metabolism in patients with severe head injuries, intracerebral hemorrhages and atherosclerotic carotid artery occlusive disease. Opportunities exist for the application of computer systems to biological modeling and data processing.

T. S. Park, MD, 1S46 St. Louis Children’s Hospital, 454-2810. Outcome studies of selective dorsal rhizotomies for treatment of spastic cerebral palsy in children and brachial plexus repair for birth injury are ongoing projects.

Keith M. Rich, MD, 5th Floor McMillan Hospital Building, 362-3566. Research on neuronal and glioma cellular apoptosis after treatment with DNA-damaging agents. Techniques include growing human brain tumor cells in culture, bioassay for apoptosis with fluorescent staining, protein immunoblotting and PCR.

Gregory J. Zipfel, MD, 5th floor McMillan Hospital Building, 747-8871. Our cerebrovascular research laboratory has two main interests: (1) Examining the pathophysiologic effects of amyloid-ß peptide on cerebral arteriolar function, and determining the manner and extent to which such effects contribute to diseases such as ischemic brain injury, cerebral amyloid angiopathy, and Alzheimer’s Disease; and (2) Exploring the molecular basis and therapeutic intervention for vasospasm and cognitive deficits following experimental aneurysmal subarachnoid hemorrhage.

Faculty

RALPH G DACEY, JR, MD Henry G and Edith R Schwartz Professor of Neurological Surgery, Head of the Department of Neurological Surgery
KEITH HAPP BRIDWELL, MD Professor of Neurological Surgery
JUSTIN M BROWN, MD Assistant Professor of Neurological Surgery
JACOB M BUCHOWSKI, MD Assistant Professor of Neurological Surgery
ANDREAS H BURKHALTER, PHD Associate Professor of Neurobiology in Neurological Surgery
MICHAEL R CHICOINE, MD Associate Professor of Neurological Surgery
WILLIAM S COXE, MD Professor Emeritus of Neurological Surgery
DEWITTE T CROSS, III, MD Professor of Neurological Surgery
Neurology concerns itself with the diseases of brain, spinal cord, peripheral nerves and muscles. An
introduction to the anatomy and physiology of the nervous system is presented in the first-year neuroscience course by the Department of Anatomy and Neurobiology, with participation of faculty from the Department of Neurology. A first-year selective titled Clinical Correlations in Neuroscience is available, which is an opportunity for interested students to shadow physicians in neuro-related fields and attend basic science or clinical conferences. In the second year, the Department of Neurology presents the course in Diseases of the Nervous System in conjunction with the Departments of Pathology, Neurosurgery and Ophthalmology. The course emphasizes the pathophysicsiology, pathology, clinical manifestations and treatment of the major neurological and neurosurgical diseases. The department also participates in the Practice of Medicine course, providing lectures, demonstrations and teaching exercises with patients in neurological physical diagnosis.

In the third year, a four-week clerkship in Neurology introduces students to the clinical care of patients with diseases of the nervous system. Questions pertaining to neurosurgical treatment, neurorehabilitation and ethical issues in management also are addressed. In the fourth year, opportunities exist for many varieties of advanced clinical or research experience. A four-year residency program prepares medical graduates for specialization in neurology. Subspecialty fellowship programs routinely provide additional training in epilepsy, electrophysiology, EMG, sleep medicine, cerebrovascular disease and stroke, neuroimmunology, neurological critical care, neuromuscular disease, neuropsychology and movement disorders.

Three divisions exist within the Department of Neurology: the Division of Adult Neurology, the Division of Pediatric and Developmental Neurology and the Division of Neuropsychology.

**Division of Neuropsychology:** Steven E. Petersen, PhD (division director), Francis Miezin, BS, MS, Bradley Schlaggar, MD, PhD, Gordon L. Shulman, PhD

**Division of Pediatric and Developmental Neurology:** Michael Noetzel, MD (division director), Janice Brunstrom, MD, Anne Connolly, MD, Philip Dodge, MD, W. Edwin Dodson, MD, Paul Golumbek, MD, PhD, Chris Gurnett, MD, PhD, David Gutmann, MD, Soe Mar, MD, Jeffrey Neil, MD, PhD, Arthur Prensky, MD, Bradley Schlaggar, MD, PhD, K. Liu Lin Thio, MD, PhD, Jean H. Thurston, MD, Michael Wong, MD, PhD, Kevin A. Yamada, MD, John Zempel, MD, PhD, Craig Zaidman, MD

In addition, several sections of faculty members are established for specialized research and teaching purposes. They include:

**Aging and Dementia Section:** John C. Morris, MD (section head), David A. Balota, PhD, Randall Bateman, MD, Carolyn Baum, PhD, Virginia D. Buckles, PhD, David Carr, MD, Mary A. Coats, BSN, Janet M. Duchek, PhD, Dorothy F. Edwards, PhD, James E. Galvin, MD, Alison M. Goate, DPhil, David M. Holtzman, MD (department chair), Terri L. Hosto, MSW, Eugene M. Johnson, Jr., PhD, Pamela Millsap, MSN, Anne Fagan Niven, PhD, Yvette I. Sheline, MD, B. Joy Snider, MD, PhD, Martha Storandt, PhD, Christy Tomlinson, MSN, PhD, Michael Wong, MD, PhD, Jian Xu, PhD, Kevin A. Yamada, MD

**Hope Center for Neurological Disorders:** Mark P. Goldberg, MD (director), Randall Bateman, MD, David Brody, MD, PhD, Janice E. Brunstrom, MD, Maurizio Corbetta, MD, Anne Cross, MD, Ralph G. Dacey Jr., MD, Anne Fagan Niven, PhD, James E. Galvin, MD, MSc, Jeffrey M. Gidday, PhD, Allison Goate, PhD, David I. Gottlieb, PhD, David M. Holtzman, MD (department chairman), Krzysztof Hyrc, PhD, Mark F. Jacquin, PhD, Eugene M. Johnson Jr., PhD, Jin-Moo Lee, MD, PhD, Jeffrey D. Milbrandt, MD, PhD, Jeffrey J. Neil, MD, PhD, Alexander Parsadanian, PhD, Joel S. Perlmuter, MD, Anneliese M. Schaefer, PhD, Christian Sheline, PhD, B. Joy Snider, MD, PhD, Liu-Lin Thio, MD, PhD, Michael Wong, MD, PhD, Jian Xu, PhD, Kevin A. Yamada, MD

**Cerebrovascular Disease Section:** Jin-Moo Lee, MD, PhD (section head), Mark P. Goldberg, MD (co-head), Janice E. Brunstrom, MD, David Carpenter, MD, Maurizio Corbetta, MD, Colin P. Derdeyn, MD, Michael N. Diringer, MD, Dorothy F. Edwards, PhD, Robert Fucetola, PhD, David M. Holtzman, MD (department chair), Jeffrey J. Neil, MD, PhD, Michael J. Noetzel, MD, Marcus E. Raichle, MD, Bradley L. Schlaggar, MD, PhD, Kevin A. Yamada, MD, Allyson Zazulia, MD

**Clinical Neurophysiology Section:** Muhammad T. Al-Lozi, MD, R. Edward Hogan, MD, (section heads), Anne M. Connolly, MD, Stephen P. Duntley, MD, Lawrence Eisenman, MD, PhD, Christina
Courses

First Year

Selectives

M04 5017-01 CLINICAL CORRELATIONS IN NEUROSCIENCE
Instructor: Allyson Zazulia, MD, 362-2560
Clinical faculty for this selective are members of the Departments of Neurology, Pediatric Neurology, Neurosurgery, Neuro ICU, Radiology, Pathology and Psychiatry. Students will shadow physicians, attend rounds and meet for seminars and demonstrations to discuss particular patient cases and research studies. Teaching Objective: to gain exposure to medical career options involving neuroscience.

Second Year
M35 632 DISEASES OF THE NERVOUS SYSTEM  
Instructor: Allyson Zazulia, MD, 362-2560  
The goal of this course is to provide an introduction to diseases of the central and peripheral nervous systems, including their clinical manifestations, pathology, pathophysiology and pharmacotherapy. The course includes reading assignments, lectures, laboratories, conferences and clinical presentations.

Third Year

M35 720 NEUROLOGY CLERKSHIP  
Instructor: Robert Naismith, MD, 362-7177  
A full-time, four-week clerkship is provided on the inpatient neurology services at Barnes-Jewish Hospital south. Patients are assigned to students who evaluate and follow them with the resident staff and discuss them regularly in conferences with the senior neurological staff. Students also work in the neurology clinic under staff supervision and attend a series of lectures on neurosurgical problems. The goal of this rotation is to gain expertise in the evaluation and treatment of patients with neurologic diseases.

Up to two students may elect to obtain their clerkship experience on the neurosurgery service. Up to two students may elect a two-week experience in either inpatient or outpatient pediatric neurology. Students participate in the neurology specialty clinics at St. Louis Children’s Hospital, working under the supervision of pediatric neurology fellows and senior staff.

M25 730 PHYSICAL MEDICINE AND REHABILITATION CLERKSHIP  
Instructor: Oksana Volshteyn, MD, 454-7757  
The clerkship in PM&R for third-year medical students provides an opportunity to gain basic knowledge and clinical skills in evaluation and management of a wide range of neurological and musculoskeletal diseases and conditions that require specialized rehabilitative medical and therapeutic care. Students spend two weeks on the Spinal Cord Injury Unit (SCI) and two weeks on Brain Injury (BI) and Stroke Unit at The Rehabilitation Institute of St. Louis. Students are expected to be a part of the rehabilitation team, follow two to three patients, participate in daily morning rounds, participate in performing consults, and attend team meetings and family conferences.

Students are required to attend several outpatient clinics such as SCI, BI, Amputee and Stroke. During the entire rotation, students work together with PM&R residents and fellows, and under direct guidance of the NeuroRehabilitation faculty. The usual duty hours are 7-7:30 a.m. to 5 p.m. on weekdays and 8 a.m. to noon on Saturdays. There is no night call.

Students are required to attend all PM&R curriculum lectures and conferences. On the first day of rotation, students meet with the PM&R program director to go over goals, objectives and schedules. Upon completion of the rotation, students are required to fill out the evaluation form to provide feedback regarding the rotation experience.

Fourth Year

Electives

M35 815 CONSULT NEUROLOGY  
Instructor: Robert Naismith, MD, 362-7177  
Location: Barnes-Jewish Hospital and Emergency Rooms  
Elective Contact: Michelle Aubuchon, 362-7177  
Other Information: Students should page neurology consult resident, 8 a.m. first day of elective. Obtain pager number in advance from Michelle Aubuchon, 362-7177.
Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will evaluate patients with neurological manifestations of medical, surgical and psychiatric diseases and participate in their care under the supervision of the consult resident and attending physician. The student also will attend weekly clinical conferences, including Neurology Grand Rounds.

Student time distribution: Inpatient 90%, Outpatient 5%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Single attending and resident
Patients seen/weekly: 10-15
On call/weekend responsibility: No call/weekends until noon Saturday

M35 816 INPATIENT NEUROLOGY SUBINTERNSHIP
Instructor: Robert Naismith, MD, 362-7177
Location: 11400 Barnes-Jewish Hospital
Elective Contact: Michelle Aubuchon, 362-7177
Other Information: Students should report to 11400 Barnes-Jewish Hospital, 7 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will function as subinterns on the inpatient neurology service under the supervision of the junior resident, the chief resident and the attending physicians. The student will also attend weekly clinical conferences. This elective would be a good option for Washington University students who are interested in a career in neurology, or would like additional neurology experience before their residency. It would also be good for visiting students interested in neurology who would like a closer look at our program.

Student time distribution: Inpatient 100%
Major teaching responsibility: Attending physicians, chief residents, junior resident
Patients seen/weekly: 6
On call/weekend responsibility: Every sixth night

M35 830 NEURO-ONCOLOGY
Instructor: David H. Gutmann, MD, PhD, 362-7379
Location: Suite C, 6th Floor CAM Building
Elective Contact: David H. Gutmann, MD, PhD, 362-7379
Other Information: Students should report to Suite C, 6th Floor CAM Building, 8:30 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Provide an outpatient-oriented combined pediatric and adult neuro-oncology experience for fourth-year medical students. (1) Attend multidisciplinary adult and pediatric neuro-oncology clinics and case conferences (tumor boards); (2) Attend adult and pediatric radiation oncology clinics; (3) Attend neuropathology brain tumor review; (4) Participate in subspecialty brain tumor clinics; (5) Attend monthly brain tumor research conferences.

Student time distribution: Outpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Team teaching in clinic
Patients seen/weekly: 50
On call/weekend responsibility: None
M35 851 CLINICAL ASPECTS OF AGING AND DEMENTIA
Instructors: John C. Morris, MD, and James E. Galvin, MD, MPH, 286-2683
Location: 4488 Forest Park Avenue (two-story brick building at intersection with Taylor)
Elective Contact: James E. Galvin, MD, MPH, 286-2547, or Mary Coats, MSN, 286-2683
Other Information: Contact Dr. Galvin prior to first day of elective to set up orientation. Students should report to the Memory and Aging Project, Suite 101, 4488 Forest Park Ave., 8:30 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 33 and 37.

This elective focuses on the distinction of dementia from healthy aging and on the differential diagnosis of dementia, including Alzheimer’s disease, dementia with Lewy bodies, frontotemporal dementias, cerebrovascular disorders and affective disorders. The student will gain proficiency in interviewing techniques and in the neurologic examination of the geriatric patient, be introduced to neuropsychological, neuropathological, radiologic and other biomedical procedures important in the diagnostic evaluation of the aged, and consider clinical trials of experimental agents used in memory disorders and practical aspects of the management of the demented patient and his or her family.

Student time distribution: Research and Clinical Patient Evaluation 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Single attending
Patients seen/weekly: 6-12
On call/weekend responsibility: None

M35 860 PEDIATRIC NEUROLOGY
Instructor: Michael Noetzel, MD, 454-6042
Location: 12th Floor, Suite 1260 Northwest Tower
Elective Contact: Kristy Bingaman (bingamank@neuro.wustl.edu), 454-6042
Other Information: Students report to Dr. Noetzel or designated pediatric neurology attending on the 12th floor, St. Louis Children’s Hospital (inpatient service) or 2nd Floor, Suite D, St. Louis Children’s Hospital (consultation service), 8:30 a.m. first day of elective.

Enrollment limit per period: 1 (Inpatient); 1 (Consultation Office Service)
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

We offer two senior electives: (1) On our Inpatient Elective the student participates as a full member of the neurology ward team and is directly responsible for a proportion of patients on the service under the direction of the senior pediatric neurology resident. The student may take night call every third or fourth night, during which time s/he is responsible for the medical care of the entire ward, as well as for emergency admissions under supervision of a pediatric resident. Formal teaching rounds with the attending pediatric neurologist are held three times a week, and informal teaching rounds are held daily with the senior residents. (2) On our Outpatient Elective the student will attend daily outpatient clinics, during which time s/he will be able to evaluate outpatient problems under faculty guidance. There are pediatric neurology clinics five days a week, in addition to teaching conferences. This elective allows students to see many new and return patients in a tutorial type of setting since patients are immediately reviewed with senior faculty.

Student time distribution: Inpatient rotation 80%, Outpatient rotation 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Inpatient: Single attending and senior resident, Outpatient: Multiple attendings
Patients seen/weekly: Inpatient: 5-9, Outpatient: 20-25
On call/weekend responsibility: Inpatient: Every fourth night; Outpatient: None

M35 861 NEUROLOGY/NEUROSURGERY ICU
Instructor: Michael Diringer, MD, 362-2999
Location: 10400B Barnes-Jewish Hospital
Elective Contact: Liz Vansickle, 362-2999
Other Information: Students report to 10400 ICU, 7:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will be integrated into the Critical Care Team that provides care in the Neurology/Neurosurgery ICU. Diseases frequently encountered include intracerebral hemorrhage, head trauma, subarachnoid hemorrhage, and stroke. The student will follow patients, participate in rounds and perform some procedures under supervision. Didactic sessions will be provided as conferences or lectures from the ICU attending.

Student time distribution: Inpatient 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Fellows and residents
Patients seen/weekly: 25
On call/weekend responsibility: Variable

M35 865 ADULT AND PEDIATRIC EPILEPSY
Instructors: Edward Hogan, MD, and Liu Lin Thio, MD, PhD, 454-4089
Location: 12th Floor Northwest Tower
Elective Contact: Kristy Middendorff, middendorffk@neuro.wustl.edu, 454-6120
Other Information: Students should meet on the 12th Floor, Northwest Tower, 9 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will learn how epileptologists diagnose and manage epilepsy in adults and children. They will learn how to use the history and physical exam and laboratory studies such as EEG, MRI, PET and SPECT to diagnose and manage patients with new onset epilepsy, established epilepsy and medically intractable epilepsy. They will become familiar with the medical management of epilepsy as well as the treatment options for medically intractable epilepsy including surgery, the vagus nerve stimulator and the ketogenic diet. They will also learn how to manage the co-morbid conditions that accompany epilepsy such as depression, behavioral problems, cognitive impairment, sleep disturbance and non-epileptic events. Students will accomplish these goals by attending epilepsy clinics and rounding on the inpatient epilepsy service with the epilepsy team at Barnes-Jewish Hospital and St. Louis Children's Hospital. They will attend the Adult Epilepsy Conference, the Pediatric Epilepsy Conference and Neurology Grand Rounds. Students will also have the opportunity to observe epilepsy surgery if they wish. Students will obtain a history and perform a physical exam on outpatients and inpatients and submit some notes for evaluation. They will also present one 15-30 minute talk on a topic relevant to epilepsy.

Student time distribution: Inpatient 40%, Outpatient 40%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attending faculty, fellows
Patients seen/weekly: 40
On call/weekend responsibility: None

M35 871 CLINICAL NEUROIMMUNOLOGY AND MULTIPLE SCLEROSIS
Instructor: Becky Parks, MD
Location: 3rd Floor McMillan Hospital Building
Elective Contact: Nanette Bladdick, 362-3307
Other Information: Contact Dr. Parks to arrange time to report on first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 5, 13, 17, 21, 29, 33, 37 and 41.
Students will have the opportunity to interview and examine new and follow-up patients with multiple sclerosis and other immunological conditions of the central nervous system at the neurology clinic at the CAM, as well as patients receiving infusions in the Minor Procedure Center. They will learn the differential diagnosis of and method of evaluating patients with, or thought to have, multiple sclerosis and will assist in filling out the necessary forms required for testing. They will learn about evaluation and treatment of spasticity, neurogenic bladder, fatigue, cognitive dysfunction and depression. Students will follow the daily progress of patients admitted to the hospital.

This elective will familiarize the student with the treatments for MS: immune-modulating, immunosuppressive and symptomatic. The student will also become very familiar with interpretation of abnormal brain MRI.

Third-year medical students rotating as part of a core rotation will be expected to attend the required conferences for third-year students. Students choosing this elective to gain additional experience in the field of Neurology will be expected to attend Neurology Grand Rounds on Friday morning. Students with particular interest in the basic aspects of neuro-immunology may be invited to attend a journal club with Dr. Anne Cross.

Student time distribution: Inpatient 10%, Outpatient 80%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Becky Parks, MD
Patients seen/weekly: 20
On call/weekend responsibility: None

M80 807 PHYSICAL MEDICINE AND REHABILITATION
Instructor: Neringa Juknis, MD, 454-7757, juknisn@neuro.wustl.edu
Location: Suite 2304, Rehabilitation Division, Neurology Department, 4444 Forest Park
Elective Contact: Donna Barbier, 454-7757, barbierd@neuro.wustl.edu
Other Information: Students report to Suite 2304, Rehabilitation Division, Neurology Department, 4444 Forest Park, 8 a.m. first day of elective.

Rotation location: The Rehabilitation Institute of St. Louis, 4455 Duncan Ave.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The elective is designed to provide the student with a broad introduction to the field of Physical Medicine and Rehabilitation. The major objective of this clinical elective is to achieve greater knowledge of the neurological and musculoskeletal diseases and their treatment, and gain understanding of basic principals of rehabilitation. The student will learn the clinical and rehabilitative care of patients with strokes, traumatic brain injury, spinal cord trauma and diseases, and limb amputations. Student will gain clinical skills in evaluating and management of functional impairments. Students will be expected to participate in daily rounds on inpatient rehabilitation units with the clinical care team, follow 3-5 patients, attend multidisciplinary team conferences and family meetings, attend outpatient rehabilitation clinics in spinal cord, stroke, traumatic brain injury and amputee. Teaching and supervision is provided by the physiatry and neurology faculty of the Division of Rehabilitation. Rehabilitation and neurology residents are involved in student teaching as well. Students are required to participate in didactic teaching conferences within the PM&R residency.

This rotation is particularly useful for students considering careers in rehabilitation, neurology, geriatrics, primary care, neurosurgery or any other field that will require experience in the evaluation and management of patients with physical impairment and disabilities.

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending faculty and residents
Patients seen/weekly: 20
On call/weekend responsibility: None

Research

(M35 900)

Randall Bateman, MD, 107 Biotechnology Center, 747-7066. Central nervous system protein metabolism in aging and dementia. This research elective will expose the student to translational research in the study of Alzheimer’s disease. The student will participate in multiple areas of the research including participant consent, enrollment and admission to a research hospital unit. Lumbar catheter placement and CSF sample collection will be demonstrated. The student will participate in sample analysis including processing for mass spectrometry quantitation, ELISA and western gel methods. Quantitation, analysis and modeling of the data will be taught in the context of data interpretation and study design.

David B. Clifford, MD, 747-8423. Clinical treatment of neurologic manifestations of AIDS, including peripheral neuropathy, AIDS dementia and progressive multifocal leukoencephalopathy. Quantitative virologic correlations are a particular area of concentration with current studies.

Maurizio Corbetta, MD, 4525 East Building, 362-7620. The elective will provide hands-on experience in using functional neuroimaging (PET and fMRI) to map regions of the human brain responsible for vision and attention, and to study recovery of function in patients with cognitive deficits (aphasia, neglect) and brain injury.

Anne H. Cross, MD, 3rd Floor McMillan Hospital Building, 362-3293. Understanding interactions of the immune system with the central nervous system as it relates to multiple sclerosis and other neuroimmunological disorders. Our goal is to understand how immune cells cross the blood-brain barrier and initiate the cascade of events leading to lesions of multiple sclerosis.

Mark P. Goldberg, MD, 201 Biotechnology Center (Hope Center for Neurological Disorders), 362-3258. Web-based neurology education. The student will select a topic and target audience, then develop web-based materials to teach the topic. Completed projects will appear on the Internet Stroke Center web site (www.strokecenter.org) or the education web site of the Department of Neurology. Target audiences may include medical students, patients or family members, or allied health professionals. Most topics will be related to stroke or neuro-imaging. Web development skills are welcome but NOT required.

Steven E. Petersen, PhD, 2108 East Building, 362-3319. This lab is interested in the functional localization of higher brain processes, particularly those processes related to language, memory and visual attention. Our main approach to these issues is the use of PET and fMRI activation, but we also study task performance in normal and selected patient populations.

Joel S. Perlmutter, MD, 2nd Floor East Building, 362-6026. Pathophysiology of movement disorders. The lab is primarily interested in etiology, pathophysiology and treatment of basal ganglia disorders. We have several studies of PD. We investigate mechanisms of action of deep brain stimulation, a dramatic new treatment. These studies combine PET, cognitive testing and quantified measures of movement. We also test new drugs that might rescue injured nigrostriatal neurons (a model of PD). For these, we use PET to measure dopamine pathways and also quantify motor behavior. We are also using PET to investigate cerebral mitochondrial metabolism in people with PD and HD to determine whether defects in oxidative phosphorylation contribute to the pathophysiology of these conditions. In people with PD, we develop and apply MR and PET methods for objective measures of disease severity. These measures enhance our genetic studies of PD.
We use PET to measure radioligand binding and sensorimotor processing in dystonia. We developed a new animal model of dystonia to investigate pharmacologic and physiologic changes. We use PET to investigate drug-mediated pathways in the brain and parse out the effects of selective dopaminergic agonists.

Finally, we investigate the relationship between blood flow responses in the brain with electrophysiological responses done in the same animals. These animal studies provide insights into the basic mechanisms of many of the studies that we subsequently apply to humans.

Marcus E. Raichle, MD, Neuro Imaging Laboratory, 2nd Floor East Building, 362-6907. In vivo brain hemodynamic, metabolic and functional studies of human cognition and emotion using cyclotron-produced isotopes and emission tomography (PET) as well as functional magnetic resonance imaging (fMRI) in humans. See also Steven E. Petersen, PhD.

B. Joy Snider, MD, PhD, 225 Biotechnology Center, 747-2107. Protein degradation and calcium homeostasis in cellular models of neurodegenerative disorders. We study regulation and dysfunction of the ubiquitin-proteasome system in cultured cells, including primary neuronal cultures. A second set of projects is aimed at elucidating the role of intracellular calcium homeostasis in neuronal dysfunction and death.

Kel Yamada, MD, 204 Biotechnology Center, 362-3533, 454-6120. Research on mechanisms modulating synaptic transmission in the central nervous system using electrophysiological techniques in neuronal cell cultures, in brain slices and in live rodents. Studies are relevant to epilepsy, neonatal brain injury and stroke.

Faculty

DAVID MICHAEL HOLTZMAN, MD Head of the Department of Neurology, Andrew B. and Gretchen P. Jones Professor of Neurology
ANINDA BHAT ACHARYA, MD Instructor in Clinical Neurology
MUHAMMAD TAHER AL-LOZI, MD Professor of Neurology
C. ROBERT ALMLI, PHD Associate Professor of Neurology
DENIS IAN ALTMAN, MBBCH Associate Professor of Clinical Neurology
LIZETTE ALVAREZ-MONTERO, MD Instructor in Clinical Neurology
BEAU MARK ANCES, MD, PHD Assistant Professor of Neurology
SYLVIA AWADALLA, MD Associate Professor of Neurology
ROBERT H BALOH, MD, PHD Assistant Professor of Neurology
DAVID ANTHONY BALOTA, PHD Professor of Neurology
JANET MARIE BALOTA, PHD Assistant Professor of Neurology
RANDALL JOHN BATEMAN, MD, BS Assistant Professor of Neurology
M. CAROLYN BAUM, PHD Professor of Neurology (Occupational Therapy)
DARIO BELTRAN, MD Instructor in Neurology
MAX PRELY BENZAQUEN Instructor in Clinical Neurology
CHRISTINE R. BERG, PHD Instructor in Neurology
LEONARD BERG, MD Professor Emeritus of Neurology
MARY ELLEN BERTRAND, MD Assistant Professor of Neurology
ALEXANDER W DROMERICK, MD Adjunct Associate Professor of Neurology
STEPHEN P DUNTLEY, MD Professor of Neurology
GAMMON MARIE EARHART, PHD Assistant Professor of Neurology
LAWRENCE N EISENMAN, MD, PHD Assistant Professor of Neurology
SVEN GUSTAV ELIASSON, MD, PHD Professor Emeritus of Neurology
JUAN ESCANDON, MD Assistant Professor of Clinical Neurology
JULAINE MARIE FLORENCE, DPT Research Associate Professor of Neurology
ANDRIA L FORD, MD Instructor in Neurology
ERIN R FOSTER Instructor in Neurology
BENNETT DAVID FRANK, MD, PHD Instructor in Clinical Neurology
ROBERT P. FUCETOLA, PHD Associate Professor of Neurology
JAMES E. GALVIN, MD, MS Associate Professor of Neurology
JUDITH REBECCA GELBER, DPT Instructor in Neurology
NUPUR GHOSHAL, MD, PHD Instructor in Neurology
ALISON GOATE, PHD Professor of Neurology
MARK PAUL GOLDBERG, MD Professor of Neurology
JAMES M GOLDRING, MD, PHD Instructor in Clinical Neurology
PAUL T GOLUMBEK, MD, PHD Assistant Professor of Neurology
DAVID B GRAY, PHD Associate Professor of Neurology
ROYAL GENE GRUENEICH, PHD Assistant Professor of Clinical Neurology
CHRISTINA A. GURNETT, MD, PHD Assistant Professor of Neurology
DAVID H GUTMANN, MD, PHD Donald O. Schnuck Family Professor of Neurology
JOSEPH HANAWAY, MD Assistant Professor of Clinical Neurology
WILLIAM B HARDIN, JR, MD, BA Assistant Professor Emeritus of Clinical Neurology
MATTHEW B HARMS, MD Assistant Professor of Neurology
J MICHAEL HATLELID, MD Associate Professor of Clinical Neurology
TAMARA G HERSHEY, PHD Associate Professor of Neurology
ROBERT EDWARD HOGAN, III, MD Associate Professor of Neurology
HOLLY H HOLLINGSWORTH, PHD Research Associate Professor of Neurology
TERRI L HOSTO Research Instructor in Neurology
CHUNG HSU, MD, PHD Adjunct Professor of Neurology
DEVYANI M. HUNT, MD Assistant Professor of Neurology
THY N HUSKEY, MD Assistant Professor of Neurology
KRZYSZTOF L HYRC, PHD Research Assistant Professor of Neurology
TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Neurology
PAMELA C. JACKSON Research Instructor in Neurology
SINDHU SAJI JACOB Assistant Professor of Neurology (Pending Executive Faculty Approval)
MARK F JACQUIN, PHD Professor of Neurology
EUGENE MALCOLM JOHNSON, JR, PHD Professor of Neurology
NERINGA JUKNIS, MD Assistant Professor of Neurology
JENNIFER S STITH, PHD  Assistant Professor of Neurology
MARTHA STORANDT, PHD  Professor of Neurology (Psychology)
RAEL D SUNDY, MD  Assistant Professor of Neurology
IN SOOK SUNWOO, MD  Instructor Emerita in Neurology
SANDRA L TATE, MD  Instructor in Clinical Neurology
W. THOMAS THACH, JR, MD  Professor of Neurology
KWEE L THIO, MD, PHD  Assistant Professor of Neurology
JEAN HOLOWACH THURSTON, MD  Professor Emeritus of Neurology (Neurochemistry)
JEFFREY B. TITUS, PHD  Instructor in Clinical Neurology
CHRISTY MARIE TOMLINSON  Research Instructor in Neurology
NORMAN EDWIN TREVATHAN, III, MD  Adjunct Professor of Neurology
RENEE BAILEY VAN STavern, MD  Associate Professor of Neurology
EDWARD F VASTOLA, MD  Professor Emeritus of Neurology
TOM O VIDEEN, PHD  Research Professor of Neurology
OKSANA VOLSHTEYN, MD  Associate Professor of Neurology
BETH ANN WARD, MD  Assistant Professor of Neurology
ANDREW M. WAYNE, MD  Instructor in Clinical Neurology
LING WEI, MD  Adjunct Research Assistant Professor of Neurology
CONRAD CHRISTIA WEIHL, MD, PHD  Assistant Professor of Neurology
JUDITH L. WEISENBERG, MD  Assistant Professor of Neurology
HOWARD I WEISS, MD  Assistant Professor of Clinical Neurology
STUART WEISS, MD  Professor of Clinical Neurology
RICHARD D WETZEL, PHD  Professor of Neurology
MICHAEL WONG, MD, PHD  Associate Professor of Neurology
THOMAS A WOOLSEY, MD  George H and Ethel R Bishop Scholar in Neuroscience in Neurology, Professor of Experimental Neurology
ALLISON WRIGHT WILLIS, MD  Assistant Professor of Neurology (Pending Executive Faculty Approval)
GREGORY FREDERI WU, MD, PHD  Assistant Professor of Neurology
CHENGJIE XIONG, PHD  Research Associate Professor of Neurology
KELVIN A YAMADA, MD  Associate Professor of Neurology
CRAIG MITCHELL ZAIMDAN, MD  Instructor in Neurology
ALLYSON R ZAZULIA, MD  Associate Professor of Neurology
JOHN M ZEMPEL, MD, PHD  Assistant Professor of Neurology
GREGORY JOSEPH ZIPFEL, MD  Assistant Professor of Neurology

Department's Web Site
http://www.neuro.wustl.edu/
Department of Obstetrics and Gynecology

The Department of Obstetrics and Gynecology has clinical teaching services located at Barnes-Jewish Hospital and Missouri Baptist Medical Center under the following director:

George A. Macones, MD, Professor and Head, Department of Obstetrics and Gynecology

In addition, for the purposes of teaching, clinical care and research, the Department of Obstetrics and Gynecology is divided into subspecialty divisions under the following directors:

- **Gynecologic Oncology:** David G. Mutch, MD
- **Maternal-Fetal Medicine:** David M. Stamilio, MD
- **Reproductive Endocrinology and Infertility:** Randall R. Odem, MD
- **Gynecology:** Jeffrey F. Peipert, MD, MPH
- **Uro-Gynecology:** L. Lewis Wall, MD, PhD
- **Research:** Kelle H. Moley, MD (Basic Research), Jeffrey F. Peipert, MD, MPH (Clinical Research)
- **Medical Education:** Rebecca P. McAlister, MD

Instruction in Obstetrics and Gynecology is provided during all four years of the medical curriculum, beginning with an introductory course in the first year as a component of Clinical Medicine. Teaching in the second year is designed to correlate basic science with the physiologic basis of normal pregnancy and parturition, reproductive biology, infertility and reproductive endocrinology and gynecologic malignancies. All third-year medical students participate in a six-week clinical clerkship in Obstetrics & Gynecology. This is divided into three two-week components of outpatient OB/GYN, inpatient obstetrics and inpatient gynecology. In the fourth year, students may elect a subinternship in the listed clinical subspecialties or a research elective.

Courses

**First Year**

As a component of the course in Clinical Medicine offered by the Department of Medicine, the student is introduced to the essentials in the medical history and examination for the gynecological evaluation of the adult woman patient.

**Second Year**

Second-year students are introduced to obstetrics and gynecology with lectures in reproductive biology that apply and expand upon pelvic anatomy and gynecologic and obstetric physiologic principles taught in the first year.

**M45 635B  OBSTETRICS AND GYNECOLOGY**
Instructor: D. Michael Nelson, MD, PhD, 362-1016
The obstetrical component of this course emphasizes the physiologic basis of normal pregnancy, parturition, labor and delivery, and adaptations of other organ systems to pregnancy. Pathophysiology of pregnancy, pregnancy complications and deviations from normal labor will also be introduced. The gynecologic component of the course reviews embryology and genetics of practical use for clinicians. This provides a foundation to overview adolescent gynecology, amenorrhea, abnormal uterine bleeding, reproductive endocrinology, infertility, menopause, surgical anatomy, and diagnosis and treatment of gynecologic neoplasms.

**Third Year**

**M45 730 OB/GYN CLERKSHIP**
Comprehensive study of the reproductive health needs of women is the focus of the curriculum. Opportunity for supervised active participation is emphasized in outpatient clinics, routine and high-risk obstetrics, care of the infertile and oncology patient (including surgical case management). Students are assigned as clinical clerks to rotations at Barnes-Jewish Hospital and area clinics. Faculty, house staff and nurse practitioners provide teaching for this rotation. Students participate in all teaching conferences offered by the Department, and core curriculum topics are presented in a seminar series and in small group sessions with faculty preceptors.

Fourth Year

Fourth-year students wishing to take an externship or research elective can choose from a variety of courses.

Electives

M45 804 OB/GYN OUTPATIENT CARE SUBINTERNSHIP
Instructor: Andrea L.P. Stephens, MD, 362-4211
Location: Room 210, Maternity Hospital, Barnes-Jewish Hospital, South Campus
Elective Contact: Patti Sasse, 362-1016
Other Information: Students should call Dr. Stephens’ office at 362-4211, 9 a.m. first day of elective for instructions.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This experience is designed to acquaint the student with the diagnosis and care of outpatients. While primarily located in the Gynecology Clinic and Outpatient Surgery unit, it should provide a more general overview of how to evaluate, diagnose and provide definitive treatment (both medical and surgical) without hospital admission. The subintern will spend three to four half days weekly participating in outpatient surgery under the supervision of attendings and house staff, and five to six additional half days in clinic and private offices. Students will receive a better understanding of mechanisms utilized in providing surgical care to outpatients and an introduction to both the style and substance of office care.

Student time distribution: Outpatient 100%; Primary Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 5-10/day
On call/weekend responsibility: None

M45 810 OB-GYN ENDOCRINOLOGY — INFERTILITY SUBINTERNSHIP
Instructors: Randall Odem, MD; Arnold Bullock, MD; Emily Jungheim, MD; Susan Lanzendorf, PhD; Kelle Moley, MD; and Valerie Ratts, MD, 286-2421
Location: 4444 Forest Park Avenue, Suite 3100
Elective Contact: Randall Odem, MD, 286-2421
Other Information: Students report to Dr. Odem first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The subintern will participate (in the office and hospital) in the study and treatment of women with reproductive endocrine disorders and infertility. S/he will attend and present in conferences, attend surgery, observe assisted reproductive technology procedures, have assigned reading and be an integral part of the reproductive endocrine service. Opportunities for clinical research projects in reproductive endocrinology are also available.
Student time distribution: Inpatient 10%, Outpatient 75%, Conferences/Lectures 15%; Primary Care 10%, Subspecialty Care 90%
Major teaching responsibility: Attendings, fellow and residents
Patients seen/weekly: 100
On call/weekend responsibility: None

M45 825 GYNECOLOGY ACROSS A WOMAN’S LIFE SPAN
Instructor: Diane Merritt, MD, 747-1510
Location: CAM Suite 13C and Missouri Baptist Doctor’s Building D, Suite 450
Elective Contact: E-mail Dr. Merritt at merrittd@wustl.edu
Other Information: Suggested reading and schedule may be obtained prior to the start of the rotation. Contact Dr. Merritt by e-mail (merrittd@wustl.edu).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical experience is designed to acquaint the student with outpatient gynecology as it impacts the patient at various times in her life span (infancy, adolescence, reproductive years, peri- and post-menopause). Sexuality and sexual dysfunction, congenital anomalies of the reproductive tract, contraception, fertility, menopause and hormone therapy, pediatric and adolescent gynecology, and outpatient management are the focus of this elective. (Obstetrics is not.) The student will spend five half-days a week in clinic seeing patients with Dr. Merritt. The student will also attend departmental conferences and be responsible for independent reading assignments in outpatient gynecology.

Student time distribution: Outpatient 100%; Subspecialty Care-Gyn 100%
Major teaching responsibility: Attending and independent reading
Patients seen/weekly: 20-30 per clinic day
On call/weekend responsibility: None required

M45 830 GYN ONCOLOGY SUBINTERNSHIP
Instructor: David Mutch, MD, 362-3181
Location: Maternity Hospital, Barnes-Jewish Hospital, South Campus
Elective Contact: David Mutch, MD, 362-3181
Other Information: Students report to Dr. Mutch, 4th Floor Maternity Hospital, 9 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The subintern will take part in the workup of tumor patients prior to surgery and/or radiotherapy, assist in pelvic operations, help render perioperative care, and review pathology specimens and slides. S/he will participate in GYN Tumor Clinic sessions, make hospital rounds with house staff, consultations and attend OB-GYN conferences. Opportunities for clinical or basic research project in gynecologic malignancy are also available.

Student time distribution: Inpatient 70%, Outpatient 20%, Conferences/Lectures 10%; Primary Care 20%, Subspecialty Care 80%
Major teaching responsibility: Attendings, fellows and residents
Patients seen/weekly: 40
On call/weekend responsibility: Weekend rounds

M45 840 MATERNAL-FETAL MEDICINE SUBINTERNSHIP
Instructor: Gil Gross, MD, 747-1336
Location: Maternity Hospital, Barnes-Jewish Hospital, South Campus
Elective Contact: Jennifer Haring, 747-1347
Other Information: Students report to Antepartum Service (ward 5300), 7:30 a.m. first Monday of
elective. If the first day is a holiday, call ahead to Dr. Gross for instructions.

Enrollment limit per period: 1, unless cleared by coursemaster.
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Subinterns will participate in the antepartum management of high-risk hospitalized patients as well as complicated outpatients through the High-Risk Obstetrics Clinics and the Center for Diabetes in Pregnancy. Examples include diabetes, hypertension, renal disease, hematologic abnormalities, preterm labor and others. Antepartum evaluation and monitoring of the pregnant woman and her fetus are emphasized. Supervision is by the antepartum chief resident and a maternal-fetal medicine faculty member. An opportunity for intense labor and delivery experience with the Night Team is also encouraged. Students will spend time observing both genetic counseling and diagnostic obstetric ultrasound examinations. The student will prepare a brief talk on a topic of his/her interest during the course of the rotation.

Student time distribution: Inpatient 60%, Outpatient 35%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: Inpatient: 20; Outpatient: 20
On call/weekend responsibility: Overnight/weekend call optional — student self-scheduled

**M45 843 MATERNAL-FETAL MED OUTPATIENT CARE SUBINTERNSHIP**
Instructor: Gil Gross, MD, 747-1347
Location: 5th Floor, Center for Advanced Medicine, Ob/Gyn office
Elective Contact: Jennifer Haring, 747-1347
Other Information: Students report to the 5th Floor, Center for Advanced Medicine, Ob/Gyn office, 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will see a variety of high-risk obstetrical patients in the out patient setting. The student will evaluate patients from different backgrounds, including prepregnancy consultations, prenatal care consultations and initial visits. The student will also see return patients to experience the continuity of prenatal care. Students will participate in antenatal testing and learn some basic ultrasonography skills. Students will spend time with geneticists and will experience counseling for a variety of genetic conditions. They will spend time on the ultrasound unit(s) observing numerous high-resolution scans.

The student will be responsible for one presentation to be given to the OB teams at the end of the rotation. Students are provided independent study time to put together the presentation, which should be in PowerPoint and on a topic of their choice, inspired by a patient-related clinical condition that piqued their interest during the block. The student will have the option to take overnight call, or call in the Pregnancy Assessment Center, to gain more hands-on experience in patient obstetrics. This is voluntary and not a requisite.

Student time distribution: Inpatient 5%, Outpatient 85%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Maternal-Fetal Medicine Attendings
Patients seen/weekly: 40
On call/weekend responsibility: Not required, overnight call available to enhance experience

**M45 856 OB/GYN ULTRASOUND-GENETICS**
Instructor: Jeffrey Dicke, MD, 454-8135
Location: The Women’s Health Center, 5th floor, Center for Advanced Medicine and The Center for Women’s Wellness, 4th floor, Building D, Missouri Baptist Medical Center
Elective Contact: Jeffrey Dicke, MD, 454-8135
Other Information: Students should contact Dr. Dicke one week prior to first day of elective.
Enrollment limit per period: 1
Valid start weeks for 2-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41 and 43.

The student will learn the principles and techniques of noninvasive screening for fetal disorders, observe the performance of invasive prenatal diagnostic procedures, and learn the standards and guidelines for performance of the antepartum obstetrical ultrasound examination and female pelvic examination. The student will also gain experience in pedigree analysis and familial risk factor assessment working with genetic counselors. Opportunities for participation in clinical research are also available.

Student time distribution: Outpatient 90%, Conferences/Lectures 10%; Primary Care 30%, Subspecialty Care 70%
Major teaching responsibility: The attendings of the ultrasound section
Patients seen/weekly: 40
On call/weekend responsibility: None

M10 823 OBSTETRICAL ANESTHESIA
Instructor: Swarup Varaday, MD, 362-6252
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Swarup Varaday, MD, 362-6252
Other Information: Students should report to 5400 Labor and Delivery, 7 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 2 or 4-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41 and 43.

The medical students will learn the different analgesia/anesthetic options for the labor patient. They will also learn how the physiological adaptations of pregnancy influence anesthetic management. They will be actively involved in the parturient’s management, i.e., starting an IV, placement of spinal, epidural or CSE (combined spinal epidural) anesthetics. They will also attend the OB anesthesia conferences and interview patients in labor (with an OB anesthesia attending).

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending, Senior Resident
Patients seen/weekly: 20
On call/weekend responsibility: None (optional)

M65 833 SPECIAL TOPICS IN REPRODUCTIVE HEALTH
Instructor: Tessa Madden, MD, 747-6495
Location: Division of Clinical Research, 4533 Clayton Ave., 2nd floor
Elective Contact: Tessa Madden, MD, 747-6495
Other Information: Students should contact Dr. Madden a week prior to the beginning of the rotation, maddent@wustl.edu

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will attend a variety of outpatient clinics to interact with patients seeking different reproductive health services. These clinics include family planning and abortion services at Planned Parenthood, the County STD clinic, Adolescent and Pediatric Gynecology, Child Sexual Abuse, Teen OB, Ultrasound and Prenatal Diagnosis and Postmenopausal Gynecology clinic. Clinical experiences will be ambulatory. Conferences include Obstetrics and Gynecology Grand Rounds and Family Planning Journal Club. Reading will include relevant articles and chapters. Students will be responsible for a brief presentation on a reproductive health topic at the conclusion of the course. Opportunities for clinical research in contraception are also available.
Research

(M45 900)

Jenifer E. Allsworth, PhD, Jeffrey F. Peipert, MD, PhD, Gina M. Secura, PhD, 4533 Clayton Avenue, 747-6434. Reproductive epidemiology. In this four-week elective, students will have the opportunity to immerse themselves in an epidemiologic study examining an obstetric or gynecologic outcome. Dr. Allsworth’s research focuses on risk factors for the acquisition of sexually transmitted infections and how social factors, including race/ethnicity, poverty, discrimination and violence impact women’s reproductive health. Dr. Peipert’s research focuses on family planning, long-acting reversible contraception, sexually transmitted infections and the promotion of dual contraceptive use. Dr. Secura’s research focuses on HIV and STD risk among young men and women and contraception among women. The Division has many ongoing clinical research studies for potential collaboration, include the Contraceptive CHOICE Project. The CHOICE Project is a prospective cohort study of 10,000 women in the St. Louis region that is seeking to reduce unintended pregnancy rates in the region through the promotion of long-acting reversible contraception as well as describe method related satisfaction, compliance and continuation rates for long- and short-acting methods. This rotation is designed for the student planning a career in academic medicine as a physician-scientist and one who is interested in considering pursuing clinical research. Prior to signing up for this course, the student must contact Dr. Allsworth to discuss the schedule and expectations of the rotation.

Irving Boime, PhD, 319-320 McDonnell Medical Sciences Building, 362-2556. Our laboratory is concerned with the biosynthesis of the gonadotropin hormones in the placenta and pituitary. Specifically, these interests can be divided into two general categories: (1) Structure-function studies that deal with the determinants for secretion, sorting and biological activity of these hormones. Such work includes the design of analogs for potential clinical use. (2) Factors governing expression of several placental and pituitary hormone genes. The approaches to these problems involve the use of site-directed mutagenesis and transgenic animals.

Kelle H. Moley, MD, Indira Mysorekar, PhD, and Joan Riley, PhD, 780 McDonnell Medical Sciences Building, 362-2022. In this six-week elective, students will have the opportunity to immerse themselves in bench research in reproductive science. The three PIs willing to take students are Kelle Moley, MD, Indira Mysorekar, PhD, and Joan Riley, PhD. Dr. Moley’s research focuses on mammalian gametes, fertilization, preimplantation development and implantation. Dr. Mysorekar’s research concentrates on murine and human bladder epithelial cell biology, changes to cell homeostasis with urinary tract infection, and the idea that an embryonic cell niche exists within the bladder epithelia. Dr. Riley’s research centers around the immunoregulatory processes of mammalian fetomaternal interaction. The main criteria for this rotation is that the student must have prior experience as an undergraduate or postgraduate in a laboratory, not including class work. This rotation is designed for the student planning a career in academic medicine as a physician-scientist and one who is interested in considering reproductive science as a field. Prior to signing up for this course, the student must contact Dr. Moley to discuss the schedule and expectations of the rotation.

Faculty

GEORGE ANDREW MACONES, MD Mitchell and Elaine Yanow Professor of Obstetrics and Gynecology, Head of the Department of Obstetrics and Gynecology

JENIFER ELIZABE ALLSWORTH, PHD Assistant Professor of Obstetrics and Gynecology
JOHN K APPELBAUM, MD Assistant Professor of Clinical Obstetrics and Gynecology
MARGARET ELIZAB BAUM, MD, BA Instructor in Clinical Obstetrics and Gynecology
ROBERT L BECKER, MD Assistant Professor of Clinical Obstetrics and Gynecology
JAMES E BELCHER, MD Instructor in Clinical Obstetrics and Gynecology
JOE E BELEW, MD Associate Professor of Clinical Obstetrics and Gynecology
LISA MARIE BERNHARD, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
SCOTT W BIEST, MD Assistant Professor of Clinical Obstetrics and Gynecology
JEFFREY D BLOSS Adjunct Associate Professor of Obstetrics and Gynecology
IRVING BOIME, PHD Professor of Reproductive Biology in Obstetrics and Gynecology
KATHRYN L BOTNEY, MD Instructor in Clinical Obstetrics and Gynecology
LAWRENCE V BOVERI, MD Instructor in Clinical Obstetrics and Gynecology
JESSICA NAOMI BOWERS Instructor in Clinical Obstetrics and Gynecology
IGOR BRONDZ, MD Instructor in Clinical Obstetrics and Gynecology
ROBERT J BROWN, MD Assistant Professor of Clinical Obstetrics and Gynecology
BRUCE L BRYAN, MD Assistant Professor of Clinical Obstetrics and Gynecology
ROBERT BURSTEIN, MD Professor Emeritus of Clinical Obstetrics and Gynecology
ALISON GALE CAHILL, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
H. MARVIN CAMEL, MD Professor Emeritus of Obstetrics and Gynecology
ARTHUR L CASEY, MD Instructor in Clinical Obstetrics and Gynecology
RONALD J CHOD, MD Adjunct Associate Professor of Obstetrics and Gynecology
ROBERT S COHEN, MD Assistant Professor Emeritus of Clinical Obstetrics and Gynecology
VICENTE M COLON-ALCARAZ, MD Assistant Professor of Clinical Obstetrics and Gynecology
ERIC S COLTON, MD Instructor in Clinical Obstetrics and Gynecology
JAMES P CRANE, MD Professor of Obstetrics and Gynecology
ROBERT D CRIST Instructor in Clinical Obstetrics and Gynecology
VERONICA LYNN CROSS Instructor in Clinical Obstetrics and Gynecology
THOMAS ALLEN DAVIS, MD Associate Professor of Obstetrics and Gynecology
CATHERINE L DEAN, MD Assistant Professor of Clinical Obstetrics and Gynecology
MICHELLE R DEVERA, MD Instructor in Clinical Obstetrics and Gynecology
JEFFREY M DICKE, MD Associate Professor of Obstetrics and Gynecology
RUSSELL B DIETERICH, MD Instructor in Clinical Obstetrics and Gynecology
LAKSHMI VIJAYA DUNDOO Instructor in Clinical Obstetrics and Gynecology
DAVID LOUIS EISENBERG, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
JOSIAH O. EKUNNO, MD Instructor in Clinical Obstetrics and Gynecology
RENEE D EWING, MD Instructor in Clinical Obstetrics and Gynecology
CATHLEEN RAE FARIS, MD Assistant Professor of Clinical Obstetrics and Gynecology
MARSHA NICOLE FISHER, MD Instructor in Clinical Obstetrics and Gynecology
SHANON ALEX FORSETER Instructor in Clinical Obstetrics and Gynecology
SEYMOUR MICHAEL FREIMAN, MD Professor Emeritus of Clinical Obstetrics and Gynecology
ERNST R FRIEDRICH, MD Professor Emeritus of Obstetrics and Gynecology
ANDREW E GALAKATOS, MD Professor of Clinical Obstetrics and Gynecology
IRA CLYDE GALL, MD Professor Emeritus of Clinical Obstetrics and Gynecology
ROBERT S GOELL, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology
GORDON GOLDMAN, MD Instructor in Clinical Obstetrics and Gynecology
PAUL JOSEPH GOODFELLOW, PHD Professor of Obstetrics and Gynecology
DIANA LEE GRAY, MD Professor of Obstetrics and Gynecology
MARGARET ROSANN GRAY-SWAIN Instructor in Clinical Obstetrics and Gynecology
PERRY W GRIGSBY, MD, MS Professor of Obstetrics and Gynecology
ANN MARIE GRONOWSKI, PHD Associate Professor of Obstetrics and Gynecology
GILAD A GROSS, MD Associate Professor of Obstetrics and Gynecology
C. RICHARD GULICK, MD Assistant Professor of Clinical Obstetrics and Gynecology
HOOSNA HAQUE, MD Instructor in Clinical Obstetrics and Gynecology
RICHARD ALAN HARTMAN, MD Associate Professor of Clinical Obstetrics and Gynecology
GODOFREDO M HERZOG, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology
KATHLEEN M HOGAN, MD Instructor in Clinical Obstetrics and Gynecology
ROBERT FRANKLYN HOLLOWAY, JR Instructor in Clinical Obstetrics and Gynecology
WILLIAM EDWARD HOUCK, MD Instructor in Clinical Obstetrics and Gynecology
DAVID H HUA Instructor in Clinical Obstetrics and Gynecology
PHYLLIS C HUETTNER, MD Associate Professor of Obstetrics and Gynecology
LAURA HULBERT, MD Instructor in Clinical Obstetrics and Gynecology
SAJI JACOB, MD Instructor in Clinical Obstetrics and Gynecology
MICHAEL K JOHNSON, MD Instructor in Clinical Obstetrics and Gynecology
SANDY LYNN JOST Adjunct Instructor in Obstetrics and Gynecology
MARK J JOSTES, MD Assistant Professor of Clinical Obstetrics and Gynecology
EMILY SUSAN JUNGHEIM, MD Instructor in Obstetrics and Gynecology
SARAH LYNN KELLER, MD Assistant Professor of Obstetrics and Gynecology
ASKO I KIVIKOSKI, MD, D SC Associate Professor Emeritus of Obstetrics and Gynecology
Laurie Klabi, MD Instructor in Clinical Obstetrics and Gynecology
JACOB KLEIN, MD Professor of Clinical Obstetrics and Gynecology
CLAUDIA KRASNOFF, MD Instructor in Clinical Obstetrics and Gynecology
FREDERICK THIER KRAUS, MD Adjunct Professor of Obstetrics and Gynecology
CHRISTINE MARIE LADD, MD Instructor in Clinical Obstetrics and Gynecology
TONE C LAM, MD Instructor in Clinical Obstetrics and Gynecology
SUSAN ELIZABETH LANZENDORF, PHD, AS, AA Associate Professor of Obstetrics and Gynecology
PATRICIA LAZAROFF Adjunct Instructor in Obstetrics and Gynecology
GARY G LEE, DOST Instructor in Clinical Obstetrics and Gynecology
FANEE J LEKKAS, MD Instructor in Clinical Obstetrics and Gynecology
EDWARD S LEVY, MD Instructor in Clinical Obstetrics and Gynecology
RYAN ERIC LONGMAN, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
TESSA E MADDEN, MD Assistant Professor of Obstetrics and Gynecology
MARIA MAMINTA-STREIFF  Instructor in Clinical Obstetrics and Gynecology
MARY ELIZABETH MANI  Instructor in Clinical Obstetrics and Gynecology
MELISSA ANN MARSHALL  Instructor in Clinical Obstetrics and Gynecology
CAROLYN MARIE MARTIN, MD  Assistant Professor of Clinical Obstetrics and Gynecology
JOHN BARLOW MARTIN, MD  Associate Professor Emeritus of Clinical Obstetrics and Gynecology
LESLIE STEWART MASSAD, MD  Professor of Obstetrics and Gynecology
KATHERINE JAHNI MATHEWS, MD, MA  Associate Professor of Obstetrics and Gynecology
REBECCA P MCALESTER, MD  Professor of Obstetrics and Gynecology
MARGARET MCCARTHY  Instructor in Clinical Obstetrics and Gynecology
DANIEL S MCDONALD, MD  Instructor in Clinical Obstetrics and Gynecology
DENISE ANDREA MECKLER, MD  Instructor in Clinical Obstetrics and Gynecology
THEODORE MERRIMS, MD  Instructor Emeritus in Clinical Obstetrics and Gynecology
DIANE F MERRITT, MD  Professor of Obstetrics and Gynecology
JERRY N MIDDLETON, MD  Instructor Emeritus in Clinical Obstetrics and Gynecology
TEHTON S MISTRY, MD  Instructor in Clinical Obstetrics and Gynecology
KELLE HARBERT MOLEY, MD  James Crane Professor of Obstetrics and Gynecology, Vice Chairman for Basic Research, Department of Obstetrics and Gynecology
ALVARO MORA, MD  Instructor in Clinical Obstetrics and Gynecology
JEFFREY STUART MORMOL  Instructor in Clinical Obstetrics and Gynecology
NATHANIEL H MURDOCK, MD  Associate Professor of Clinical Obstetrics and Gynecology
HELEN I-YUN MUSSEMANN, MD  Instructor in Clinical Obstetrics and Gynecology
DAVID G MUTH, MD  Ira C and Judith Gall Professor of Obstetrics and Gynecology
INDIRA U MYSOREKAR, PHD  Assistant Professor of Obstetrics and Gynecology
DONALD MICHAEL NELSON, MD, PHD  Virginia Lang Professor of Obstetrics and Gynecology
MARLYNN NUNEZ  Instructor in Clinical Obstetrics and Gynecology
OROMA BEATRICE NWANODI  Instructor in Clinical Obstetrics and Gynecology
RANDALL ODEM, MD  Professor of Obstetrics and Gynecology
ANTHONY O ODIBO, MD  Associate Professor of Obstetrics and Gynecology
ALLEN S PALMER, DOST  Instructor in Clinical Obstetrics and Gynecology
LAURA ANNE PARKS, MD, BS  Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
MEERA RAMAN PATEL, MD  Instructor in Clinical Obstetrics and Gynecology
MICHAEL J PAUL, MD  Associate Professor of Obstetrics and Gynecology
ANTHONY CRAIG PEARLSTONE, MD  Instructor in Clinical Obstetrics and Gynecology
JEFFREY F PEIPERT, MD, PHD  Vice Chairman of Clinical Research, Department of Obstetrics and Gynecology, Robert J. Terry Professor of Obstetrics and Gynecology
JOHN DAVID PFEIFFER, MD, PHD  Professor of Obstetrics and Gynecology
TIMOTHY CHARLES PHILPOTT, MD  Assistant Professor of Clinical Obstetrics and Gynecology
AARON JUAN PILE, MD  Instructor in Clinical Obstetrics and Gynecology
JORGE PINEDA, MD  Assistant Professor of Clinical Obstetrics and Gynecology
MATTHEW A POWELL, MD  Assistant Professor of Obstetrics and Gynecology
JODIE RAI, MD Associate Professor of Clinical Obstetrics and Gynecology
ROXANE M. RAMPERSAD, MD Assistant Professor of Obstetrics and Gynecology
VALERIE RATT, MD Associate Professor of Obstetrics and Gynecology
AMY J. RAVIN, MD Assistant Professor of Clinical Obstetrics and Gynecology
JONATHAN R REED, MD Assistant Professor of Clinical Obstetrics and Gynecology
MARVIN RENNARD, MD, BS Professor Emeritus of Clinical Obstetrics and Gynecology
LEE A RIGG, MD, PHD Associate Professor of Clinical Obstetrics and Gynecology
JOAN K. RILEY, PHD Instructor in Obstetrics and Gynecology
ANN MARIE ROCKAMANN, MD Instructor in Clinical Obstetrics and Gynecology
CHINDA VANASIN ROJANASATHIT, MD Assistant Professor of Clinical Obstetrics and Gynecology
JEROME D SACHAR, MD Assistant Professor of Clinical Obstetrics and Gynecology
SUDHA SAHA, MD Instructor in Clinical Obstetrics and Gynecology
JAMES R SCHREIBER, MD Professor of Obstetrics and Gynecology
JOSEPH BAGLEY SHUMWAY, MD Assistant Professor of Obstetrics and Gynecology
DAVID ELAN SIMCKES, MD Instructor in Clinical Obstetrics and Gynecology
CLAYTON D. SKAGGS, DC Adjunct Instructor in Obstetrics and Gynecology
JENNIFER H. SMITH, MD Instructor in Clinical Obstetrics and Gynecology
TAMMY SHIM SONN, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval)
THERESA M SPITZNAGLE, DPT Assistant Professor of Obstetrics and Gynecology
CHOTCHAI SRISURO, MD Associate Professor of Clinical Obstetrics and Gynecology
KLAUS J STAISCH, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology
DAVID M. STAMILIO, MD Associate Professor of Obstetrics and Gynecology
ANDREA L STEPHENS, MD Assistant Professor of Obstetrics and Gynecology
JOHN A STOPPLE, MD Instructor in Clinical Obstetrics and Gynecology
ABBE L SUDVARG Instructor in Clinical Obstetrics and Gynecology
FREDERICK SWEET, PHD Professor of Reproductive Biology in Obstetrics and Gynecology
PREMAL H THAKER, MD Assistant Professor of Obstetrics and Gynecology
JEAN ALFRED THOMAS, SR., MD Instructor in Clinical Obstetrics and Gynecology
JEFFREY BRYANT THOMPSON, MD Instructor in Clinical Obstetrics and Gynecology
M. BRYANT THOMPSON, MD Associate Professor of Clinical Obstetrics and Gynecology
ALBRO C TOBEY, MD Assistant Professor of Clinical Obstetrics and Gynecology
RANDALL W TOBLER, MD Assistant Professor of Clinical Obstetrics and Gynecology
GLADYS TSE, MD, BS Assistant Professor of Obstetrics and Gynecology
JACQUELINE SUE TURNER, MD Instructor in Clinical Obstetrics and Gynecology
DANIEL G WAGNER, MD, BA Instructor in Clinical Obstetrics and Gynecology
J. LESLIE WALKER, MD Assistant Professor Emeritus of Clinical Obstetrics and Gynecology
LEONARD LEWIS WALL, MD, PHD, BS Professor of Obstetrics and Gynecology
JAMES C WARREN, MD, PHD Professor Emeritus of Obstetrics and Gynecology
GARY MICHAEL WASSERMAN, MD Assistant Professor of Clinical Obstetrics and Gynecology
MARK S WASSERMAN, MD, BS Instructor in Clinical Obstetrics and Gynecology
Instruction begins in the first year with examination of the eye and a lecture on various aspects of ocular disease. During the second year, all students receive (via e-mail) the "Ophthalmology Case Studies," and these cases are reviewed in a "lecture/feedback" session. During the third year, students are given the opportunity during the surgery block to spend four weeks on the ophthalmology services. In addition, during the third year there are lectures given to students during the Internal Medicine rotations. All students work on Washington University’s “Case Studies for Medical Students.” The emphasis is on ocular manifestations of common systemic diseases, ocular trauma and common eye diseases such as cataract and glaucoma. In the fourth year, four-week clinical or research electives are offered.

Courses

First Year

Introduction to clinical ophthalmology begins in the first year with a lecture and practicum (peer exam) on taking an ocular history and performing an ocular exam. Emphasis is on ophthalmoscopy. Morton E. Smith, MD; staff

Second Year

During the second year, all students receive (via e-mail) the "Ophthalmology Case Studies." All students must review each case in preparation for the "lecture/feedback" session with Dr. Morton Smith in a large-group format. Students will be called on (at random) for their answers to each case.

Third Year

Third-Year clerkship opportunities

In the third year, students are given the opportunity to spend four weeks of their surgery rotation on the ophthalmology service. The students work closely with the ophthalmology residents and review
the differential diagnosis of the "red eye," how to interpret an ophthalmologic consult note, and how to handle ocular emergencies. During this rotation, there is again emphasis on the use of the ophthalmoscope. All third-year students must complete the "Case Studies in Ophthalmology for Medical Students" and attend the periodic "feedback/oral exam" session with Morton E. Smith, MD, staff.

**Fourth Year**

**Electives**

**M50 801 OPHTHALMOLOGY**

Instructor: Morton E. Smith, MD, 747-5559 or 362-5722  
Location: McMillan Hospital Building, Room 114, Barnes-Jewish Hospital, South Campus  
Elective Contact: Morton Smith, MD, 747-5559 or Mary Hitt, 362-5722  
Other Information: All students interested in this senior elective must meet with Dr. Morton E. Smith in March of year WUMS III.

Enrollment limit per period: 6  
Valid start weeks are: June 1, 2009 – June 26, 2009 and August 3, 2009 – August 28, 2009

This elective is for senior students who plan to apply for a residency in ophthalmology. The student rotates through one or more specialty clinics including the general eye clinic and/or the subspecialty clinics of the full-time faculty of the Washington University Medical School Department of Ophthalmology and Visual Sciences (e.g. pediatric ophthalmology clinic at St. Louis Children's Hospital, neuro-ophthalmology service, cornea/external disease service, etc.) The student's responsibilities progress from observation (including observing surgery) to complete eye exam to presentation of patients to the director of that particular service. Several cases must be presented to Dr. Morton Smith. The student must also work on the "Case Studies in Ophthalmology for Medical Students" and present the answers to these cases in the form of an oral exam to Dr. Morton Smith. The students must attend all conferences as well as Grand Rounds and Wednesday Night Seminar for residents and spend one night a week (until 9 p.m.) with the ophthalmology resident on call for emergencies. By the end of the four-week rotation, the student is expected to be proficient in taking an ocular history and performing a complete eye exam including slit lamp biomicroscopy and indirect ophthalmoscopy. All students interested in this senior elective must meet with Dr. Morton E. Smith in March of year WUMS III. The final grade of the student is determined by the narrative input from the director of the particular service(s) through which the student rotated, plus the case presentations to Dr. Smith, plus the oral quiz on the "Case Studies" book. The grades at Washington University are Honors, High Pass, Pass, Fail.

Student time distribution: Inpatient 5%, Outpatient 80%, Conferences/Lectures 15%; Subspecialty Care 100%  
Major teaching responsibility: Attendings, fellows and residents  
Patients seen/weekly: At least 25, usually more  
On call/weekend responsibility: 1 night per week (until 9 p.m.)

**Research**

**(M50 900)**

Usha P. Andley, PhD, 1114-B McMillan Hospital Building, 362-7167. Crystallins and lens cell biology. Crystallins play an essential refractive role and maintain lens transparency. However, the role of the molecular chaperone α-crystallin is still poorly understood. Recently, Dr. Andley’s laboratory has shown that αA or αB-crystallin expression alters the regulation of lens epithelial cell growth, and protects cells from stress-induced death. Mutations in these proteins are the basis of several inherited cataracts. Using genetic approaches, the laboratory is now focusing on visualizing DNA synthesizing
cells *in vivo* in the αA and αB knockout mice, and the interaction of αA and αB with cell cycle proteins. These studies use confocal microscopy, flow cytometric and biochemical techniques to study the role of α-crystallin in the cell cycle. Time-lapse video microscopy is being used to visualize the protein in living cells. Other studies focus on the role of αA in the cross talk between cell proliferation and apoptosis in the lens epithelium.

Rajendra S. Apte, MD, PhD, 702 McMillan Hospital Building, 747-5329. I use a murine model of experimental neovascularization that will help us understand the pathophysiology of human retinal or choroidal neovascularization that is seen in a number of blinding eye diseases such as diabetic retinopathy, age-related macular degeneration and retinopathy of prematurity. I am also involved in a number of clinical research trials investigating potential therapeutic agents for the treatment of diabetic retinopathy, and macular degeneration.

Steven Bassnett, PhD, 1114 McMillan Hospital Building, 362-1604. Currently, we are using advanced microscopic techniques to elucidate the cellular basis of accommodation and presbyopia.

David C. Beebe, PhD, 101C McMillan Hospital Building, 362-1621. My laboratory is interested in the molecular and cellular mechanisms that regulate the development of the eye and the mechanisms responsible for the formation of maturity-onset cataracts. We recently suggested that changes that occur in the eye with aging (especially, degeneration of the vitreous body) cause the lens to be exposed to higher levels of oxygen. Our data implicate oxygen toxicity as a major cause of the most common type of age-related cataracts. We have recently shown that the high levels of ascorbate (vitamin C) that are present in the vitreous body protect the lens by reacting with oxygen. One or two clinically-related projects are available to confirm and extend these observations.

Milam A. Brantley Jr., MD, PhD, 707A McMillan Hospital Building, 747-5606. I am involved in two research areas. The first is exploring the role of the GDNF family of neurotrophic factors in normal retinal development and investigating their ability to slow photoreceptor cell death in retinal degenerative diseases such as retinitis pigmentosa. The second involves genotyping patients with age-related macular degeneration (AMD) for certain genetic polymorphisms and determining whether these genetic variants affect patients' AMD phenotype or response to treatment.

Shiming Chen, PhD, 618 McMillan Hospital Building, 747-4350. Molecular basis of retinal specific gene expression and hereditary retinal degeneration. This elective is for students who are interested in gaining research experience in molecular vision and retinal diseases. The research will mainly focus on transcription factors that are expressed in the retinal photoreceptor cells and required for the normal development of photoreceptor function and/or linked to photoreceptor degenerative diseases. Students will learn basic molecular and biochemical approaches commonly used for: (1) studying target genes and their regulatory network tissue-specific transcription factor, (2) functional analysis of mutated factors carrying genetically identified mutations as a tool to find phenotype and genotype correlations, and (3) how to apply the above knowledge to develop early diagnosis and therapeutic interventions for the photoreceptor diseases. Both hands-on experience and experimental design skills will be covered during the course. A small project will be assigned to each student. By the end of the course, each student will give an oral presentation on the progress of the project in a lab meeting and/or a departmental seminar setting.

Susan M. Culican, MD, PhD, 1104 McMillan, 362-9278. I am using the segregation of eye specific regions in the mouse lateral geniculate nucleus as a model system to examine the cellular mechanisms that underlie activity dependent competition and synaptic remodeling in the developing visual system. Mechanisms involved in this kind of competition may be related to the pathophysiology of amblyopia, or “lazy eye” in children. (1) Developmental neurobiology. (2) Synaptic plasticity.
Thomas A. Ferguson, PhD, 1207 McMillan Hospital Building, 362-3745. Cellular and molecular regulation of the ocular immune response. Immunological basis of age-related macular degeneration (AMD).

Mae Gordon, PhD, 1125 Shriners Building, 362-3716. (1) Multicenter randomized clinical trial to determine if medical treatment of ocular hypertension prevents or delays glaucomatous optic nerve damage. (2) Quality-of-life assessment. (3) Multicenter epidemiological study of keratoconus.


Didier Hodzic, PhD, 620 McMillan Hospital Building, 362-7037. Linker of the Nucleoskeleton to the Cytoskeleton (LINC complexes) are macromolecular assemblies that span the nuclear envelope of mammalian cells and physically connect the nuclear lamina to different cytoskeletal elements such as actin and plectin. LINC complexes assemble through the interaction between evolutionary-conserved domains of Sun proteins and Nesprins, two families of inner and outer nuclear membrane proteins, respectively. In lower organisms, the expression of these proteins is essential for nuclear migration and anchorage. Using in vitro and in vivo models where LINC complexes are disrupted, we are studying the mechanisms of nuclear migration and anchorage in single cell assays as well as their relevance to retinogenesis, CNS development and skeletal muscle biology.

Andrew Huang, MD, MPH, 106 McMillan Hospital Building, 362-0403. TGFβ1-related corneal dystrophies, corneal epithelial stem cells, corneal wound healing. Transforming growth factor-beat inducible protein (TGFβ1, also know as bIGH3 or keratoepithelin, KE) is a constituent of the extracellular matrix (ECM) responsible for cell adhesion. Several autosomal dominant corneal dystrophies are attributed to more than 30 missense mutations of the TGFβ1 gene in 5q31 in humans. These dystrophies are found to have abnormal stromal deposits and related poor epithelial adhesions with resultant painful corneal erosions. Corneal transplantation is often needed to restore corneal clarity. Our working hypothesis is that formation of those untoward protein aggregates is caused by either conformational misfolding of TGFβ1 proteins due to missense mutations and/or accumulation of dysregulated TGFβ1 proteins. This lab is investigating the biophysical properties of native and mutant TGFβ1 proteins. Amyloid fibrils formed by differentially degraded native and mutant proteins are also being studied. Synthetic peptides will be used to identify the amyloidogenic mechanisms. Novel therapeutic strategies, such as small interfering RNAs (siRNA) or methylated peptides (meptide), to mitigate the untoward TGFβ1 aggregation are also being investigated. The goals of this lab are to elucidate the pathogenesis of abnormal protein aggregations in TGFβ1-related corneal dystrophies and to formulate potential therapeutic strategies.

Vladimir Kefalov, PhD, 1007 McMillan Hospital Building, 362-4376. Considering the great importance of cone photoreceptors for our visual experience, surprisingly little is known about the mechanisms that determine their functional properties. Why are cones less sensitive than rods and function only under daylight conditions? What are the mechanisms that drive their adaptation to wider range of light intensities compared to rods? What are the mechanisms by which known mutations in cone phototransduction proteins lead to visual disorders? We use two different experimental approaches to address these questions. First, using single cell recordings we characterize the physiological properties of mouse cones. These studies allow us to investigate the role of various phototransduction proteins by using available, and possibly generating new, genetically modified animals. We can also study the mechanisms by which known mutations of cone phototransduction proteins cause disease. Second, we investigate the differences between rod and cone phototransduction proteins in order to understand how they affect photoreceptor properties. This approach builds on our established understanding of rod phototransduction, which allows the use of rods as a surrogate system to study cone transduction proteins. We study the signaling properties of cone phototransduction proteins by expressing them in Xenopus rods. The combined studies of knockout, knockin and transgenic mice together with
transgenic *Xenopus* will be invaluable for understanding how cones function.


David A. Leib, PhD, 1106 McMillan Hospital Building, 362-3826. Latency, pathogenesis and molecular genetics of herpes simplex virus.

Peter Lukasiewicz, PhD, 1003C McMillan Hospital Building, 362-4284. Roles of receptors for inhibitory and excitatory amino acids in retina. Neurobiology of the vertebrate retina.

Nathan Ravi, MD, PhD, 623 McMillan Hospital Building, 747-4458. Development of biomaterials for ophthalmic applications.

Alan Shiels, PhD, 625 McMillan Hospital Building, 362-1637, shiels@vision.wustl.edu. Genetic eye disease. (1) Cataract and glaucoma. (2) Eye movement disorders.

Larry Tychsen, MD, 2S89 Eye Clinic, St. Louis Children’s Hospital, 454-6026. Pediatric Ophthalmology: (1) Development of the visual brain and eye alignment. (2) Visual cortex development, ocular alignment, strabismus.

**Faculty**

**MICHAEL A KASS, MD** Head of the Department of Ophthalmology and Visual Sciences, Professor of Ophthalmology and Visual Sciences

**MATTHEW BRIAN ALBRIGHT, MD** Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)

**HENRY W ALLHOFF, OD** Adjunct Instructor in Ophthalmology and Visual Sciences

**ARGHAVAN ALMONY, MD** Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)

**NAVIKUMAR J AMIN** Associate Professor of Clinical Ophthalmology and Visual Sciences

**SHILPA S AMIN, MD** Assistant Professor of Clinical Ophthalmology and Visual Sciences

**USHA P ANDLEY, PHD** Professor of Ophthalmology and Visual Sciences

**RAJENDRA APTE, MD, PHD** Assistant Professor of Ophthalmology and Visual Sciences

**NEVA P ARRIBAS, MD, AA** Associate Professor Emerita of Clinical Ophthalmology and Visual Sciences

**EDWARD M BARNETT, MD, PHD** Associate Professor of Ophthalmology and Visual Sciences

**STEVEN BASSNETT, PHD** Professor of Ophthalmology and Visual Sciences

**PAUL DOUGLAS BECHERER, OD** Adjunct Instructor in Ophthalmology and Visual Sciences

**BERNARD BECKER, MD** Lecturer in Ophthalmology and Visual Sciences, Professor Emeritus of Ophthalmology and Visual Sciences

**STANLEY C BECKER, MD, PHD** Assistant Professor of Clinical Ophthalmology and Visual Sciences

**WILLIAM L BECKER, MD** Assistant Professor of Clinical Ophthalmology and Visual Sciences

**DAVID C BEEBE, PHD** Janet and Bernard Becker Professor of Ophthalmology and Visual Sciences

**GREGG JONATHAN BERDY, MD** Assistant Professor of Clinical Ophthalmology and Visual Sciences
PAUL M BERNIER, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ANJALI MARUTI BHORADE, MD Assistant Professor of Ophthalmology and Visual Sciences
FRANK JOSEPH BIER, OD Adjunct Instructor in Ophthalmology and Visual Sciences
RONALD C BILCHIK, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
MARK GERALD BIRKMANN, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ANDREW N BLATT, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
KEVIN JAY BLINDER, MD Associate Professor of Clinical Ophthalmology and Visual Sciences
JAMES C BOBROW, MD Professor of Clinical Ophthalmology and Visual Sciences
GEORGE M BOHIGIAN, MD Professor of Clinical Ophthalmology and Visual Sciences
ISAAC BONIUK, MD Professor of Clinical Ophthalmology and Visual Sciences
BERNITA BORN-WOLF, OD Adjunct Instructor in Ophthalmology and Visual Sciences
PAUL J BOTELHO, MD Adjunct Instructor in Ophthalmology and Visual Sciences
MILAM A BRANTLEY, JR, MD, PhD Assistant Professor of Ophthalmology and Visual Sciences
REBEKAH ARLETTA BRASLOW, MD Instructor in Clinical Ophthalmology and Visual Sciences
SEAN MICHAEL BREIT, MD Instructor in Clinical Ophthalmology and Visual Sciences
LARRY G BROKERING, OD Adjunct Instructor in Ophthalmology and Visual Sciences
MARC RICHARD BROWN, OD Adjunct Instructor in Ophthalmology and Visual Sciences
DEAN B BURGESS, MD Professor of Clinical Ophthalmology and Visual Sciences
SAMUEL A CANAAN, JR, MD Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences
CARMEN F CASTELLANO, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences
SIDNEY TAN CHANG, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)
EARL S CHANGAR, OD Adjunct Instructor in Ophthalmology and Visual Sciences
SHIMING CHEN, PHD Associate Professor of Ophthalmology and Visual Sciences
BRUCE H COHEN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
NICHOLAS J COLOSI, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
PAMELA ANN COSLICK-FADA, OD Adjunct Instructor in Ophthalmology and Visual Sciences
MATTHEW DANIEL COUNCIL, MD Instructor in Ophthalmology and Visual Sciences
JOHN BRUCE CRANE, II, OD Adjunct Instructor in Ophthalmology and Visual Sciences
SUSAN MARGARET CULICAN, MD, PHD Assistant Professor of Ophthalmology and Visual Sciences
PHILIP L CUSTER, MD Professor of Ophthalmology and Visual Sciences
DAVID L DAVIDSON, OD Adjunct Instructor in Ophthalmology and Visual Sciences
JAMES ALLEN DECLUE, OD Adjunct Instructor in Ophthalmology and Visual Sciences
JOHN JAMES DEGUIRE, MD Instructor in Ophthalmology and Visual Sciences
PAUL E DIEHL, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ROBERT C DREWS, MD, BA Professor Emeritus of Clinical Ophthalmology and Visual Sciences
JOHN ROBERT EIGENBRODT, OD Adjunct Instructor in Ophthalmology and Visual Sciences
NICHOLAS EARL ENGELBRECHT Assistant Professor of Clinical Ophthalmology and Visual Sciences
LAWRENCE W ERNST, OD Adjunct Instructor in Ophthalmology and Visual Sciences
RAYMOND F FADA, JR, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ROBERT M FEIBEL, MD Professor of Clinical Ophthalmology and Visual Sciences
MARK ALAN KLEINDORFER, OD Adjunct Instructor in Ophthalmology and Visual Sciences
VIVIAN MARIE KLOKE, OD Adjunct Instructor in Ophthalmology and Visual Sciences
HARRY L KNOPF, MD Professor of Clinical Ophthalmology and Visual Sciences
RONALD JOSEPH KNOX, OD Adjunct Instructor in Ophthalmology and Visual Sciences
MICHAEL S KORENFELD, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
THOMAS ERROL KRAEMER, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences
STEVEN M KYMES, PHD Research Assistant Professor of Ophthalmology and Visual Sciences
MICHAEL J LACHTRUP Instructor in Ophthalmology and Visual Science
ROBERT LOUIS LAMBERG, MD Associate Professor of Clinical Ophthalmology and Visual Sciences
PAUL ARTHUR LAPOINT, OD, AA Adjunct Instructor in Ophthalmology and Visual Sciences
STEVEN F LEE, MD Instructor in Clinical Ophthalmology and Visual Sciences
SCOTT W LEWIS, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences
JAMES WALTER LIEBER, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ANTHONY J LUBNIEWSKI, MD Professor of Ophthalmology and Visual Sciences
GREGG T LUEDER, MD Professor of Ophthalmology and Visual Sciences
PETER DAVID LUKASIEWICZ, PHD Professor of Ophthalmology and Visual Sciences
LISA MARIE MACKAY, OD Adjunct Instructor in Ophthalmology and Visual Sciences
RANJAN P MALHOTRA, MD Instructor in Clinical Ophthalmology and Visual Sciences
LESLIE DENISE MCINTOSH Research Instructor in Ophthalmology and Visual Sciences
MARY KAY MIGNECO, OD, BS Instructor in Ophthalmology and Visual Sciences
BARRY DAVID MOLDER, MD Associate Professor of Clinical Ophthalmology and Visual Sciences
BENJAMIN MOLDER, MD Professor Emeritus of Clinical Ophthalmology and Visual Sciences
JAMES E MILLER, MD Professor Emeritus of Clinical Ophthalmology and Visual Sciences
TARA GURETZKY MISSOI, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval )
DUANE L MITZEL, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
EUGENE JAMES MOBLEY, OD Adjunct Instructor in Ophthalmology and Visual Sciences
ROBERT L MOBLEY, OD Adjunct Instructor in Ophthalmology and Visual Sciences
CARRIE LYNN MORRIS, MD Assistant Professor of Ophthalmology and Visual Science
ROBERT F MUNSCH, MD Instructor in Clinical Ophthalmology and Visual Sciences
RAYMOND I MYERS, OD Adjunct Instructor in Ophthalmology and Visual Sciences
RANDALL EARL NACKE Instructor in Clinical Ophthalmology and Visual Sciences
MATTHEW NEWMAN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
PAUL F NICHOLS, III, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
JUDITH MOSINGER OGILVIE, PHD Adjunct Research Assistant Professor of Ophthalmology and Visual Sciences
EDWARD OKUN, MD Professor of Clinical Ophthalmology and Visual Sciences
F. THOMAS OTT, MD Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences
ANJALI K PATHAK, MD, BS Assistant Professor of Ophthalmology and Visual Sciences
JAY S PEPOSE, MD, PHD Professor of Clinical Ophthalmology and Visual Sciences
JOHN CRAIG PERLMUTTER, MD Associate Professor of Clinical Ophthalmology and Visual Sciences
MONICA S PERLMUTTER Instructor in Ophthalmology and Visual Sciences
MUJTABA A QAZI, Instructor in Clinical Ophthalmology and Visual Sciences
MARK S RALLO, OD, Instructor in Ophthalmology and Visual Sciences
KAMALESH JANAKS RAMAIYA, MD, Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)
PRABAKAR KUMAR RAO, MD, Assistant Professor of Ophthalmology and Visual Sciences
RAJIV RAMESH RATHOD, MD, Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)
V. NATHAN RAVI, MD, PHD, Professor of Ophthalmology and Visual Sciences
MICHAEL DENNIS ROHDE, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
LOUIS J ROSENBAUM, MD, Associate Professor of Clinical Ophthalmology and Visual Sciences
MARK A ROTSTEIN, MD, Assistant Professor of Ophthalmology and Visual Sciences
MICHAEL B RUMELT, MD, Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences
SCOTT GEOFFREY SAGETT, Instructor in Clinical Ophthalmology and Visual Sciences
MICKEY L SALMON, MD, Instructor Emeritus in Clinical Ophthalmology and Visual Sciences
FREDERICK W SCHWAGGER, OD, BS, Adjunct Instructor in Ophthalmology and Visual Sciences
CHRISTOPHER G SEEP, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
DAVID BRIAN SEIBEL, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
GAURAV KIRIT SHAH, MD, Associate Professor of Clinical Ophthalmology and Visual Sciences
JAMES BANKS SHEPHERD, III, MD, Assistant Professor of Ophthalmology and Visual Sciences
STEVEN M SHIELDS, MD, Assistant Professor of Clinical Ophthalmology and Visual Sciences
ALAN SHIELS, PHD, Professor of Ophthalmology and Visual Sciences
HOWARD NEWTON SHORT, MD, Instructor in Clinical Ophthalmology and Visual Sciences
CARLA J SIEGFRIED, MD, Associate Professor of Ophthalmology and Visual Sciences
CHARLES D SIGNORELLI, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
MORTON EDWARD SMITH, MD, Professor Emeritus of Ophthalmology and Visual Sciences, Lecturer in Ophthalmology and Visual Sciences
CLAUD RANDALL SNOWDEN, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
CRAIG H SORCE, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
FLORENTINA SOTO LUCAS, Research Assistant Professor of Ophthalmology and Visual Sciences (Pending Executive Faculty Approval)
MARK H SPURRIER, MD, Instructor in Clinical Ophthalmology and Visual Sciences
ARTHUR WALDO STICKLE, JR, MD, Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences
JAMES F STRIETER, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
BRIAN PATRICK SUMNER, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
KENNETH V SWANSON, Instructor in Clinical Ophthalmology and Visual Sciences
PAUL M TESSER, MD, PHD, Assistant Professor of Clinical Ophthalmology and Visual Sciences
MATTHEW A THOMAS, MD, Professor of Clinical Ophthalmology and Visual Sciences
LINDA MEI-LIN TSAI, MD, Associate Professor of Ophthalmology and Visual Sciences
ROBERT LAWRENCE Tychsen, MD, Professor of Ophthalmology and Visual Sciences
GREGORY PAUL VAN STAVERN, MD, Associate Professor of Ophthalmology and Visual Sciences
GARY LEE VOGEL, OD, Adjunct Instructor in Ophthalmology and Visual Sciences
JAMES J WACHTER, OD, BS, Adjunct Instructor in Ophthalmology and Visual Sciences
WILLIAM LEE WALTER, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences
DONALD E WALTER, JR, OD Adjunct Instructor in Ophthalmology and Visual Sciences
STEPHEN R WALTMAN, MD Professor of Clinical Ophthalmology and Visual Sciences
RAYMOND WEE, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval)
STEPHEN ALAN WEXLER, MD Associate Professor of Clinical Ophthalmology and Visual Sciences
RICHARD HARRIS WIEDER, MD Assistant Professor of Ophthalmology and Visual Sciences
MICHAEL L WOLF, OD Adjunct Instructor in Ophthalmology and Visual Sciences
MITCHEL L WOLF, MD Associate Professor of Ophthalmology and Visual Sciences
MING-FONG AGNES WONG, MD, PHD Adjunct Associate Professor of Ophthalmology and Visual Sciences

Department's Web Site

http://ophthalmology.wustl.edu/

Department of Orthopaedic Surgery

Courses

Third Year

THE MUSCULOSKELETAL CLERKSHIP: A PART OF THE COMPREHENSIVE SURGICAL CLERKSHIP

The objective of this rotation is to convey to the student appropriate knowledge, skills and attitudes for the recognition, diagnosis, investigation and treatment of conditions affecting the musculoskeletal system.

Most students at Washington University School of Medicine are not entering specialties that devote themselves to the treatment of diseases of the musculoskeletal system. It is noteworthy, though, that greater than one-third of complaints directed toward primary caregivers and general internists are related to the musculoskeletal system: the actual volume of these complaints presented to primary care physicians, general internists and pediatricians is second only to complaints related to the cardiovascular system (and for pediatricians, presentations related to infectious diseases).

Musculoskeletal signs and symptoms are encountered commonly in emergency medicine, trauma surgery, internal medicine, oncology, neurology, pediatrics and endocrinology as well as many other surgical and medical specialties. Since students who enter postgraduate training in these subspecialties as well as in general primary care will be required to evaluate, diagnose and treat these conditions, it is important for the undergraduate curriculum to have these topics addressed in an organized and consistent way. It is for this reason that we developed a comprehensive integrated exposure to musculoskeletal surgery and medicine during the third-year comprehensive surgical clerkship. This is a key component of the integrated third-year curriculum.

To accomplish these goals, there will be a balance between clinical, operative, emergency room and didactic (lecture and small group) experiences. Didactic sessions will be in several formats: lectures, physical examination demonstrations and small group discussions. Only instructor or assistant-, associate- or professor-level members of the full-time Washington University School of Medicine staff...
will deliver formal lectures to the students. Lecturers will be from the following specialties: Orthopaedic Surgery, Sports Medicine, and Physical Medicine and Rehabilitation (Physiatry) for balance and content expertise.

The following lecture topics will be scheduled monthly:
1) History and Physical Examination of the Musculoskeletal System
2) Musculoskeletal Emergencies
3) Common Fractures
4) Bone and Mineral Physiology
5) Electrophysiology
6) Pediatric and Adolescent Sports Medicine
7) Adult Sports Injuries
8) Cancer
While the following will be scheduled as part of the 12-week surgery clerkship:
9) Arthritis
10) Cervical and Lumbar Disc Disease

The clinical experience is one month in duration, and takes place during the comprehensive surgical clerkship for all Washington University medical students during either the first, second or third months of the 12-week clerkship. The one-month block is divided into two two-week sessions wherein the students would spend time with staff from the following specialties: orthopaedic surgery, rheumatology, physical medicine and rehabilitation, sports medicine and bone and mineral physiology.

The experience can be combined inpatient and outpatient, clinic and operating room, emergent and non-emergent care as well as both surgical and nonsurgical, based upon the student’s own choosing. However, to ensure an appropriately balanced experience, students will be limited to specific rotation combinations from which to choose:

- Hand/Joint Reconstruction (2 weeks/2 weeks)
- Shoulder and Elbow/Orthopaedic Oncology (2 weeks/2 weeks)
- Physical Medicine and Rehabilitation/Spine (2 weeks/2 weeks)
- Pediatric Orthopaedic Surgery/Sports Medicine or Sports Surgery (2 weeks/2 weeks)
- VA Orthopaedic Service/Rheumatology Bone and Mineral (2 weeks/2 weeks)

The following Washington University School of Medicine full-time attending staff mentors are eligible to have students rotate with them during the rotation:
1) Martin Boyer (Hand)
2) Charles Goldfarb (Hand)
3) Ryan Calfee (Hand)
4) Matthew Matava (Sports Surgery)
5) Mark Halstead (Sports Medicine)
6) Heidi Prather and Devyani Hunt (Physical Medicine and Rehabilitation)
7) John Metzler and Adam Labore (Physical Medicine and Rehabilitation)
8) Eric Gordon (Pediatric Orthopaedic Surgery)
9) Gary Miller (VA Orthopaedic Surgery Service)
10) John Clohisy (Joint Reconstruction)
11) Richard Brasington and Kathy Diemer (Rheumatology Bone and Mineral)
12) Jacob Buchowski (Spine)
13) Paul Santiago (Neurosurgery Spine)
14) Douglas McDonald (Orthopaedic Oncology)
15) Leesa Galatz (Shoulder and Elbow)

There should only be ONE student per attending staff in order to promote one-on-one teaching; however, exceptions can be made in the event of vacations, illness, conference travel, etc. on the part of the attending staff.

The learning of physical examination skills by the students is a critical part of the musculoskeletal block. The coursemaster will meet weekly with the students to demonstrate physical examination of the neck and spine, shoulder and elbow, hip and knee, and the hand and foot. The normal examination will be covered, and relevant common conditions and provocative tests will be covered as
Electives

**M95 838 PEDIATRIC ORTHOPAEDICS SPINE AND SPORTS SURGERY**
Instructor: Scott J. Luhmann, MD, 747-2543
Location: Washington University; St. Louis Children’s Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St. Louis Children’s Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER and outpatient clinics. In addition to general pediatric orthopaedics, Dr. Luhmann has special interests in the treatment of pediatric spinal injuries and disorders as well as pediatric sports medicine. Attendance at and participation in the weekly pediatric orthopaedic conference activities required.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

**M95 839 ORTHOPAEDIC SPORTS MEDICINE**
Instructor: Robert Brophy, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases and patient rounds on the Sports Medicine service.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Robert Brophy, MD
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

**M95 840 ORTHOPAEDIC SURGERY — FOOT/ANKLE**
Instructor: Jeff Johnson, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases and patient rounds. The medical students electing this rotation will serve as an active and integral part of the orthopaedic team.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

M95 842A ORTHOPAEDIC SHOULDER/ELBOW SURGERY
Instructor: Ken Yamaguchi, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with attending surgeons primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours, attendance at designated orthopaedic conferences and dissection of upper-extremity anatomical specimens.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

M95 842B ORTHOPAEDIC SHOULDER/ELBOW SURGERY
Instructor: Leesa Galatz, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with attending surgeons primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours, attendance at designated orthopaedic conferences and dissection of upper-extremity anatomical specimens.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks
M95 842C ORTHOPAEDIC SHOULDER/ELBOW SURGERY
Instructor: Jay D. Keener, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with attending surgeons primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours, attendance at designated orthopaedic conferences and dissection of upper-extremity anatomical specimens.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks.

M95 845B ORTHOPAEDIC HAND AND UPPER EXTREMITY SURGERY
Instructors: Charles Goldfarb, MD, and Paul Manske, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital, Shriners Hospital for Children, St. Louis Children's Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with attending surgeons primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours, attendance at designated orthopaedic conferences and dissection of upper-extremity anatomical specimens. Please note that the hand/upper extremity fellow assigned to Dr. Manske's service will also participate in the instruction of students choosing this elective.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks.

M95 845C ORTHOPAEDIC HAND AND UPPER EXTREMITY SURGERY
Instructor: Richard H. Gelberman, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with attending surgeon primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours,
Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Richard Gelberman, MD
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

M95 846A ORTHOPAEDIC TRAUMA
Instructor: William Ricci, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated orthopaedic conferences and participation in ongoing research projects.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

M95 846B ORTHOPAEDIC TRAUMA
Instructor: Michael Gardner, MD, 747-2523
Location: Washington University/Barnes-Jewish Hospital
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated orthopaedic conferences and participation in ongoing research projects.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

M95 848A ORTHOPAEDIC PEDIATRIC SURGERY
Instructor: Eric Gordon, MD, 747-2543
Location: Washington University/St. Louis Children’s Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St. Louis Children’s Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER and outpatient clinics. Attendance at and participation in the weekly pediatric orthopaedic conference activities required.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

**M95 849A ORTHOPAEDIC SPINE SURGERY IN ADULT PATIENTS**
Instructor: Staff
Location: Washington University/Barnes-Jewish Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is available for four weeks during which time the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student’s education experience on this rotation.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attending, spine fellow assigned to this service and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — the student generally participates in Trauma call in the Barnes-Jewish Hospital ER at least once during the week. Additional subspecialty at-home call may be included if desired. Generally one weekend call every two weeks.

**M95 849B ORTHOPAEDIC SPINE SURGERY IN ADULT PATIENTS**
Instructor: Jacob Buchowski, MD, MS, 747-2543
Location: Washington University/Barnes-Jewish Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is available for four weeks during which time the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student’s education experience on this rotation.
Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attending, spine fellow assigned to this service and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks.

**M95 855A RECONSTRUCTIVE AND JOINT PRESERVATION SURGERY**
Instructor: Robert L. Barrack, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with the attending physician on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings, fellow and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

**M95 855B RECONSTRUCTIVE AND JOINT PRESERVATION SURGERY**
Instructor: John C. Clohisy, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with the attending physician on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings, fellow and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: On call one weekend every two weeks

**M95 855C RECONSTRUCTIVE AND JOINT PRESERVATION SURGERY**
Instructor: Ryan M. Nunley, MD, 747-2523
Location: Washington University/Barnes-Jewish Hospital, Washington University Orthopedics — Chesterfield
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Clinical elective available, during which time the student will work with the attending physician on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings, fellow and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: On call one weekend every two weeks

**M95 859 ORTHOPAEDIC ONCOLOGY**

Instructor: Douglas J. McDonald, MD, 747-2543
Location: Washington University/Barnes-Jewish Hospital
Elective Contact: Kathy Jones, 747-2813, jones.k@wustl.edu
Other Information: Students should contact Kathy Jones prior to the first day of the elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective, centered primarily at Barnes-Jewish Hospital, is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases and patient rounds on the Musculoskeletal Oncology service.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Douglas J. McDonald, MD
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks

**M95 8991 ORTHOPAEDIC SURGERY EXTERNSHIP (Visiting Students Only)**

Instructors: Martin I. Boyer, MD, and Rick Wright, MD
Location: Washington University/Barnes-Jewish Hospital; Washington University Orthopedics — Chesterfield
Elective Contact: Orthopaedics Education Office, 747-2543, orthsurg@wudosis.wustl.edu
Other Information: Students meet in the Education Office (6102 Queeny Tower), 8 a.m. first day of the elective.

Enrollment limit per period: Varies
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students rotate on Orthopaedic Services for two- or four-week blocks. Students typically participate in two weeks of hand and upper extremity surgery with Dr. Martin Boyer and two weeks of sports medicine with Dr. Rick Wright. Please contact the Orthopaedics Education Office for further information. E-mail address: orthsurg@wudosis.wustl.edu.

Student time distribution: Inpatient 48%, Outpatient 47%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Faculty attendings and resident mentors
Patients seen/weekly: Varies
On call/weekend responsibility: Varies — generally one weekend call every two weeks
Research

(M95 900)

Various orthopaedic surgery research opportunities are available with the following faculty attendings. If interested, please contact the Education Office at 747-2543, orthsurg@wudosis.wustl.edu or contact the faculty member directly.

Yousef Abu-Amer, PhD
Robert L. Barrack, MD
Jacob M. Buchowski, MD, MS
John Clohisy, MD
Matthew Dobbs, MD
Leesa Galatz, MD
Richard H. Gelberman, MD
Charles A. Goldfarb, MD
J. Eric Gordon, MD
Kate Keeler, MD
Lawrence G. Lenke, MD
Scott J. Luhmann, MD
Matthew J. Matava, MD
William Ricci, MD
Linda Sandell, PhD
Perry Schoenecker, MD
Matt Silva, PhD
Stavros Thomopoulos, PhD
Rick Wright, MD
Ken Yamaguchi, MD

Faculty

RICHARD H GELBERMAN, MD Fred C Reynolds Professor of Orthopaedic Surgery, Head of the Department of Orthopaedic Surgery
YOUSEF ABU-AMER, PHD Associate Professor of Orthopaedic Surgery
ROBERT L BARRACK, MD Charles F and Joanne Knight Distinguished Professor of Orthopaedic Surgery
DONALD R BASSMAN, MD Instructor in Clinical Orthopaedic Surgery
MARTIN I BOYER, MD Carol B and Jerome T Loeb Professor of Orthopaedic Surgery
KEITH HAPP BRIDWELL, MD Asa C. and Dorothy W. Jones Distinguished Professor of Orthopaedic Surgery
ROBERT HENRY BROPHY, IV, MD, BS Assistant Professor of Orthopaedic Surgery
JACOB M BUCHOWSKI, MD Assistant Professor of Orthopaedic Surgery
CHERYL ANN CALDWELL, DPT Assistant Professor of Orthopaedic Surgery
RYAN PATRICK CALFEE, MD  Assistant Professor of Orthopaedic Surgery
ROBERTO CIVITELLI, MD  Professor of Orthopaedic Surgery
JOHN C CLOHISY, MD  Professor of Orthopaedic Surgery
SUZANNE MARIE CORNBLEET, DPT  Assistant Professor of Orthopaedic Surgery
SYLVIA LIN CZUPPON  Instructor in Orthopaedic Surgery
ROBERT H DEUSINGER, PHD  Associate Professor of Orthopaedic Surgery
MATTHEW BARRETT DOBBS, MD  Associate Professor of Orthopaedic Surgery
JACK R. ENGSRBEN, PHD, MS  Associate Professor of Orthopaedic Surgery
ROBERTA FACCIO, PHD  Associate Professor of Orthopaedic Surgery
LEESA GALATZ, MD  Associate Professor of Orthopaedic Surgery
MICHAEL J GARDNER, MD  Assistant Professor of Orthopaedic Surgery
JEROME J GILDEN, MD  Professor Emeritus of Orthopaedic Surgery
LOUIS ARNOLD GILULA, MD  Professor of Orthopaedic Surgery
CHARLES A GOLDFARB, MD  Associate Professor of Orthopaedic Surgery
J. ERIC GORDON, MD  Associate Professor of Orthopaedic Surgery
CHRISTINA A. GURNETT, MD, PHD  Assistant Professor of Orthopaedic Surgery
MARK E. HALSTEAD, MD  Assistant Professor of Orthopaedic Surgery
MARY KENT HASTINGS, DPT  Assistant Professor of Orthopaedic Surgery
MARCIE HARRIS HAYES, DPT  Assistant Professor of Orthopaedic Surgery
THOMAS MARTIN HERING  Visiting Associate Professor of Orthopaedic Surgery
GREGORY WILLIAM HOLTZMAN, DPT  Assistant Professor of Orthopaedic Surgery
DEVYANI M. HUNT, MD  Assistant Professor of Orthopaedic Surgery
RENEE A. IVENS, DPT  Assistant Professor of Orthopaedic Surgery
JEFFREY E JOHNSON, MD  Associate Professor of Orthopaedic Surgery
KATHRYN A. KEELER, MD  Assistant Professor of Orthopaedic Surgery
JAY DONOVAN KEENER, MD  Assistant Professor of Orthopaedic Surgery
LYNETTE C KHOO-SUMMERS, DPT  Assistant Professor of Orthopaedic Surgery
SANDRA E. KLEIN, MD  Assistant Professor of Orthopaedic Surgery (Pending Executive Faculty Approval)
ROBERT S KRAMER, MD  Instructor in Clinical Orthopaedic Surgery
ROBERT E KUHLMAN, MD  Assistant Professor Emeritus of Clinical Orthopaedic Surgery
ADAM J. LABORE, MD  Assistant Professor of Orthopaedic Surgery
ROBERT CRAIG LANDER, MD  Instructor in Clinical Orthopaedic Surgery
W. EDWARD LANSCHE, MD  Instructor in Clinical Orthopaedic Surgery
LAWRENCE G LENKE, MD  Jerome J. Gilden M.D. Professor of Orthopaedic Surgery
SCOTT J LUHMANN, MD  Associate Professor of Orthopaedic Surgery
CHARLES IRWIN MANNIS, MD  Instructor in Clinical Orthopaedic Surgery
PAUL R MANSKE, MD  Professor of Orthopaedic Surgery
NICOLAS CLAY MARTIN  Instructor in Clinical Orthopaedic Surgery
MATTHEW J MATAVA, MD  Associate Professor of Orthopaedic Surgery
AUDREY McALINDEN, PHD  Assistant Professor of Orthopaedic Surgery
Otolaryngology is presented to students in the first-, second-, third- and fourth-year classes. Physical diagnosis skills are taught in the first year. Clinically oriented lectures and a physical diagnosis workshop are presented to second-year students. In the third year of the medical curriculum, four-week elective rotations on one of the services in East Pavilion, the Veterans Administration Medical Center or St. Louis Children’s Hospital are offered. During this period, there is teaching at the bedside, in the operating room and in the clinic, supplemented by daily afternoon lectures, Grand Rounds on Wednesdays and an introduction to audiology.

Fourth-year students interested in ENT as a specialty may take a two- to four-week elective designed to give them exposure to patient care, both in the outpatient clinic and the operating room and postoperative setting. An additional four-week elective that provides comprehensive ambulatory experience is offered to students headed for primary care.

**Postgraduate Program**

The educational mission of the Otolaryngology training program at Washington University is to prepare physicians to become competent and highly skilled otolaryngologists with excellent preparation in clinical and surgical patient care, mastery of existing knowledge within the scope of practice, and appropriate experience in teaching and research. In addition to Medical Knowledge and Patient Care in the above mentioned areas, the department teaches and evaluates performance in Interpersonal and Communication Skills, Professionalism, Systems-Based Practice and Practice-Based Learning and Improvement as defined by the ACGME Core Competencies. To this end, the program has established goals and objectives for each level of postgraduate year and a formative and summative evaluation process to measure progress along the way. In such an environment the developing otolaryngologist can reach his or her full potential by the completion of the program.

The Department of Otolaryngology-Head and Neck Surgery at Washington University School of Medicine offers two pathways, the 5-year Clinical Residency track which includes three months of research time and a 7-year Research Residency oriented track which includes two years of contiguous NIH supported research training called the Physician Scientist Program (PSP).

The objective of the 5-year Clinical Residency track is to train individuals in advanced medical and surgical patient care and to introduce them to scientific principles of investigation in order to enhance the scholarly evidence-based practice of medicine.

The first year of otolaryngology will include ACGME required rotations. A minimum of five months of structured education in at least three of the following: general surgery, thoracic surgery, vascular surgery, pediatric surgery, plastic surgery, surgical oncology. One month of structured education in each of the following four clinical areas: emergency medicine, critical care unit (intensive care unit; trauma unit or similar), anesthesia, neurological surgery. An additional maximum of three months of otolaryngology-head and neck surgery is optional.

The second year otolaryngology residents participate in a rich operative and ambulatory clinical setting. At the beginning of this year, a comprehensive basic science course is given, including temporal bone and neck dissection. A two-year rotating core curriculum is given by the faculty covering all major topics. Additional conferences include: Grand Rounds, Tumor Conference, Otology/Audiology Conference, Journal Club, Morbidity/Mortality Conference and Research Seminars.

During the third and fourth year otolaryngology years, graduated surgical and outpatient responsibility is provided to the residents. In the final (chief resident) year, significant responsibility is afforded to the graduating residents to further aid the transition into independent practice. Career guidance and counseling is performed at six-month intervals via a faculty advisor system throughout the program.

The objective of the Physician Scientist Program (PSP) is to train career physician-scientists capable of delivering advanced medical and surgical patient care and capable of obtaining funding for additional mentored clinical scientist development. The ultimate goal of this career pathway is to produce life-time career physician-scientists who maintain active surgical practices and research laboratories which are independently funded.
This is designed for applicants dedicated to research and academics within the field of Otolaryngology. Funded through a T32 training grant from the NIH, the PSP offers salary support for 2 years of consecutive research during residency training. Residents are encouraged to engage in basic science or clinical research and are able to choose mentors from the many funded principal investigators throughout Washington University School of Medicine. The PSP provides a framework in which residents are able to interact with experienced scientists and develop critical thinking, experimental design skills, and grantsmanship. Each year two of the five entering residents match into the PSP. Residents in the PSP begin research after either PGY-1 or PGY-2 years. Many PSP residents also qualify for the NIH Loan Repayment Program which can pay up to $70,000 in medical school loans.

A two-year rotating lecture series provides the backbone of didactic teaching for the residents. Eight sections: Head and Neck - malignant, Head and Neck - benign, Head and Neck - reconstruction and trauma, Facial Plastic Surgery, Pediatric Otolaryngology, Otology-Audiology-Vestibular, Sinus-Allergy and Critical Appraisal of the Medical Literature are each headed by a faculty coursemaster who selects the individual topics, faculty presenters, and duration of each section. Attendance is taken and all residents are expected to attend.

In addition to the two-year rotation, a yearly Basic Science course is provided for the OTO-2 residents. Topics are outlined following the ACGME standards for basic science contents. These lectures are given Monday and Thursday afternoon from July through September preceding the start of the Core Curriculum cycle. Other mandatory conferences include (September thru May) Grand Rounds, Journal Club, Facial Plastic Conference, Otology Conference, Head and Neck Conference, Morbidity-Mortality Conference & Physician-Scientist Conference. There is also a temporal bone otology course, as well as a head and neck dissection course.

During the clinical years, residents are expected to participate in clinical and/or basic research and to publish papers in peer-reviewed journals, and they are expected to make presentations at the lectures or Grand Rounds. They are encouraged to submit papers and to make presentations at regional and national otolaryngology meetings. There is a national course consisting of literature given by the American Academy of Otolaryngology in which residents are expected to participate throughout the year. There is also an In-Training Examination given by the American Academy of Otolaryngology that all residents must take on a yearly basis. Throughout their residency, residents receive training in all aspects of otolaryngology, including general otolaryngology; head and neck cancer surgery; microvascular reconstructive techniques; facial plastic surgery; trauma; otology and neurotology; pediatric otolaryngology, including pediatric endoscopy; and allergy and endoscopic nasal sinus surgery.

Central Institute for the Deaf at Washington University School of Medicine

An alliance that began as a trusted handshake in 1931 became a formal affiliation in September 2003, when, after decades of working together, Washington University School of Medicine entered into an historic agreement with nearby Central Institute for the Deaf (CID) — one of the world’s leading education and research centers for hearing disorders. This affiliation transferred CID’s graduate training program, hearing research programs and adult audiology clinic, along with its state-of-the-art, 66,000-square-foot campus and research facilities, into the School of Medicine. These programs became known collectively as CID at Washington University School of Medicine.

The graduate degree programs in audiology, deaf education, and speech and hearing sciences moved into the School of Medicine’s newly formed Program in Audiology and Communication Sciences (PACS). The research and clinical programs moved into the Department of Otolaryngology, under the direction of Richard A. Chole, M.D., Ph.D., continuing to advance CID’s mission to help people with hearing loss and strengthening the research efforts in the fields of hearing and deafness of one of the largest otolaryngology departments in the world. Work also continues in the Harold W. Siebens Hearing Research Center, which houses the Fay and Carl Simons Center for Biology of Hearing and Deafness and the Center for Childhood Deafness and Adult Aural Rehabilitation.
The Spencer T. Olin Hearing Clinic remained on the CID campus as part of the Department of Otolaryngology’s Division of Adult Audiology. CID continued its affiliation with the programs by providing faculty and practicum sites as well as collaborating on applied research studies involving children with hearing loss. The CID at Washington University School of Medicine programs share the CID campus.

Courses

First Year

OTOLARYNGOLOGY CLINICAL SKILLS
Instructor: Joel A. Goebel, MD, 747-0553
Introductory lecture and group sessions pertaining to the complete head and neck examination. After the one-hour lecture, students will be divided into small groups to learn the otoscopic, nasal, oral cavity and neck examination to be proctored by physicians from the ENT department.

Second Year

M55 660B CLINICAL TOPICS IN OTOLARYNGOLOGY
Instructor: Brian Nussenbaum, MD, 362-6599
This course consists of eight introductory lectures on common diseases of the head and neck, including head and neck carcinoma, hearing loss and dizziness, neck masses, pediatric airway obstruction, sinusitis, otolaryngologic emergencies and facial fractures. Each lecture is highlighted by case presentations and treatment options in addition to pathophysiology. This course follows the physical examination practicum given earlier in the academic year.

Fourth Year

Electives

M55 801 OTOLARYNGOLOGY
Instructor: Joel Goebel, MD, 747-0553
Location: 9916 McMillan Hospital Building
Elective Contact: Maria Harrington, 747-0553
Other Information: Students considering a career in otolaryngology should speak to Dr. Goebel prior to scheduling this elective. Prior to first day of elective student should contact Dr. Goebel to discuss options of elective and to ascertain starting time and location.

Enrollment limit per period: 3/period for Weeks 1 and 5; 2/period for Weeks 9, 13, 17, 21, 25, 29, 33, 37 and 41.
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Four-week rotation includes evaluation of ENT problems presented to specialist for diagnosis and treatment. The student participates in the clinic, hospital and operating room. This also includes time on the Pediatric ENT Service, Audiology, Voice Laboratory and Vestibular Evaluation Laboratory. Option of rotation on the ENT Service at VAMC is available.

Student time distribution: Inpatient 40%, Outpatient 40%, Conferences/Lectures 20%; Primary Care 20%, Subspecialty Care 80%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 50
On call/weekend responsibility: Every fourth day

M55 802 GENERAL OTOLARYNGOLOGY
This two-week elective is an extremely flexible program consisting of several options:

**General Ear, Nose and Throat Service:** Student functions as a junior resident at either Barnes-Jewish Hospital or John Cochran VA Medical Center. At Barnes-Jewish Hospital participation in clinic, hospital inpatient and operating room settings would expose student to a broad spectrum of patients. At the VA Medical Center the emphasis would be on head and neck tumors.

**Head and Neck Service — Barnes-Jewish Hospital:** Student functions as junior resident on ENT hospital floor with great deal of exposure to head and neck surgery.

**Pediatric Otolaryngology — St. Louis Children’s Hospital:** Student participates as a junior resident, involved in pre- and postoperative surgical care as well as outpatient medical care.

**Preceptorships:** Student is assigned to a private practitioner’s office functioning in his/her office as well as hospital service.

Other options can be entertained and formulated according to the student’s particular needs. Students participating in this elective will be required to spend an afternoon or morning in the Audiology/Vestibular Laboratory learning fundamentals of audiological and vestibular evaluation. Attendance at Monday afternoon conferences as well as Grand Rounds on Wednesday mornings is expected.

**Student time distribution:** Inpatient 20%, Outpatient 70%, Conferences/Lectures 10%; Primary Care 40%, Subspecialty Care 60%

**Major teaching responsibility:** Attendings and residents

**Patients seen/weekly:** 60

**On call/weekend responsibility:** None
30%, Subspecialty care 70%
Major teaching responsibility: Attending physician and residents
Patients seen/weekly: 100
On call/weekend responsibility: At student's discretion

**M55 820 PRACTICUM IN ADULT CLINICAL AUDIOLOGY**
Instructor: Michael Valente, PhD, 362-7489
Location: 11th Floor, Center for Advanced Medicine (CAM)
Elective Contact: Michael Valente, PhD, 362-7489
Other Information: Students should contact Dr. Valente to schedule this elective.

Enrollment limit per period: 8
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Guidance provided in the administration and interpretation of audiometric tests. Emphasis on defining the severity of auditory dysfunction in addition to identifying sites of pathological processes. Theoretical bases of acoustics, anatomy and physiology, and electronics reviewed as they relate to auditory assessment. Modification of conventional test paradigms and hearing aid procedures covered according to each student's interests and needs.

Student time distribution: Inpatient 10%, Outpatient 80%, Conferences/Lectures 10%; Primary Care 50%, Subspecialty Care 50%
Major teaching responsibility: Audiology staff
Patients seen/weekly: 120
On call/weekend responsibility: None

**M55 831 NEUROTOLOGY**
Instructor: Joel Goebel, MD, 747-0553
Location: 9th Floor McMillan Hospital Building
Elective Contact: Maria Harrington, 747-0553
Other Information: Students should contact Dr. Goebel if interested in this elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Active student participation in the physical exam, advanced testing and management of patients with balance dysfunction. Attend patient clinic two days a week and test patients on ENG, rotary chair and computerized platform three days a week. Research participation welcome with prior arrangements.

Student time distribution: Outpatient 80%, Conferences/Lectures 20%; Primary Care 10%, Subspecialty Care 90%
Major teaching responsibility: Attending
Patients seen/weekly: 40
On call/weekend responsibility: None

**M55 833 AMBULATORY OTOLARYNGOLOGY FOR THE PRIMARY CARE PHYSICIAN**
Instructor: Joel Goebel, MD, 747-0553
Location: Barnes-Jewish Hospital and St. Louis Children’s Hospital clinics
Elective Contact: Maria Harrington, 747-0553
Other Information: Students should contact Maria Harrington, 9906 McMillan Hospital Building, 747-0553, prior to the start of this elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This course offers a four-week exposure to ambulatory care of patients with diseases of the head and
Eight half-day sessions per week will be offered in attending clinics for general otolaryngology, head and neck cancer, otology and pediatric otolaryngology. Two half-day sessions are reserved for audiology, vestibular lab and voice lab experience. Surgical exposure is available for selected cases as identified by the student and attending physician, but the main goal of this rotation is outpatient diagnosis and management.

Student time distribution: Outpatient 100%; Primary Care 50%, Subspecialty Care 50%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: >100
On call/weekend responsibility: None

**M80 841 ART OF ASKING QUESTIONS/PROBLEM SOLVING**

Instructor: J. Gail Neely, MD, 362-7344
Location: 9th Floor McMillan Hospital Building
Elective Contact: J. Gail Neely, MD, 362-7344
Other Information: Student should report to Carole Bradshaw, 804 McMillan Hospital Building, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Medical Intelligence: The Art of Asking Questions and Efficient Clinical Problem Solving. The pressures of continued learning, competitive residency searches and time constraints can erode the joy and the efficiency of the fundamental principles of medicine, the fiduciary responsibilities to appreciate human values, and to practice intelligent medicine. This is a one-on-one mentored program of independent study designed to increase the student’s efficiency and enjoyment of the intelligent practice of medicine. The student will set the course of study. Working with the mentor on a daily basis and using the facilities of the institution, the student will learn to efficiently think through clinical cases, to use science and the techniques of clinical medicine to expand his/her understanding of the topic, and to communicate effectively. The underlying efficiencies of thought pivot upon the art of asking questions while examining a patient and while reading for discovery.

Student time distribution: N/A
Major teaching responsibility: N/A
Patients seen/weekly: N/A
On call/weekend responsibility: None

**Research**

**(M55 900)**

The type of research will depend upon the current phase of the research program in each laboratory. Students should contact the director of each laboratory to negotiate.

Barbara A. Bohne, PhD, and Gary W. Harding, MSE, 2110 and 2154 Central Institute for the Deaf Building, 362-7497. The structure and function of the normal and damaged hearing organ, the organ of Corti, are studied in this laboratory. Several projects utilize the chinchilla for determining mechanisms of cell degeneration in the organ of Corti following exposure to different ototoxicants, particularly noise. The chinchilla is an excellent model for these studies because its hearing is similar to that of humans, it is free of spontaneous middle ear disease and it is feasible to perform surgery on its middle and inner ears, including survival surgery. Current projects involve: (a) Using an inert tracer particle injected in vivo into the endolymphatic space or perilymphatic space of the cochlea to determine if, when and for how long cell membranes are disrupted after a particular noise exposure; (b) Exposure to a damaging noise produces focal losses of outer hair cells and inner hair cells in the organ of Corti. The patterns of hair-cell loss in the low-frequency (i.e., apex) and high-frequency (i.e., base) of the organ of Corti are different, implying that different mechanisms are involved. We are trying to identify the mechanisms associated with the formation of focal losses of outer hair cells, inner hair cells, supporting cells and afferent nerve fibers following exposure to a high- or a
low-frequency noise; and (c) Several cell death pathways have been identified for outer hair cells following exposure to moderate- to high-intensity noise. In vivo treatment of the cochlea with the vital dye, trypan blue, allows us to identify cells with disrupted plasma membranes. By instilling trypan blue into the endolymphatic space or perilymphatic space, we can determine what portion of the hair-cell’s plasma membrane initially breaks down when the cell has been damaged. The long-term goal of this research is to identify pharmacological agents that will ameliorate or attenuate noise-induced hearing loss and aging-related hearing loss in humans.

Brian T. Faddis, PhD, 1020 McMillan Hospital Building, 747-3665, faddisb@wustl.edu. Mechanisms of middle/inner ear damage. Our lab is interested in the cellular and molecular mechanisms associated with cell injury and tissue destruction in the middle and inner ears. We are currently studying the ability of nitric oxide to activate osteoclastic bone resorption, commonly seen in such middle ear diseases as cholesteatoma and chronic otitis media. We are interested in the roles of specific isoforms of nitric oxide synthase and possible interactions between them. Another focus in the lab is the study of cellular mechanisms of noise-induced hearing loss and how this can be exacerbated by simultaneous exposure to environmental toxins such as common workplace chemicals. Again, nitric oxide may play a key role in this injury because of the variety of NOS isoforms present in these tissues.

A wide variety of techniques are employed to gain a broad understanding of these disease processes at molecular, cellular and organismal levels. We use real time RT-PCR and in situ hybridization to study changes in gene expression, cell and organ culture models to assess injury models in more controlled environments, histological techniques for routine light and electron microscopy, western blotting and immunofluorescence to examine protein and structural changes within cells and tissues, and auditory brainstem response thresholds to correlate hearing sensitivity to specific cellular and molecular challenges.

Students in the lab will typically take some time to become familiar with a variety of projects and techniques before selecting a specific area or project for more in-depth and independent study. Students or residents with specific but unrelated research questions that may benefit from the techniques we employ are also welcome to discuss the possibility of conducting these studies in the lab.

Joel A. Goebel, MD, 8th Floor McMillan Hospital Building, 747-0553. Clinical research testing of posture and ocular motor control. Projects include measurement of gaze stabilization during head movement, otolith input into dynamic subjective visual vertical measurements, outcomes in treatment for vestibular neuritis, evaluation of tactile stimulation for balance and oculomotor control and investigation of lingual stimulation for sensory substitution in bilateral vestibular loss patients.

Bruce H. Haughey, MD, 9903 McMillan Hospital Building, 362-0365. Work in progress is investigating the functional results of allotransplantation of the canine hemitongue. Successful recovery has been observed in five chronic animals, but inhibited in some cases by allograft rejection, despite immunosuppression. Much scope exists for further study of the immunosuppression of tongue tissue and its functional recovery. A new primate study is now approved. Also in progress are clinical studies of rehabilitation following reconstructive surgery of head and neck cancer resections, as well as a clinical database and a study of outcomes of treatment for recurrent head and neck cancer.

Stephen M. Highstein, MD, PhD, 4566 Scott Ave., East McDonnell Specialized Research Facility, 362-1012. The gain of the vestibulo-ocular reflex (VOR) in alert squirrel monkeys can be plastically adapted either acutely over 4-5 hours or chronically over weeks by employing visual/vestibular interactive stimulation. We study the neural substratum of motor learning and memory for this behavior with (a) intracellular and extracellular recording, (b) neuroanatomical techniques for marking single neurons, and (c) chemical block of selected CNS sites. The patterns of response of single and multiple neurons have led us to construct mathematical models of the neural circuits involved. Brain sites implicated include the brainstem and cerebellum.
We also study the determinants of the response dynamics (phase and gain) of the vestibular horizontal semicircular canal by (a) recording intracellularly from hair cells in situ in different regions of the crista, (b) patch-clamping hair cells isolated from defined regions of the crista, (c) measuring the motion of the cupula of the canal using laser interferometry and/or video microscopy, (d) injecting identified primary afferents with tracer to elucidate their peripheral origins and central projections, and (e) recording chronically in natural settings, from primary afferents and efferents that have regenerated through a multichannel sieve recording electrode. We have arrived at a general theory of the contributions of the biomechanical and neural factors that shape the responses of the canal nerve.

Timothy E. Hullar, MD, 2235 Central Institute for the Deaf Building, 362-8641. Vestibular anatomy and physiology. Our laboratory’s efforts reflect the principal investigator’s interest in problems of balance and equilibrium. We are pursuing three major directions. First, we use physiologic and anatomic techniques to understand the peripheral vestibular system’s remarkable ability to transmit accurate information regarding rotational and linear head rotations. The temporal resolution of the system in humans is 7 ms or better, while the spatial resolution is not as well known. Animal studies are required to determine the cellular basis for this ability, using light and electron microscopy, digital image processing and neural and eye movement recordings.

Second, dizziness remains a diagnostic and therapeutic challenge for all practitioners. We are developing novel tests of human vestibular function and improved techniques for replacement or rehabilitation of a damaged vestibular system in patients. Our studies with patients are aimed at making disequilibrium, which is an increasingly important symptom as the population ages, a condition which can be more accurately diagnosed and more effectively treated.

Finally, we are studying balance and equilibrium among marine mammals including sirenians, pinnipeds and cetaceans (whales and dolphins). Using anatomic studies as well as recordings on captive animals, we are exploring how these animals orient in their aquatic medium. This research has implications for understanding the effect of anthropogenic noise (i.e., sonar) on these animals.

A student’s involvement in the lab would be tailored to his or her background and interest. Possibilities range from hands-on animal surgery to analysis and interpretation of digitized anatomic images. Opportunities exist for summertime and school year projects as well as a yearlong full-time research experience.

Judith E.C. Lieu, MD, 3S35 Children’s Hospital and 8th Floor McMillan Hospital Building, 454-2138. Clinical outcomes research in pediatric otolaryngology. The Clinical Outcomes Research office performs clinical epidemiology and health services research. (Please reference the research elective offered by Dr. Jay Piccirillo in Otolaryngology for more details.) These techniques and methodologies are used to investigate clinical problems seen in pediatric otolaryngology. Projects include the follow-up and evaluation of newborn hearing screening programs, progression of hearing loss in children, and evaluation of unilateral hearing loss. Other projects of the student’s choosing that would utilize these research techniques may also be pursued.

J. Gail Neely, MD, 9902 McMillan Hospital Building, 362-7344. Facial motion analysis laboratory: Clinical research application of subtracted digitized image light reflectance. The student(s) will participate in videotaping normal subjects and patients with facial paralysis and synkinesis, in using a unique computer program to analyze dynamic surface deformations during facial expression, and using spreadsheet and statistical applications in order to quantitatively define outcomes during treatments of disorders of the facial nerve.

Kevin K. Ohlemiller, PhD, 2205 Central Institute for the Deaf Building, 747-7179, Gene/environment interactions in cochlear injury. We study the interaction of genes and environment that increase cochlear injury due to noise and ototoxic exposure, with an emphasis on how these may yield apparent presbycusis. Because cochlear function and injury is the same in mice and humans and
governed by the same genes, we use mostly mouse models. Methods employed include standard ABR assessment and intra-cochlear recording, quantitative light microscopy, immunohistochemistry and western blots. We also collaborate to map and perform expression profiling of genes that underlie traits we have discovered. We and our collaborators have identified specific genes and inbred strains of mice that mimic the three major forms of human presbycusis (sensory, neural and strial). Sensory presbycusis appears promoted by alleles and mutations that impair protective factors such as antioxidant enzymes, or that impair ion homeostasis. Neural presbycusis can be modeled by mutations that alter the function of cholinergic receptors. While we are not sure what types of genes and mutations can lead to strial presbycusis, we have discovered four mouse strains that show the key feature of this disease (age-related endocochlear potential reduction), and also show distinct types of strial pathology.

We have shown that some of the same gene alleles and mutations that promote presbycusis also promote cochlear noise injury. Such findings point to an interpretation of sensory presbycusis as principally cumulative injury. We have also published evidence for one or more QTLs that impact the qualitative character of noise injury. Important implications of our findings are (1) that there exists no single ‘mammalian’ archetype of cochlear noise injury, and (2) that injury to the organ of Corti and lateral wall are mechanistically and genetically independent.

Our research is eminently adaptable in difficulty and scale to students’ schedules and other requirements. Students may expect to learn the full range of methods we employ, including physiology, immunohistochemistry, histopathology and cellular/molecular techniques.

Jay F. Piccirillo, MD, 8th Floor McMillan Hospital Building, 362-8641. The Clinical Outcomes Research Office of the Division of Research performs basic and applied clinical epidemiology and health services research. Clinical epidemiology is the study of the diagnosis, prognosis and evaluation of treatment. Health service research is the study of the delivery of health care. The scientific methodology of clinical epidemiology is based on the architecture of clinical research, biostatistics and data processing. Current projects include studying the impact of comorbidities on treatment and outcome for patients with cancer and the impact of a web-based cancer patient-specific prognostic information (Prognostigram) on treatment choices, outcomes and satisfaction with care. We also conduct research into treatment and outcomes for patients with tinnitus. Using clinical epidemiology methodology, we can also study a variety of other diseases.

Faculty

RICHARD A CHOLE, MD, PHD Head of the Department of Otolaryngology, Lindburg Professor of Otolaryngology
MARC BRUCE ABRAMS, DDENT Instructor in Clinical Otolaryngology
BENARD C ADLER, MD Professor Emeritus of Clinical Otolaryngology
NAWAL MONA AHMED Instructor in Clinical Otolaryngology (DDS)
LOUIS ALTSHULER, DDENT Assistant Professor Emeritus of Clinical Otolaryngology
MURRAY HOWARD APPELBAUM, DDENT Instructor in Clinical Otolaryngology (DMD)
SEAN B BAILEY, MD Instructor in Clinical Otolaryngology
JIANXIN BAO, PHD Research Associate Professor of Otolaryngology
DENNIS L BARBOUR, MD, PHD Assistant Professor of Otolaryngology
PERRY J BARTELS, DDENT Instructor in Clinical Otolaryngology
PABLO M BLAZQUEZ GAMEZ, PHD Research Assistant Professor of Otolaryngology
BARBARA ANN BOHNE, PHD Professor of Otolaryngology (Neurobiology)
GREGORY HARRIS BRANHAM, MD Associate Professor of Otolaryngology
DOUGLAS A CARANO, DDENT Instructor in Clinical Otolaryngology (DDS)
CHAD PHADUNG CHADARATANA, MD Instructor in Clinical Otolaryngology
MARK A CHECCONE, MD Assistant Professor of Otolaryngology
JOHN N CHIAPEL Instructor in Clinical Otolaryngology
WILLIAM W. CLARK, PHD Professor of Otolaryngology
GENE C COHEN, DDENT Instructor in Clinical Otolaryngology (DDS)
SHELDON C COHEN, DDENT Instructor in Clinical Otolaryngology
WILLIAM MARK COHEN, DDENT Instructor in Clinical Otolaryngology (DMD)
SHARON L. COLLINS, MD, PHD Associate Professor of Otolaryngology
JOHN MICHAEL CONOYER, MD Instructor in Clinical Otolaryngology
LISA S. DAVIDSON, PHD Research Assistant Professor of Otolaryngology
RICHARD DAVIDSON, DDENT Instructor in Clinical Otolaryngology (DMD)
INDRANIL DEBNATH, MD Assistant Professor of Otolaryngology
JASON ANTHONY DIAZ Assistant Professor of Otolaryngology
J. DAVID DICKMAN, PHD Associate Professor of Otolaryngology
ANDREW J. DRESCHER, MD Assistant Professor of Otolaryngology
NORMAN STEVEN DRUCK, MD Assistant Professor of Clinical Otolaryngology
TAMARA KAY EHLERT, MD Instructor in Clinical Otolaryngology
CARL F EHRLICH, MD Assistant Professor of Otolaryngology
BRIAN T FADDIS, PHD Research Assistant Professor of Otolaryngology
JAMES A FERNANDEZ, MD Instructor in Clinical Otolaryngology
JEFFREY T FIERSTEIN, MD Assistant Professor of Clinical Otolaryngology
DEBRA FINK, DDENT Instructor in Clinical Otolaryngology (DMD)
JILL B FIRSZT, PHD Associate Professor of Otolaryngology
JOHN MURRAY FREDRICKSON, MD Professor Emeritus of Otolaryngology
WILLIAM D GAY, DDENT Christy J. and Richard S. Hawes III Associate Professor of Otolaryngology
ANNE ELIZABETH GETZ, MD Assistant Professor of Otolaryngology
JOEL GOEBEL, MD Professor of Otolaryngology, Vice Chairman of Otolaryngology
RICHARD I GOLDBERG, DDENT Instructor in Clinical Otolaryngology (DMD)
BARRY STEVEN GOLDENBERG, DDENT Instructor in Clinical Otolaryngology (DMD)
JAMES DEAN GOULD, MD Instructor in Clinical Otolaryngology
JASON M. HANSON, MD Instructor in Clinical Otolaryngology
GARY WILLIAM HARDING Retiree-Research Associate Professor of Otolaryngology
BRUCE H HAUGHEY, MBCHB Joseph B Kimbrough Professor of Otolaryngology
JAY FREDRICK HAUSER, DDENT Instructor in Clinical Otolaryngology
HEATHER HAYES, MA Assistant Professor of Otolaryngology
JACQUES A HERZOG, MD Assistant Professor of Clinical Otolaryngology
KEIKO HIROSE, MD Associate Professor of Otolaryngology, Vice Chairman of Otolaryngology
IRA J. HIRSH, PHD, MA Research Professor of Audiology in Otolaryngology
LAWRENCE M HOFFMAN, DDENT Instructor in Clinical Otolaryngology (DMD)
DEE JAY HUBBARD, PHD, MA Adjunct Assistant Professor of Otolaryngology (Speech Pathology)
TIMOTHY EVERETT HULLAR, MD Assistant Professor of Otolaryngology
DONALD R INGRAM, MD Assistant Professor Emeritus of Clinical Otolaryngology
ARNOLD SCOTT JACOBSON, DDENT Instructor in Clinical Otolaryngology (DMD)
SUSAN JERGER Adjunct Research Professor of Otolaryngology
TIMOTHY N KAISER, MD Assistant Professor of Clinical Otolaryngology
EUGENIA KARDARIS Instructor in Clinical Otolaryngology (DDS)
ANDREW M KIM, DDENT Instructor in Clinical Otolaryngology
JUNE LESLIE KLEINFELD, DDENT Instructor in Clinical Otolaryngology (DMD)
GEORGE R KLETZKER, MD Assistant Professor of Clinical Otolaryngology
KENNETH E KRAM, DDENT Instructor in Clinical Otolaryngology (DMD)
LAURENCE A LEVINE, DDENT, MD Associate Professor of Clinical Otolaryngology
JAMES S. LEWIS, JR, MD Assistant Professor of Otolaryngology
JUDITH E LIEU, MD Assistant Professor of Otolaryngology
MICHAEL LILLMARS, DDENT Instructor in Clinical Otolaryngology (DDS)
ROBERT DOUGLAS LOWE, DDENT Instructor in Clinical Otolaryngology (DMD)
RICHARD W MAACK, MD Instructor in Clinical Otolaryngology
ROBERT R MAC DONALD III, MD Instructor in Clinical Otolaryngology
SUSAN E MACKINNON, MD Professor of Otolaryngology
KAMLESH R MAKWANA, DDENT Instructor in Clinical Otolaryngology (DDS)
MARSHALL S MANNE, DDENT Instructor in Clinical Otolaryngology (DDS)
PHILIP LATHAM MARTIN, MD Associate Professor of Clinical Otolaryngology
ALICIA B MATAYOSHI Instructor in Clinical Otolaryngology (DDS)
CLAIRE MATTHEWS, PHD Adjunct Assistant Professor of Otolaryngology (Speech Pathology)
SCOTT A MCCLAIN, DDENT Instructor in Clinical Otolaryngology (DDS)
MURRAY D MCGRADY, MD Instructor in Clinical Otolaryngology
JOHN W MCKINNEY, MD, BS Instructor in Clinical Otolaryngology
DAVID W. MOLTER, MD Associate Professor of Otolaryngology
STEWARD EDWARD MORELAND, DDENT Instructor in Clinical Otolaryngology (DMD)
NANCY TYE MURRAY, PHD Research Professor of Otolaryngology
JOHN GAIL NEELY, MD Professor of Otolaryngology
JOHANNA GRANT NICHOLAS, PHD Research Associate Professor of Otolaryngology
BRIAN NUSSENBAUM, MD Vice Chair for Clinical Affairs, Department of Otolaryngology, Associate Professor of Otolaryngology
MARGARET A OGDEN, MD Assistant Professor of Otolaryngology
KEVIN KENNETH OHLEMILLER, PHD Research Associate Professor of Otolaryngology
RANDAL C PANNIELLO, MD, MS, BS Associate Professor of Otolaryngology
MARGARET GRACE PEAK, PHD Adjunct Assistant Professor of Otolaryngology (Audiology)
MICHAEL JAMES PERNOUD, DDENT Instructor in Clinical Otolaryngology
SUPOTE PHIPATANAKUL, MD Assistant Professor of Clinical Otolaryngology
JAY FRANCIS PICCIRILLO, MD Professor of Otolaryngology
GERALD RAYMOND POPELKA  Adjunct Professor of Otolaryngology
LISA GAYLE POTTS, PHD  Research Instructor in Otolaryngology
JULIE L RING, DDS  Instructor in Clinical Otolaryngology (DDS)
ROBERT V RIVLIN, DDS  Instructor in Clinical Otolaryngology (DMD)
ALBERT F RUEHL, MD  Assistant Professor of Clinical Otolaryngology
ALEC N SALT, PHD  Professor of Otolaryngology
RICHARD E SCHRICK, MD  Instructor in Clinical Otolaryngology
ALLEN SCLAROFF, DDS  Professor of Clinical Otolaryngology (Oral Surgery)
KARL SHANKER, DDS  Instructor in Clinical Otolaryngology (DDS)
PETER GAILLARD SMITH, MD, PHD  Assistant Professor of Clinical Otolaryngology
JULES M SNITZER, DDS  Instructor in Clinical Otolaryngology (DDS)
GERSHON J SPECTOR, MD  Professor of Otolaryngology
MALCOLM H STROUD, MD  Professor Emeritus of Otolaryngology
ISOLDE E THALMANN, PHD  Research Professor Emeritus of Otolaryngology
RUEDIGER THALMANN, MD  Lecturer in Otolaryngology, Professor Emeritus of Otolaryngology
STANLEY E THAWLEY, MD  Associate Professor of Otolaryngology
HERMAN TURNER, DDS  Instructor in Clinical Otolaryngology
ROSALIE MAY UCHANSKI, PHD  Research Assistant Professor of Otolaryngology
RAVINDRA UPPALURI, MD, PHD  Assistant Professor of Otolaryngology
LORA MAUREEN VALENTE, PHD  Associate Professor of Otolaryngology
MICHAEL VALENTE, PHD  Professor of Otolaryngology (Audiology)
THOMAS J VERALDI, DDS  Instructor in Clinical Otolaryngology
WAYNE A VIERS, MD  Associate Professor of Clinical Otolaryngology
MARK EDWARD WARCHOL, PHD  Research Professor of Otolaryngology
CALVIN H WEISS, DDS  Instructor in Clinical Otolaryngology (DDS)
ALAN P WILD, MD  Instructor in Clinical Otolaryngology

Department's Web Site

http://ent.wustl.edu/

Department of Pathology and Immunology

The Department of Pathology and Immunology is involved in the clinical diagnosis and monitoring of disease, in the teaching of Pathology and Immunology, and in research on the molecular basis of disease and immunology.

The Department is responsible through its divisions for studying the pathogenesis and the biochemical and anatomical basis of diseases. Pathologists do research on disease processes using molecular, genetic and structural analysis. Pathologists have the responsibility for the cytological and anatomical diagnosis of diseases and for developing novel structural and molecular approaches for the analysis of them, particularly cancers and infectious diseases. The divisions of Anatomic and Molecular Pathology (with Peter A. Humphrey, MD, PhD, as chief and John D. Pfeifer, MD, PhD, as associate chief, Laboratory and Genomic Medicine (headed by Jack H. Ladenson, PhD) and
Neuropathology (headed by Robert E. Schmidt, MD, PhD) have faculty involved in teaching, clinical service and research. Prominent areas of research include experimental diabetes, hematology, bone pathophysiology, cancer, and gastrointestinal and vascular pathology.

The department teaches an extensive course in the second year of the curriculum and presents a number of conferences that third- and fourth-year students can attend. The department also offers a number of clerkships. The coursemaster of the second-year Pathology course is Erika C. Crouch, PhD, MD. Students can take clerkships in Autopsy Pathology, Surgical Pathology or Laboratory Medicine, or participate in the research activities of the faculty.

The Division of Immunobiology integrates immunobiology activities in the School. It is responsible for the teaching of immunology in the first year of the curriculum (Andrey S. Shaw, MD, is the coursemaster) and for conducting basic research in immunobiology and in the immunological basis of disease.

Many faculty in the department are involved in graduate teaching and participate in the various programs offered by the Division of Biology and Biomedical Sciences. The department has strong participation in the Immunology Graduate Program, which is headed by Barry P. Sleckman, MD, PhD.

Courses

First Year

M30 523 IMMUNOLOGY
Instructors: Andrey S. Shaw, MD, 362-4614; Emil R. Unanue, MD, 362-7440; John P. Atkinson, MD, 362-8391; Robert D. Schreiber, PhD, 362-8748; Barry P. Sleckman, MD, PhD, 747-8235; Herbert W. Virgin IV, MD, PhD, 362-9223
This course consists of lectures, laboratory exercises and small group discussions. It covers all aspects of the immune response — general properties of the immune system, effector molecules, cells and their function, cellular interactions and immunological diseases. The Immunology course requires a strong background in biochemistry, genetics and cell biology. Some of the basic concepts from these fields should be reviewed during the course. There are two laboratory sessions. These will cover the areas of blood typing/blood banking and allergy. In these laboratories, students will type blood and be tested for allergies. POPS (Patient Oriented Problem-Solving System in Immunology) will also be used during each laboratory session and contain a clinical problem that is analyzed and solved by small groups of three to four students. There are five hours of small group clinical discussion sessions. In these sessions, students meet with physicians to discuss the role of immunology and a particular human disease. The Immune System (latest edition) by Peter Parham is used. For the small group clinical sessions, the latest edition of the textbook Case Studies in Immunology: A Clinical Companion by Rosen and Geha will be used. There will be an online self assessment (multiple-choice and true/false), a take-home exam (essay questions) and a formal final exam (multiple choice and short answer) on the topics described in the lectures and in the laboratory sessions. This course is restricted to medical students only.

Second Year

M60 665 PATHOLOGY
Instructor: Erika C. Crouch, PhD, MD, 454-8462
This course provides a comprehensive survey of the biology and morphology of human disease through a combination of lectures and laboratory/case study sessions. The year begins with a review of basic disease mechanisms at the cellular and molecular level. Subsequently, the pathogenesis and characteristics of important diseases involving each organ system of the body are presented. Considerable emphasis is placed on learning the “language” of human disease. During the year, students become familiar with the methods of contemporary pathologic analysis. They also learn how the results of pathologic studies are used in the clinical setting to establish diagnoses, to assess
prognosis and response to therapy, and to evaluate the quality of patient care.

Third Year

Conferences

Tumor Conference
One hour each week for 12 weeks during the Surgery and Obstetrics and Gynecology clerkships. Problem cases are presented for illustration and discussion of all aspects of neoplastic disease. Instructors: Staff

Fourth Year

Electives

M60 805 AUTOPSY PATHOLOGY
Instructor: Louis P. Dehner, MD, 362-0150
Location: West Building
Elective Contact: Louis P. Dehner, MD, 362-0150
Other Information: Students should contact Dr. Dehner prior to scheduling this elective.
Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 13, 17, 21, 25, 29, 33, 37 and 41.

This full-time elective is designed to introduce students to autopsy pathology. Students will assist in performing autopsies, and together with the first-year pathology residents, will participate in all of the activities of the Autopsy Service including brain cutting, specialty microscopic conferences and weekly autopsy case conferences. Students will be under the direction of senior pathology faculty.
Student time distribution: Autopsy Activities 75%, Conferences/Lectures 25%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: N/A
On call/weekend responsibility: None

M60 807 DERMATOPATHOLOGY
Instructor: Anne Lind, MD, 362-0117
Location: 3rd Floor, Peters Building, Room 300N
Elective Contact: Anne Lind, MD, 362-0117
Other Information: Students will meet on the 3rd Floor, Peters Building, Room 300N, 9 a.m. first day of elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 25, 29 and 33

The student will be involved in all activities of the dermatopathology service. These include review, discussion and sign-out of gross and microscopic skin specimens. Sign-out occurs each day with a team that includes the attending, fellow and residents from both dermatology and pathology. Study sets are available if an area of special interest is expressed by the student. Each week of the rotation, the student will be asked to present a brief discussion of an interesting case that was seen during sign-out. These are informal, at-the-microscope discussions. Conferences include the 8 a.m. pathology conferences, which are optional, but strongly encouraged. Dermatology Grand Rounds and dermatopathology slide review conferences are held on Thursday mornings and are mandatory. The primary goal of this elective is to acquire basic competence in the diagnosis of skin diseases at the microscopic level. A secondary goal is to acquire understanding of the structure and function of the laboratory at the technical, administrative and medical professional level as it pertains to skin specimens.
Student time distribution: Inpatient 5%, Outpatient 80%, Conferences/Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Dr. Anne Lind and two other dermatopathologists
Patients seen/weekly: Average number of specimens per week is 300; percentages above reflect specimens, not patients.
On call/weekend responsibility: None

**M60 815 OB-GYN PATHOLOGY SUBINTERNSHIP**
Instructor: Phyllis Huettner, MD, 362-0118
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Phyllis Huettner, MD, 362-0118
Other Information: Students report to Dr. Huettner’s office, 300S Peters Building, Barnes-Jewish Hospital, South Campus, 9 a.m. first day of elective.
Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The elective stresses the principles of anatomic pathology when applied to operative material in obstetrics and gynecology. The subintern will examine gross and microscopic specimens in the Ob-Gyn Pathology Lab and review pertinent literature with a senior pathologist. Ample time will be available for attending regular conferences in ob-gyn and pathology.
Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: N/A
On call/weekend responsibility: None

**M60 820 SURGICAL PATHOLOGY-BARNES-JEWISH HOSPITAL**
Instructor: Samir El-Mofty, MD, 362-2681, elmofty@wustl.edu
Location: Division of Surgical Pathology, 3rd Floor Peters Building, Barnes-Jewish Hospital, South Campus
Elective Contact: Phyllis Huettner, MD, 362-0118, huettner@path.wustl.edu
Other Information: See the pathology web site for detailed orientation and introductory information (http://pathimm.wustl.edu/). Please call or e-mail Dr. Huettner at least one week prior to the elective to discuss individual goals and interests.
Enrollment limit per period:
In order to permit maximum interaction with the surgical pathology staff and house staff, the elective is limited to three students per four-week block. For the initial round of scheduling, the available slots are allotted to accommodate two fourth-year students and one third-year student during the first three blocks and then one fourth-year student and two third-year students in the remaining blocks. Any open slots after the original scheduling period are then made available to third- and fourth-year students on a first-come, first-serve basis. Contact your scheduling office for details.

This elective is designed to familiarize students with the discipline of surgical pathology and to encourage the development of basic skills in gross pathology and histopathological interpretation. The Laboratory of Surgical Pathology at Barnes-Jewish Hospital receives a broad range of medical biopsy material in addition to specimens derived from the busy surgical subspecialty practices. As a result, this elective is beneficial not only for students considering a career in pathology, but also for students planning careers in internal medicine, surgery, obstetrics-gynecology, pediatrics, radiology, radiation oncology and dermatology. Students on this elective will (1) Learn how patient specimens are received and processed, (2) Acquire skills in the gross examination and microscopic diagnosis of disease through active participation and (3) Learn the role of the pathologist in the preoperative, intraoperative and postoperative care and management of patients. Students will function as junior house staff, managing their own cases with supervision from residents, fellows and attending pathologists. Students may also wish to participate in ongoing research projects within the Department as time and interest allow. The daily schedule for students begins at 8 a.m. with morning conference. In general, the student will be able to complete all gross examination and sign-out activities by 4:30 p.m. Students are welcome to stay beyond 4:30 p.m. to participate in any of the academic or other working activities of the Division.
Student time distribution: Clinical duties 85%, Conference/Lectures 15%
Major teaching responsibility: Attending staff, residents and fellows
M60 825 INTRODUCTION TO NEUROPATHOLOGY
Instructor: Robert E. Schmidt, MD, PhD, 362-7426
Location: West Building
Elective Contact: Robert E. Schmidt, MD, PhD, 362-7426
Other Information: Students report to 3720 Neuropathology, West Building, 9 a.m. first day of elective.
Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 13, 17, 21, 29, 33, 37 and 41.

The course is structured to give the student a full-time immersion in the specialty of neuropathology including both neurosurgical and neuropathology derived material. There are daily didactic sessions that cover the spectrum of neurological diseases, review gross and microscopic neuro-anatomy, discuss approaches to the diagnosis of nervous system disease, and point out the interrelationships of research to clinical problems. Multiple clinical conferences and diagnostic working sessions complement reading, use of a large microscopic Divisional study set and project work. Time: 35 to 40 hours per week.
Student time distribution: Conferences/Lectures 100%; Subspecialty Care 100%
Major teaching responsibility: Attendings and fellows
Patients seen/weekly: N/A
On call/weekend responsibility: None

M60 860 CLINICAL LABORATORY MEDICINE-BARNES-JEWISH HOSPITAL
Instructor: Charles Eby, MD, 362-3186
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Jenny Adams, 362-3110
Other Information: Students meet in chief resident’s office, 2nd Floor Barnes-Jewish Hospital, South Service Building, 8:30 a.m. first day of elective.
Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: 13, 17, 21, 29, 33, 37 and 41.

This elective is designed to teach the student how clinical assays are used in the diagnosis of disease and how the tests are actually performed in the clinical laboratory. The four-week elective includes rotations through laboratories in clinical chemistry, clinical microbiology, transfusion medicine and hematology. During the elective the student will have a daily schedule, which includes regular didactic sessions with senior staff and house staff. Particularly useful clinical skills to be acquired include morphology of peripheral blood smears and bone marrow biopsies; interpretation of coagulation tests, cardiac enzyme and serum protein electrophoresis patterns; appropriate use of blood component therapy and indications for therapeutic apheresis; and identification of infectious organisms. Students will be given the opportunity to present and lead case discussions during this elective.
Student time distribution: Inpatient 25%, Conferences/Lectures 75%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 5
On call/weekend responsibility: None

M25 883 TRANSFUSION MEDICINE
Instructor: Douglas Lublin, MD, PhD, 747-0687
Location: Barnes-Jewish Hospital
Elective Contact: Mary Madden, 747-0687
Other Information: Students should discuss their rotation with Dr. Lublin and staff in advance. Students should meet the team at the Center for Pheresis on the 4th floor of the CAM at 9:30 a.m. first day of the elective. Contact resident on beeper 424-1154 if you have questions.
Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to introduce the student to the clinical aspects of blood banking and transfusion medicine. The four-week elective will consist of regular didactic sessions with senior staff, teaching conferences and participation in daily clinical rounds. The student will develop clinical skills in areas related to transfusion practice, blood conservation and evaluation of transfusion reactions. Complex hematologic diseases such as the coagulopathies and diseases that require pheresis will serve to instruct in current clinical practice along with evolving applications of interventional hematology, such as photopheresis and peripheral stem cell harvest for marrow transplantation.

Student time distribution: For July, November and March: Inpatient 30%, Outpatient 30%, Conferences/Lectures 40%; For remainder of year: Inpatient 40%, Outpatient 40%, Conferences/Lectures 20%; Subspecialty Care 100%

Major teaching responsibility: Attendings
Patients seen/weekly: 40-60
On call/weekend responsibility: None

Research

(M60 900)

Paul M. Allen, PhD, 7th Floor Clinical Sciences Research Building, 362-8758. Research in immunology. The recognition of antigen by T cells. We are investigating how the T cell receptor functions developmentally, biochemically and structurally. We utilize in vivo models to study alloreactivity/graft rejection and the pathophysiological mechanisms involved in rheumatoid arthritis.

Jacques U. Baenziger, MD, PhD, 7th Floor Clinical Sciences Research Building, 362-8730. Glycobiology, informational role of carbohydrates in protein targeting and reproductive endocrinology.

Erika C. Crouch, MD, PhD, 454-8462. The structure and function of collagenous carbohydrate bindings' proteins known as collectins. We are actively investigating the structure, function, synthesis, assembly and secretion of SP-D — a lung surfactant associated collectin that contributes to the innate pulmonary host defense against a wide variety of important bacterial, fungal and viral pathogens. The laboratory is studying the human SP-D promoter and using site-directed mutagenesis to examine the structural requirements for assembly, secretion and biologic activity.

Jeffrey I. Gordon, MD, 5th Floor 4444 Forest Park, 362-7243. Genomic and metabolic foundations of symbiotic host-microbial interactions in the human gut; impact on obesity and malnutrition.


Michael McDaniel, PhD 3709 West Building, 362-7435. The focus of this laboratory is to study the function and growth of pancreatic islets in Types 1 and 2 diabetes. Mammalian target of rapamycin (mTOR) is a protein kinase that integrates signals from growth factors and nutrients to regulate DNA and protein synthesis. G protein-coupled receptor agonists, such as GLP-1, have been shown to enhance proinsulin biosynthesis and secretion, and stimulate cellular growth and proliferation. Our objective is to further explore the mechanisms of action of GLP-1 to enhance DNA and protein synthesis via mTOR in rodent and human islets. These studies are of fundamental interest in optimizing mTOR to induce cellular growth and proliferation to: (1) enhance pre- and post- islet transplantation in Type 1 diabetes and (2) prolong β-cell compensation in response to insulin resistance in Type 2 diabetes. β-cell failure in obesity-associated Type 2 diabetes is believed to correlate with the intracellular accumulation of lipids that contribute to defects in insulin secretion and
maintenance of β-cell mass. Our studies have identified lipoprotein lipase in β-cells, a key enzyme for catalyzing the hydrolysis of lipoprotein-associated TAG, to produce free fatty acids (FFA) for local cellular uptake. We are also characterizing the effects of enhanced FFA uptake through fatty acid transporters and determining the regulation of lipid droplet synthesis and breakdown by lipid droplet associated proteins. Recent studies suggest that FFA up-regulate mitochondrial uncoupling proteins proposed to dissipate the proton gradient across the mitochondrial inner membrane. The objective of this study is to delineate the link between FFA and β-cell mitochondrial dysfunction in Type 2 diabetes.

Jeffrey D. Milbrandt, MD, PhD, 101 Biotechnology Center, 362-4650. We have several ongoing projects in our laboratory. (1) The biological function of the GFL family of neurotrophic factors (GDNF, neurturin, persephin and artemin) that signal through a receptor complex containing the Ret tyrosine kinase. These factors promote survival of multiple neuronal populations including dopaminergic neurons, which degenerate in Parkinson's disease, motor neurons, which are affected in Lou Gehrig's disease and most neurons of the peripheral nervous system. (2) The biological roles of Egr2/Nab2 in regulating the Schwann cell myelination program and how abnormal function of these transcription factors result in peripheral neuropathies. (3) The development of prostate cancer, especially the role of Egr1 in regulating the PIN to invasive carcinoma transition and the role of the Nkx3.1 homeodomain protein in tumor initiation.

Jason C. Mills, MD, PhD, Room 1030 Clinical Sciences Research Building North Tower, 362-4213. We investigate the differentiation of epithelial stem cells in the upper GI tract. We study how genes regulate differentiation in mouse models and in vitro in tissue culture, and we correlate our findings with human tissue specimens. Specific projects include: (1) understanding how inflammation leads to aberrant differentiation (metaplasia), which is a precursor for cancer; (2) elucidating how master regulatory transcription factors like Xbp1 and Mist1 coordinate the massive cytoskeletal and organellar expansion of specialized secretory cells as they differentiate from stem cells; and (3) comparing and contrasting the roles of Xbp1 and Mist1 in development of plasma cells (where both genes are also expressed) and in gastrointestinal secretory cells.

Curtis A. Parvin, PhD, 2435 Barnes-Jewish Hospital, North Campus, 454-8436. The application of biostatistical theory to data analysis issues in laboratory medicine, with particular emphasis on statistical approaches to characterizing the performance and quality of laboratory tests.

Robert E. Schmidt, MD, PhD, 3rd Floor West Building, 362-7429. Areas of research interest in this laboratory include: (1) the development and characterization of an experimental model of diabetic autonomic neuropathy in several mouse models; (2) human sympathetic nervous system in aging and diabetes; (3) susceptibility of subpopulations of sympathetic neurons to experimental injury; (4) the role of oxidative stress in the pathogenesis of experimental diabetic autonomic and age-related neuropathy; (5) treatment with novel therapeutic agent.


Barry Sleckman, MD, PhD, 4711 West Building, 747-8235. Cellular immunology; repair of DNA damage; Mechanisms of chromosomal translocations.
Carl H. Smith, MD, St. Louis Children’s Hospital, 454-6029. Placental transport and surface membrane structure and function.

Thaddeus S. Stappenbeck, MD, PhD, Room 1020 Clinical Sciences Research Building North Tower, 362-4214. My lab studies the pathogenesis of inflammatory bowel disease including epithelial regeneration in response to injury, host gene mutations that predispose to IBD and host-microbe interaction that incite the pathology.

Steven Teitelbaum, MD, Barnes-Jewish Hospital, 454-8463. Cellular and molecular mechanisms of bone remodeling with particular emphasis on osteoclast biology as relates to pathogenesis and prevention of diseases, such as osteoporosis. We focus on integrin and cytokine biology utilizing a variety of genetically-manipulated mice.

John Turk, MD, PhD, 6609 Wohl, 362-8190. Studies focus on the role of phospholipase A2 (PLA2) enzymes in the regulation of insulin secretion from pancreatic islet beta cells. A novel PLA2 that does not require calcium ions has been cloned from rat and human islets that appears to participate in beta cell secretion and proliferation. Further studies of the role of this enzyme in these processes, its post translational modifications, and its interactions with other proteins involve molecular biologic manipulation of expression of the enzyme in cultured beta cells and intact mice. Mass spectrometric characterization of complex lipids and proteins is an important tool in these studies.

Emil R. Unanue, MD, 3701 West Building, 362-7440. Research in immunobiology/immunopathology. Examination of cellular interactions resulting in immune induction and cellular immunity. These cellular interactions are being studied in normal, in infectious processes and in autoimmune diseases. The focus is to identify the proteins responsible for activation of lymphocytes in Type 1 diabetes as well as in infection with the intracellular pathogen Listeria monocytogenes.

Herbert Virgin, MD, PhD, 1754 West Building, 362-9223. We work on issues at the interface of virology and immunology by analyzing aspects of viral immunity, viral pathogenesis and viral genetics that contribute to virulence and disease. We focus on latency and pathogenesis of herpes viruses.

Mark A. Watson, MD, PhD, Barnes-Jewish Hospital, Room 2316 Kingshighway Building, 454-7919. Our laboratory is interested in defining gene transcriptional programs associated with the early progression of human breast cancer. The experimental approach utilizes histopathological review and laser capture microdissection of tumor tissue from patient biopsies coupled with state-of-the-art quantitative RT-PCR, DNA expression microarray, and tissue microarray technologies. Using bioinformatics and statistical analysis of microarray data, we are defining gene expression profiles associated with breast tumor progression, from cellular atypia to invasive disease. Individual genes and signaling pathways identified will be used to better understand the biology of breast cancer, to identify novel diagnostic markers, and to develop strategies for new, targeted therapies. Similar approaches using DNA microarrays and bioinformatics are being applied to molecularly classify several other types of inherited and sporadic solid tumor neoplasms.

Faculty

HERBERT W VIRGIN, IV, MD, PHD Head of the Department of Pathology and Immunology, Mallinckrodt Professor of Pathology and Immunology
PAUL M ALLEN, PHD Robert L. Kroc Professor of Pathology and Immunology
DONALD CRAIG ALLRED, MD Professor of Pathology and Immunology
JACQUES ULRICH BAENZIGER, MD, PHD Professor of Pathology and Immunology
MELISSA ANNE BARROW, PHD Research Instructor in Pathology and Immunology
DEEPTA BHATTACHARYA, PHD Assistant Professor of Pathology and Immunology
MOREY A BLINDER, MD Assistant Professor of Pathology and Immunology
GEORGE JOHN BROZE, JR, MD Professor of Pathology and Immunology
ELIZABETH M BRUNT, MD Professor of Pathology and Immunology
NIGEL JOHN CAIRNS, PHD Research Associate Professor of Pathology and Immunology
DENGFENG CAO, MD, PHD Assistant Professor of Pathology and Immunology
BEATRIZ M CARRENO, PHD Research Assistant Professor of Pathology and Immunology
JAVIER A CARRERO-BREWER Research Instructor in Pathology and Immunology
MARINA CELLA, MD Research Associate Professor of Pathology and Immunology
SASO CEMERSKI, PHD Research Instructor in Pathology and Immunology
SZEMAN RUBY CHAN, PHD Research Instructor in Pathology and Immunology
HUGH CHAPLIN, JR, MD Professor Emeritus of Pathology
EMILY CHENG, MD, PHD Assistant Professor of Pathology and Immunology
REBECCA D CHERNOCK, MD Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
KYUNGHEE CHOI, PHD Associate Professor of Pathology and Immunology
MARCO COLONNA, MD Professor of Pathology and Immunology
JANET M CONNOLLY, PHD Research Professor of Pathology and Immunology
JOSEPH C. CORBO, MD, PHD Assistant Professor of Pathology and Immunology
ERIKA C CROUCH, MD, PHD Professor of Pathology and Immunology
GAUTAM DANTAS, PHD Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
LOUIS P DEHNER, MD Professor of Pathology and Immunology
GEORGE J DESPOTIS, MD Associate Professor of Pathology and Immunology
MICHAEL DIAMOND, MD, PHD Professor of Pathology and Immunology
DENNIS J. DIETZEN, PHD Associate Professor of Pathology and Immunology
JOHN F DIPERSIO, MD, PHD Associate Professor of Pathology and Immunology
JAMIE K DONNELLY, MD Assistant Professor of Pathology and Immunology
WILLIAM MICHAEL DUNNE, JR., PHD Professor of Pathology and Immunology
TIMOTHY J EBERLEIN, MD Professor of Pathology and Immunology
CHARLES S EBY, MD Associate Professor of Pathology and Immunology
SAMIR KHATTAB EL-MOFTY, DDENT, PHD Associate Professor of Pathology and Immunology
THOMAS A FERGUSON, PHD Associate Professor of Pathology and Immunology
DOROTHY J FIETE Research Instructor in Pathology and Immunology
JOHN LAWRENCE FRATER, MD Assistant Professor of Pathology and Immunology
DAVED H FREMONT, PHD Associate Professor of Pathology and Immunology
ANTHONY RAYMOND FRENCH, MD, PHD Assistant Professor of Pathology and Immunology
ANDREW E. GELMAN, PHD Assistant Professor of Pathology and Immunology
SUSAN GILFILLAN, PHD Research Assistant Professor of Pathology and Immunology
JEFFREY I GORDON, MD Professor of Pathology and Immunology, Dr Robert J Glaser Distinguished University Professor
TIMOTHY A. GRAUBERT, MD, BA Associate Professor of Pathology and Immunology
JONATHAN M GREEN, MD Assistant Professor of Pathology and Immunology
ANN MARIE GRONOWSKI, PHD Associate Professor of Pathology and Immunology
MICHAEL L GROSS, PHD Professor of Pathology and Immunology
BRENDA JEAN GROSSMAN, MD Associate Professor of Pathology and Immunology (Pending Executive Faculty Approval)
THOMAS JOSEPH HANNAN, DVM, BA Research Instructor in Pathology and Immunology
TED H HANSEN, PHD Professor of Pathology and Immunology
GEORGE J HAROCOPOS, MD Assistant Professor of Pathology and Immunology
ANJUM HASSAN, MD Assistant Professor of Pathology and Immunology
CHYI-SONG HSIEH, MD, PHD Assistant Professor of Pathology and Immunology
YINA HSING HUANG, PHD Assistant Professor of Pathology and Immunology
PHYLLIS C HUETTNER, MD Associate Professor of Pathology and Immunology
MICHAEL E. HULL, MD Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
PETER A HUMPHREY, MD, PHD Ladenson Professor of Pathology in Pathology and Immunology
SANJAY JAIN, MD, PHD Assistant Professor of Pathology and Immunology
CHARLES KILO, MD Professor of Pathology and Immunology
JOHN M KISSANE, MD Retiree - Professor of Pathology and Immunology
ROBYN SUE KLEIN, MD, PHD Assistant Professor of Pathology and Immunology
DANIEL KREISEL, MD Assistant Professor of Pathology and Immunology
FRIEDERIKE H. KREISEL, MD Assistant Professor of Pathology and Immunology
HANNAH RACHEL KRIGMAN, MD Assistant Professor of Pathology and Immunology
SHASHIKANT KULKARNI, PHD Assistant Professor of Pathology and Immunology
MICHAEL KYRIAKOS, MD Professor of Pathology and Immunology
JACK H LADENSON, PHD Oree M Carroll and Lillian B Ladenson Professor of Clinical Chemistry in Pathology and Immunology
DEBORAH J. LENSCHOW, MD, PHD Assistant Professor of Pathology and Immunology
JAMES S. LEWIS, JR, MD Assistant Professor of Pathology and Immunology
HELEN LIAPIS, MD Professor of Pathology and Immunology
ANNE C LIND, MD Assistant Professor of Pathology and Immunology
DANIEL C LINK, MD Professor of Pathology and Immunology
JINGLAN LIU, PHD Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
JOY LOH, PHD Research Instructor in Pathology and Immunology
DONGSI LU, MD, PHD Assistant Professor of Pathology and Immunology
DOUGLAS M LUBLIN, MD, PHD Professor of Pathology and Immunology
MARY A. MARKIEWICZ, PHD Research Instructor in Pathology and Immunology
MICHAEL L MCDANIEL, PHD Professor of Pathology and Immunology
JEFFREY D MILBRANDT, MD, PHD Professor of Pathology
MARK JAMES MILLER, PHD Assistant Professor of Pathology and Immunology
JASON C MILLS, MD, PHD Assistant Professor of Pathology and Immunology
THALACHALLOUR MOHANAKUMAR, PHD Professor of Pathology and Immunology
HECTOR D MOLINA-VICENTY, MD Associate Professor of Pathology and Immunology
JOHN CARL MORRIS, MD  Professor of Pathology and Immunology
THERESA L MURPHY, PHD  Research Assistant Professor of Pathology and Immunology
INDIRA U MYSOREKAR, PHD  Assistant Professor of Pathology and Immunology
RAKESH NAGARAJAN, MD, PHD, BA  Associate Professor of Pathology and Immunology
CHRISTOPHER A NELSON, PHD  Research Instructor in Pathology and Immunology
TU-DUNG THI NGUYEN, MD, PHD  Assistant Professor of Pathology and Immunology
DEBORAH J NOVACK, MD, PHD  Associate Professor of Pathology and Immunology
JOHN WILLIAM OLNEY, MD  Professor of Pathology and Immunology (Neuropathology)
EUGENE MERLE OLTZ, PHD  Professor of Pathology and Immunology (Pending Executive Faculty Approval)
OLEG OSIPOVICH, PHD  Research Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
RISH KOCHIKAR PAI, MD, PHD  Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
CHANGWON PARK  Research Instructor in Pathology and Immunology
JACQUELINE ELIS PAYTON, MD, PHD  Research Instructor in Pathology and Immunology
ARIE PERRY, MD  Professor of Pathology and Immunology
ALAN PESTRONK, MD  Professor of Pathology and Immunology
JOHN DAVID PFEIFER, MD, PHD  Professor of Pathology and Immunology
CHRISTINE T PHAM, MD  Assistant Professor of Pathology and Immunology
JON H RITTER, MD  Associate Professor of Pathology and Immunology
ANDRES ANIBAL ROMA, MD  Assistant Professor of Pathology and Immunology
SOUZAN SANATI, MD  Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval)
ROBERT EDWARD SCHMIDT, MD, PHD  Professor of Pathology and Immunology (Pending Executive Faculty Approval)
ROBERT D SCHREIBER, PHD  Alumni Professor of Pathology and Immunology
MITCHELL G SCOTT, PHD  Professor of Pathology and Immunology
ANDREY S SHAW, MD  Emil R. Unanue Professor of Immunobiology in Pathology and Immunology, Howard Hughes Medical Institute Investigator in Pathology and Immunology
KATHLEEN C SHEEHAN, PHD  Research Assistant Professor of Pathology and Immunology
BARRY SLECKMAN, MD, PHD  Professor of Pathology and Immunology
MORTON EDWARD SMITH, MD  Lecturer in Pathology and Immunology
THADDEUS S. STAPPENBECK, MD, PHD  Assistant Professor of Pathology and Immunology
WOJCIECH A. SWAT, PHD  Associate Professor of Pathology and Immunology
AKIKO TAKEDA, PHD  Research Assistant Professor of Pathology and Immunology
STEVEN L TEITELBAUM, MD  Messing Professor of Pathology and Immunology
LARISSA BRYKA THACKRAY  Research Instructor in Pathology and Immunology
DOUGLAS M TOLLEFSEN, MD, PHD  Professor of Pathology and Immunology
ROBERT L. TUGGEY, PHD  Research Instructor in Pathology and Immunology
JOHN W TURK, MD, PHD  Professor of Pathology and Immunology
EMIL RAPHAEL UNANUE, MD  Paul and Ellen Lacy Professor of Pathology and Immunology
DAVID WANG, PHD  Assistant Professor of Pathology and Immunology
XIAOLI WANG, MD, PHD  Research Instructor in Pathology and Immunology
The primary aim of the teaching program of the Department of Pediatrics is to stimulate interest in developmental biology, especially human growth and development, and to provide the student with a foundation sufficiently comprehensive so that he or she will have an appreciation of clinical pediatric problems regardless of his or her future career choice in medicine.

The major clinical and research facilities are in St. Louis Children’s Hospital, and the newborn services are at Barnes-Jewish Hospital. St. Louis Children’s Hospital is a facility with 235 beds that accepts patients through 21 years of age with all types of medical and surgical problems. Hospital admissions average 11,000 annually. Pediatric medical ambulatory activity, including subspecialty and emergency visits, averages about 90,000 visits a year. Nearly 5,000 infants are born annually at the Medical Center.

Courses

First Year

M30 511 MEDICAL GENETICS
Instructor: Alison J. Whelan, MD, 362-7800

This course focuses on the fundamentals of genetics including the basic structure of genes, gene expression and regulation, patterns of inheritance, types of mutations, the consequences of mutations, and molecular diagnostic strategies. Discussion includes the structure of DNA and its means of replication, the organization and packaging of eukaryotic genomes, chromatin structure and the nucleosome, the processing of their primary transcripts, and the molecular basis for transcriptional and translational regulation including the use of transgenic mice to study cell-specific gene regulation, and how these concepts can be applied to an understanding of medical genetics through discussion of principles of Mendelian genetics, the molecular basis for various inborn errors of metabolism, their diagnosis and prenatal screening, and the genetics of cancer. Ethical issues raised in diagnostic and
prognostic efforts are also discussed. This course is referenced in Department of Genetics and is cross-listed with L41 (Bio) 550.

Selectives

M04 526 NEW DISEASES, NEW PATHOGENS
For full description, see Department of Molecular Microbiology.

Second Year

Students are introduced to pediatrics and to the faculty through a series of lectures and symposia designed to acquaint them with the concepts of human growth and development and the effects of age and maturity on reactions to injury and disease. The unique aspects of the physical examination of the infant and child are presented in the Introduction to Clinical Medicine course. Members of the faculty are active participants in the second-year Pathophysiology course.

Third Year

M65 760 PEDIATRICS CLERKSHIP
Instructors: Douglas W. Carlson, MD, Michelle Estabrook, MD (both: 454-6299)
This six-week curriculum emphasizes pediatric pathophysiology and normal growth and development from birth through adolescence. This rotation consists of three two-week combinations of the following: Regular or special-care nurseries at Barnes-Jewish Hospital or Missouri Baptist Medical Center spent assessing newborns, seeing patients in the pediatric emergency department and Hematology/Oncology outpatient service and in St. Louis Children’s Hospital on a variety of inpatient services. Emphasis is on performing a pediatric history and physical examination and developing an appropriate differential diagnosis. Daily rounds with house staff and attending physicians, as well as weekly case management conferences and grand rounds, further this emphasis. A core lecture series also is offered on Mondays and Thursdays during this six-week clerkship.

Fourth Year

Electives

M65 801 GENERAL PEDIATRIC SUBINTERSHIP — ST. LOUIS CHILDREN’S HOSPITAL
Instructors: Angela Sharkey, MD, Douglas Carlson, MD, and Middy Estabrook, MD, 454-6299
Location: St. Louis Children’s Hospital
Elective Contact: Liz Karner, 5S50 St. Louis Children’s Hospital, 454-6299
Other Information: Students should call Liz Karner, 454-6299, one month before start date. Floor assignments will be determined by lottery from floor choices 8 East and 8 West. Students should report to their designated floor on their first day at 7:50 a.m.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This is the general pediatric subinternship. Liz will hold a lottery in the pediatric medical student education office to determine if the student will be assigned to 8 East or 8 West. The students will be assigned patients on one of two inpatient pediatric floor teams. They will follow patients from initial evaluation and for continuing care. The student works as an extern and is expected to take call every fourth night. Students work directly under the supervision of the senior resident. Teaching rounds are conducted by the faculty. The elective will provide experience in the management of many pediatric medical conditions (variable depending on floor) and will include the care of patients with various diseases including pulmonary, infectious diseases, gastrointestinal, renal, neurological, endocrine and
rheumatologic issues. Additionally, patients with failure to thrive, asthmatic exacerbations, poisonings and undiagnosed conditions may be seen.

Student time distribution: Inpatient 100%; Subspecialty Care/General Pediatrics 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 12
On call/weekend responsibility: Every fourth night

M65 808 PEDIATRIC ASTHMA AND ALLERGY
Instructors: Leonard B. Bacharier, MD, Robert C. Strunk, MD, Gordon Bloomberg, MD, and Caroline Horner, MD, 454-2694
Location: St. Louis Children's Hospital
Elective Contact: Kim Tinsley, 454-2158
Other Information: Students should call 454-2158 prior to the start of this elective for location and time.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

In predominantly an outpatient setting, students will evaluate patients with a wide variety of allergic disorders including asthma, allergic rhinitis, anaphylaxis, food allergy, atopic dermatitis, urticaria and angioedema. Goals include: (1) the extension of history-taking skills to include environmental exposures, (2) the recognition of physical findings suggestive of allergic disease, (3) understanding the indications and interpretation of diagnostic testing including skin testing and assessment of pulmonary function, and (4) application of appropriate therapeutic strategies to these disorders. Weekly didactic conferences and inpatient consultations provide additional educational opportunities.

Student time distribution: Inpatient 20%, Outpatient 70%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Leonard B. Bacharier, MD, and Robert C. Strunk, MD
Patients seen/weekly: 20
On call/weekend responsibility: None

M65 811 PEDIATRIC CRITICAL CARE MEDICINE
Instructor: Jennifer Duncan, MD, duncan_j@kids.wustl.edu, 454-2527
Location: St. Louis Children’s Hospital
Elective Contact: Tracey Erdman, 454-2527
Other Information: Students report to the PICU, 7th Floor St. Louis Children’s Hospital, 7:15 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to familiarize the student with the diagnosis and treatment of critical illness in infants and children. To this end, each student is made responsible for a small number of assigned cases under the direct supervision of pediatric residents, pediatric critical care fellows and faculty. The teaching activities emphasize the understanding of pathophysiological processes that lead to respiratory, cardiocirculatory and central nervous system dysfunction and their therapy in the developing subject. Students are expected to participate in all the daily activities of the Pediatric Intensive Care Unit at St. Louis Children’s Hospital and be on occasional call after hours.

Student time distribution: Inpatient 100%; Subspecialty Care 100%
Major teaching responsibility: Attending, critical care fellows and pediatric residents
Patients seen/weekly: 150
On call/weekend responsibility: Yes
**M65 813 PEDIATRIC CARDIAC CATHETERIZATION**
Instructors: David Balzer, MD, and Susan Foerster, MD, 454-6095
Location: St. Louis Children’s Hospital
Elective Contact: David Balzer, MD, 454-6095
Other Information: Students report to St. Louis Children’s Hospital Cath Lab (7th Floor), 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Elective will focus on interpretation of hemodynamic and angiographic data acquired in the cardiac catheterization laboratory.

Student time distribution: Inpatient 95%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Two attendings, supplemented by one fellow
Patients seen/weekly: 10
On call/weekend responsibility: None

**M65 819 PEDIATRIC CARDIOLOGY/OUTPATIENT SERVICE**
Instructors: Angela Sharkey, MD, George Van Hare, MD, Dave Balzer, MD, Charles Canter, MD, Susan Foerster, MD, Mark Grady, MD, Patrick Jay, MD, Mark Johnson, MD, Caroline Lee, MD, Joshua Murphy, MD, and Guatam Singh, MD, 454-6095
Location: St. Louis Children’s Hospital
Elective Contact: Angela Sharkey, MD, 454-6095
Other Information: Students report to 8th Floor Northwest Tower, Division of Cardiology, Christine Turner, Room 8206, 8 a.m. first day of elective to pick up a rotation schedule/information packet.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will independently evaluate outpatients referred for evaluation of cardiac murmurs, chest pain, arrhythmia and report findings to the attending physician. Clinics are held at St. Louis Children’s Hospital. Auscultation skill acquisition will be enhanced through examination of patients and use of other teaching tools. The student will review with the attending all EGGs, holter monitors and echocardiograms performed. Participation in weekly surgical conference and other educational conferences is expected.

Student time distribution: Outpatient 95%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Multiple attendings
Patients seen/weekly: 25
On call/weekend responsibility: None required

**M65 826 GENETICS AND GENOMIC MEDICINE**
Instructor: D. Kathy Grange, MD, 454-6093
Location: St. Louis Children’s Hospital
Elective Contact: D. Kathy Grange, MD, 454-6093
Other Information: Students should report to the Genetics office on the 9th floor of the Northwest Tower at 9 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The goal of this senior elective is to facilitate the acquisition of clinical skills and knowledge in genetics and genomic medicine. The student will actively participate in the diagnosis and management of pediatric and adult patients with genetic disease in both the ambulatory and in-patient settings. Emphasis will be placed on application of the science of genetics to the bedside and will include a broad exposure to patients with biochemical, metabolic, structural and complex genetic diseases.
Students will have an opportunity to visit clinical laboratories involved with diagnosis of genetic disorders, including the cytogenetics, molecular genetics and biochemical genetics laboratories. Students will be expected to participate in the weekly clinical case conference.

Student time distribution: Inpatient 30%, Outpatient 60%, Conferences/Lectures 10%; Subspeciality Care 100%.
Major teaching responsibility: Attendings
Patients seen/weekly: 15
On call/weekend responsibility: None

**M65 827 SUBINTERNSHIP — PEDIATRIC HEMATOLOGY/ONCOLOGY**
Instructors: Robert Hayashi, MD, 454-4118
Location: St. Louis Children’s Hospital, 9 West
Elective Contact: Robert Hayashi, MD, 454-4118
Other Information: Students report to 9 South Nursing Station, 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will assume the responsibilities of a pediatric resident on the inpatient Hematology/Oncology service at St. Louis Children’s Hospital.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Single attending, first-year hem-onc fellow and junior resident
Patients seen/weekly: 2-3 patients a day
On call/weekend responsibility: Every 4 days with resident

**M65 833 SPECIAL TOPICS IN REPRODUCTIVE HEALTH**
Instructors: Tessa Madden, MD, 747-6495
Location: Division of Clinical Research, 4533 Clayton Ave., 2nd floor
Elective Contact: Tessa Madden, MD, 747-6495
Other Information: Students should contact Dr. Madden a week prior to the beginning of the rotation: maddent@wustl.edu.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Students will attend a variety of outpatient clinics to interact with patients seeking different reproductive health services. These clinics include family planning and abortion services at Planned Parenthood, the County STD clinic, Adolescent and Pediatric Gynecology, Child Sexual Abuse, Teen OB, Ultrasound and Prenatal Diagnosis, and Postmenopausal Gynecology clinic. Clinical experiences will be ambulatory. Conferences include Obstetrics and Gynecology Grand Rounds and Family Planning Journal Club. Reading will include relevant articles and chapters. Students will be responsible for a brief presentation on a reproductive health topic at the conclusion of the course. Opportunities for clinical research in contraception are also available.

Student time distribution: Outpatient 100%; Primary Care 30%, Subspecialty Care 70%
Major teaching responsibility: Attendings
Patients seen/weekly: Varies
On call/weekend responsibility: None

**M65 836 PEDIATRIC RHEUMATOLOGY**
Instructors: Andrew White, MD, 454-6124, and Anthony French, MD, PhD
Location: St. Louis Children’s Hospital
Elective Contact: Andrew White, MD, 454-6124
Other Information: Students report to Rheumatology Clinic, Suite C, St. Louis Children’s Hospital, 8:30
a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Opportunities are available to care for children with a variety of immunologic and rheumatologic disorders. Students will see patients in outpatient clinics and inpatient consultations. An in-depth approach to evaluating disorders of the immunologic system will be provided. Students will participate in evaluation of new patients with a variety of rheumatologic diseases including JRA, SLE and scleroderma at both SLCH and Shriners Hospital clinics. Students may elect to participate in conferences and seminars.

Student time distribution: Inpatient 20%, Outpatient 70%, Conferences/Lectures 10%; Primary Care 30%, Subspecialty Care 70%
Major teaching responsibility: Andrew White, MD
Patients seen/weekly: 35-40
On call/weekend responsibility: None

M65 838 PEDIATRIC GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION
Instructor: Robert Rothbaum, MD, 454-6173
Location: Gastroenterology Clinical Offices, 9th Floor, Northwest Tower
Elective Contact: Sherri Austin, 454-6173, austin_sh@kids.wustl.edu
Other Information: Students should contact Sherri Austin at least one week in advance of first day of elective for further information.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The rotation in Pediatric Gastroenterology, Hepatology and Nutrition provides broad exposure to specialized and common pediatric problems. Gastroenterology patients are seen in the outpatient suites and in the hospital. Students see outpatients with common pediatric complaints like abdominal pain, constipation and poor growth. Additionally, students experience the ongoing outpatient care of patients with liver disease, inflammatory bowel disease, short-gut syndrome, celiac disease and other rare disorders. The inpatient service provides experience in caring for patients with acute illnesses such as gastrointestinal bleeding, malnutrition, liver failure, complications of inflammatory bowel disease and pancreatitis. Students participate in diagnostic and therapeutic endoscopic procedures. At weekly divisional conferences, attendings, fellows and students review pathology slides from current cases and discuss difficult patient problems and topics of interest.

Student time distribution: The time spent in the outpatient clinic and on the inpatient service can be individualized according to the student’s interests. In general, the distribution is: Inpatient 50%, Outpatient 30%, Procedures 10%, Conferences/Lectures 10%; Subspecialty Care 80%, Primary Care 20%
Major teaching responsibility: Attendings and fellows
Patients seen/weekly: 130 (entire division)
On call/weekend responsibility: None

M65 840 PEDIATRIC INFECTIOUS DISEASES
Instructors: Gregory Storch, MD, Alexis Elward, MD, Michele Estabrook, MD, Stephanie Fritz, MD, David Haslam, MD, Ericka Hayes, MD, David Hunstad, MD, Audrey Odom, MD, PhD, and Rachel Orscheln, MD, 454-6050
Location: St. Louis Children’s Hospital
Elective Contact: Gregory Storch, MD, 454-2261
Other Information: Students should contact Fellow on call at 424-6877 one week prior to start of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to introduce students to the clinical aspects of infectious diseases in children. Students will consult on both inpatients and outpatients. Regular daily activities will include evaluation of new patients, work rounds on inpatient consults, microbiology teaching rounds in the bacteriology and virology labs, and teaching rounds with the infectious diseases attending. Students will attend the general pediatric clinic and the pediatric HIV clinic once per week. Formal teaching sessions include a weekly pediatric infectious disease case conference, a weekly joint clinical conference with the adult infectious diseases group, a weekly pediatric infectious diseases research conference and a monthly journal club.

Student time distribution: Inpatient 70%, Outpatient 20%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: One or two attendings, one or two fellows
Patients seen/weekly: 5-10 new patients primarily, over 15-20 new patients with team
On call/weekend responsibility: Saturdays optional

**M65 845 PEDIATRIC EMERGENCY MEDICINE**
Instructor: David M. Jaffe, MD, 454-2341
Location: St. Louis Children’s Hospital
Elective Contact: Carol Heller, 454-2341
Other Information: Students report to Room 9150 Northwest Tower, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The goal of this elective is to provide the senior medical student with a broad introductory clinical experience in pediatric emergency medicine. Functioning as a subintern in the Emergency Unit of St. Louis Children’s Hospital, the student will have the opportunity to evaluate and manage patients with a wide variety of emergent and urgent medical and surgical problems. Examples include: respiratory distress, abdominal pain, lacerations, bone injuries, rashes, fever, etc.

Students will work either a day shift (7:30 a.m.-3 p.m.) or an evening shift (3-11 p.m.) in rotation. Daily teaching conferences are provided by the attending staff. A weekly meeting of the students and senior faculty will occur to review interesting cases. Also, attending staff and senior pediatric residents provide 24-hour on-site supervision. Each medical student will be asked to prepare a 20-minute presentation on a topic of his/her choosing.

Student time distribution: Outpatient 90%, Conferences/Lectures 10%; Subspecialty Care (Emergency Medicine) 100%
Major teaching responsibility: All EM attendings
Patients seen/weekly: ~30
On call/weekend responsibility: None (unless making up time)

**M65 849 PEDIATRIC ENDOCRINOLOGY AND DIABETES**
Instructors: Neil H. White, MD, Abby Hollander, MD, Bess Marshall, MD, Rebecca Green, MD, PhD, Paul Hruz, MD, PhD, Ana Maria Arbelaez, MD, and Lori Wagner, MD, 286-2761
Location: St. Louis Children’s Hospital
Elective Contact: Angie Genovese, 286-2761
Other Information: Student has the option to extend elective. Students report to Endocrinology/Metabolism Office, 9th Floor Northwest Tower, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective is designed to include broad clinical experience in pediatric endocrinology and diabetes. The student will have an opportunity to evaluate both patients admitted to St. Louis Children’s
Hospital and patients referred for consultation in our three outpatient clinics each week. In addition to a divisional conference to review referred patients, several joint conferences with the adult Endocrinology and Diabetes Division (clinical rounds, journal club/research seminar, case conference) are held weekly.

Student time distribution: Inpatient 40%, Outpatient 50%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attending physicians and fellows
Patients seen/weekly: 10-20 by student
On call/weekend responsibility: None

**M65 852 CLINICAL PEDIATRIC PULMONARY MEDICINE**
Instructors: Thomas Ferkol Jr., MD, Robert C. Strunk, MD, Leonard Bacharier, MD, Carolyn Cannon, MD, PhD, Albert Faro, MD, Kay Horner, MD, James Kemp, MD, Anand Patel, MD, Katherine Rivera-Spoljaric, MD, and Stuart C. Sweet, MD, PhD, 454-2694
Location: St. Louis Children's Hospital
Elective Contact: Kim Tinsley, 454-2158
Other Information: Students should call 454-2158 prior to the start of elective for location and time.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective provides an opportunity for students to be exposed to the full scope of respiratory diseases in infants and children. Pediatric referrals will be seen in both an inpatient and outpatient setting. Goals include: (1) to learn the importance of the physical exam using inspection, percussion and auscultation; (2) indications and interpretation of diagnostic tests, such as CXR, chest CT, blood gas measurements, polysomnography, pulmonary function testing, and bronchoscopy with biopsy and lavage; (3) therapeutic interventions and the use of bronchodilators, anti-inflammatory agents, et. al. Unique aspects of this rotation include a broad exposure to children with congenital lung defects, asthma, cystic fibrosis, primary ciliary dyskinesia, interstitial lung disease, and end-stage cardiopulmonary diseases referred for transplantation. Weekly didactic sessions as well as weekly divisional patient care sections are another opportunity to develop and practice presentation skills.

Student time distribution: Inpatient varies, Outpatient varies, Conferences/Lectures 10%; Subspeciality Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 25
On call/weekend responsibility: None

**M65 861 NEWBORN MEDICINE**
Instructor: Aaron Hamvas, MD, 454-6148
Location: 8th Floor Northwest Tower
Elective Contact: Tammy Cecena, 454-6148
Other Information: Students should report to Dr. Hamvas's office by appointment the afternoon (or the Friday) prior to the beginning of the rotation for orientation.

Enrollment limit per period: 3
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The goal of this course is to provide students with responsibility for caring for newborn infants who range from normal to acutely ill to chronically ill and for their families. The physiology of the transition from fetal to extraterine existence, the pathophysiology of specific diseases, and primary accountability of the student for patient management decisions and procedures will be emphasized. In addition, collaboration with nursing staff and other health care providers in decision-making (especially concerning the viability of individual infants) and family management will be regularly required.
Students during each rotation will have the option to rotate through the Neonatal Intensive Care Unit at St. Louis Children's Hospital and/or the Labor and Delivery services at Barnes-Jewish Hospital. Students assigned to the Neonatal Intensive Care Unit at St. Louis Children's Hospital also will have the opportunity to become involved in the transport of acutely ill infants, while those on the Labor and Delivery Service will routinely be involved in normal newborn care and delivery room management. The student will be expected to rotate patient responsibilities every fourth night.

Student time distribution: Inpatient 90%, Outpatient 5%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Attending, fellow and residents
Patients seen/weekly: 30
On call/weekend responsibility: Every fourth night

M65 875 PEDIATRIC RENAL DISEASE
Instructors: Keith A. Hruska, MD, Anne M. Beck, MD, S. Paul Hmiel, MD, PhD, and Suresh Matthew, MD, 454-6043
Location: St. Louis Children’s Hospital
Elective Contact: Keith A. Hruska, MD, 454-6043
Other Information: Students report to Lynne Strain, 454-2261, 2N 80, 2nd Floor Dialysis Unit, St. Louis Children’s Hospital, 9 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This course is designed to provide the student with a wide exposure to all aspects of pediatric renal disease and an opportunity to explore a desired aspect of the field in-depth. The student will be an integral part of the Renal Team and as such will see both inpatients and outpatients. Students will have an opportunity to follow the courses of patients with acute renal disease as well as those with more chronic problems and will help to plan the evaluation and therapeutic management of these patients. Discussions and rounds with the attending staff and fellows emphasize the relationship between clinical problems and the pathophysiology of the underlying disease. These informal teaching sessions are supplemented by more formal sessions. These include renal attending rounds, renal research rounds and grand rounds, which are conducted weekly in conjunction with the Renal Division of Barnes-Jewish Hospital. Renal biopsy material is reviewed with the renal pathologists. Attendance at the weekly pediatric grand rounds and pediatric case conferences is encouraged. Opportunities in clinical and translational research projects will be discussed with interested students.

Student time distribution: Inpatient 50%, Outpatient 40%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 12-15
On call/weekend responsibility: None

M65 876 PEDIATRIC LUNG TRANSPLANTATION
Instructors: Stuart C. Sweet, MD, and Albert Faro, MD, 454-2214
Location: St. Louis Children’s Hospital
Elective Contact: Kim Tinsely, 454-2158
Other Information: Students should call 454-2158 prior to the start of elective for location and time.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

St. Louis Children’s Hospital has the largest pediatric lung transplant program in North America. This unique clinical rotation will enable students to be exposed to the process of transplantation from referral and listing to the actual surgery and post-operative care. Both inpatient and twice weekly outpatient clinics will be available for participation and learning. The use of diagnostic tests, such as flexible fiberoptic bronchoscopy with biopsies, the histopathology of infection and graft rejection, and
the complexities of immunosuppression will all be explored. Weekly transplant meetings with our multidisciplinary team, as well as didactic/psychosocial and ethical and divisional care meetings will all be available. Our patient referral base is worldwide, and the primary cardiopulmonary disease states include cystic fibrosis, pulmonary hypertension, complex congenital heart defects and alveolar proteinosis.

Student time distribution: Inpatient 50%, Outpatient 40%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 20-30
On call/weekend responsibility: None

**M65 878 CLERKSHIP IN RURAL PRIMARY CARE PEDIATRICS**
Instructors: Angela Sharkey, MD, 454-6299. Site Instructors: Kevin Blanton, MD, in Sikeston and Claudia Preuschoff, MD, in Cape Giradeau
Location: Sikeston or Cape Giradeau, MO
Elective Contact: Liz Karner, St. Louis Children’s Hospital, 454-6299
Other Information: Students should call Liz Karner, 454-6299, at beginning of school year to indicate which rotation (Sikeston or Cape Giradeau) they have chosen, complete additional paperwork, and make housing reservations. Students should then report to their chosen site on their first day at 7:30 a.m.

Enrollment limit per period: 1 per site
Valid start weeks for 2- or 4-week blocks are: Weeks 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39 and 41.

The clerkship in rural primary care pediatrics is designed to provide the student with first-hand experience in general pediatric practice in a rural community setting. Students will have the opportunity to see patients in a private office, participate in delivery room resuscitation, evaluate patients in the emergency department, and provide pediatric consultation to family practitioners, obstetricians and surgeons. The objective of this elective is to provide the student with the experience of serving as a general pediatrician providing comprehensive health services in a rural community. Students assume responsibility for ongoing care of patients and have opportunities to perform procedures. Housing is available through SEMA ADHEC/Southeast Missouri Health Network at no cost to the student; however, reservations must be made early. Two-week or four-week blocks are available.

Student time distribution: Inpatient 10%, Outpatient 90%; Primary Care 100%
Major teaching responsibility: Single attending
Patients seen/weekly: 25-50
On call/weekend responsibility: Call with instructor, not in-house call

**M25 831 PEDIATRIC DERMATOLOGY**
Instructor: Susan J. Bayliss, MD, 454-2714
Location: 3N48 Children’s Hospital
Elective Contact: Rosemarie Brannan, 454-8622
Other Information: Call 454-2714 prior to first day of elective. Reporting time is 7:30 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical rotation will be available to students interested in dermatology, pediatrics or both. Students will follow the dermatology rotation (M25 830) with an emphasis on pediatric dermatology by attending pediatric dermatology clinics, seeing consults, etc. Enthusiastic students will have an opportunity to write up a case report if they wish, but need to notify Dr. Bayliss before the course. **Students can take either this elective or M25 830 — not both.**
Student time distribution: Inpatient 1%, Outpatient 74%, Conferences/Lectures 25%; Subspecialty Care 100%
Major teaching responsibility: Single attending
Patients seen/weekly: 50-100
On call/weekend responsibility: None

Research

(M65 900)

Ana Maria Arbelaez, MD, 10th Floor Northwest Tower, 286-1138. Clinical research in diabetes mellitus. Clinical research studies on hypoglycemia associated autonomic failure in patients with type 1 diabetes mellitus and on cystic fibrosis related diabetes.

Charles E. Canter, MD, 8th Floor Northwest Tower, Division of Cardiology, 454-6095. Clinical studies on cardiac transplantation in infants and children.

F. Sessions Cole, MD, and Aaron Hamvas, MD, 8th Floor Northwest Tower and 5th Floor McDonnell Pediatric Research Building, 454-6148. Using population-based data based and case-control databases, our laboratory focuses on understanding the contribution of genetic variation in candidate genes of the pulmonary surfactant metabolic pathway (surfactant protein B, surfactant protein C and ABCA3), with neonatal respiratory distress syndrome (disease severity and pulmonary surfactant metabolic phenotype).

Michael R. DeBaun, MD, MPH, 454-4177. Dr. DeBaun’s research interests include: (1) clinical investigation of the natural history of stroke in sickle cell disease; and (2) genotype/phenotype analysis in pediatric syndromes associated with cancer.

Allan Doctor, MD, 5th Floor McDonnell Pediatric Research Building, 454-2527. Role of erythrocytes in pathologic vascular signaling. We employ several novel experimental platforms to pursue a range of basic, translational and clinical studies exploring (1) the role of erythrocytes in context-responsive metabolism of vasoactive effectors in flowing blood; (2) molecular control of antioxidant defense in erythrocytes; (3) the role of acquired injury to normal erythrocytes in the pathophysiology of acute lung injury and multiple organ failure syndrome; and (4) the impact of genetic abnormalities in erythrocytes upon antioxidant defense and vascular signaling (modeled by sickle cell anemia). Query is modeled on many levels from isolated proteins - cell culture - isolated organ - whole mouse - to studies in humans. http://research.peds.wustl.edu/.

Matthew Goldsmith, MD, Room 7108 McDonnell Pediatric Research Building, 286-2769. Growth control and regeneration in zebrafish. All of our patients are growing. Indeed, it’s the sine qua non of pediatric medicine that distinguishes us from all other physicians. The research efforts of our laboratory center on understanding the biology of growth and regeneration. Growth control and the development of proper size and form is a fundamental problem for growing children, moreover multiple pediatric diseases result in undergrowth, overgrowth or dysregulated growth (i.e., structural birth defects). In addition, while many animals are capable of extensive regeneration, the ability of diseased or damaged tissues and organs to regenerate in humans is quite limited.

We are using the zebrafish, Danio rerio, as a model system for studying the biology of growth and regeneration. Current studies are focused on: (1) Using fin overgrowth mutants already identified in forward genetic screens (e.g. rapunzel) to help dissect the genetics of growth control pathways; (2) Using forward genetic and pharmacologic screens to identify novel pathways/molecules important in organ regeneration, and; (3) Understanding how the nutritional environment is integrated into an
overall hierarchy of growth regulatory signals.

An elective is offered for students wishing to pursue research on one of the three topics described above.

David B. Haslam, MD, Room 6107 McDonnell Pediatric Research Building, 286-2888. Mechanisms of
disease caused by bacterial toxins. Research focuses on the binding and intracellular transport of shiga
toxins within human cells. An area of particular interest is the genetic and evolutionary basis for
human susceptibility to shiga toxins. In addition, research is examining the ability of shiga toxins to
gain access to the cytoplasm by exploiting normal quality control mechanisms in the endoplasmic
reticulum.

Robert J. Hayashi, MD, 9S St. Louis Children’s Hospital, 454-4118. Clinical research interests include
stem cell transplantation and its complications including Post Transplant Lymphoproliferative Disease
and long-term side effects of therapy.

Keith A. Hruska, MD, 5th Floor McDonnell Pediatric Research Building, 286-2772. The research in the
laboratory focuses on chronic kidney disease (CKD) and its complications of renal osteodystrophy,
vascular calcification. The lab has discovered important new pathologic mechanisms of disease leading
to vascular calcification through hyperphosphatemia. Translation studies that continue to develop new
therapeutic approaches are being aggressively pursued. New therapies for chronic kidney disease
and its complications are being studied in clinical trials.

Paul Hruz, MD, PhD, 3rd Floor McDonnell Pediatric Research Building, 286-2797. Research interests
include structure/function relationships in facilitative glucose transporters, congenital and acquired
lipodystrophy syndromes, and insulin resistance associated with HIV protease inhibitor therapy.

David A. Hunstad, MD, Room 6106 McDonnell Pediatric Research Building, 286-2710. The laboratory
studies the molecular mechanisms by which conserved, general periplasmic chaperones, such as SurA,
contribute to the assembly and presentation of surface virulence factors by Gram-negative pathogens.
In addition, we are evaluating the utility of novel silver-based antimicrobial compounds in special
populations with UTI. Our goals are to discover novel targets for interventions that will prevent and
treat Gram-negative infections of the urinary tract, gastrointestinal tract and central nervous system.

Terrie Inder, MD, 10th Floor Northwest Tower, 454-2200. Newborn brain injury and development.
Clinical and experimental studies on the nature and timing of brain injury and alterations in brain
development in high-risk infants, including prematurely born and asphyxiated infants. Studies focus
predominantly clinically on newborn infants in the NICU at St. Louis Children’s Hospital but are
complemented by animal models. Understanding in the human infant is assisted by technologies such
as electroencephalography and MR scanning, the results of which are also related to
neurodevelopmental outcomes. Neuroprotective strategies, such as hypothermia and treatment of
‘clinically silent’ seizures in infants are also being undertaken in trials within our laboratory.

David M. Jaffe, MD, 4S50 St. Louis Children’s Hospital, 454-2341. Clinical research interests are: (1)
occult bacteremia—identification, clinical decision making; (2) trauma — injury prevention, head and
cervical spine injuries; (3) health care delivery system — role of the pediatric emergency department;
and (4) pain management.

Jose A. Pineda, MD, 10th Floor Northwest Tower, (Patient Oriented Research Unit), 286-1246.
Mechanisms of brain injury in children. Our clinical research efforts focus on studies aimed at further understanding the complex pathophysiology of acute brain injury in children, with special emphasis on traumatic brain injury (TBI). In collaboration with a multidisciplinary team of investigators, our research aims at identifying neuroprotective therapies for severe TBI in children. We utilize advanced imaging techniques (MRI), physiological monitoring and biochemical analysis of clinical samples.

Scott Saunders, MD, PhD, 4105 McDonnell Pediatric Research Building, 286-2850. Investigative efforts are aimed at understanding the molecular basis of development through cell and molecular biological approaches, including transgenic and knockout mouse technology. A particular focus is on the role of a class of tissue- and cell-type specific glycoproteins (heparan sulfate proteoglycans) that play a unique and essential role in the regulation of growth factor and morphogen signaling during human development and diseases.

Alan L. Schwartz, MD, PhD, 3S36 St. Louis Children’s Hospital, 454-6005. Investigative efforts are aimed at understanding: (1) the biology of cell surface receptors including biochemical and molecular dissection of the mechanisms responsible for receptor-mediated endocytosis of blood coagulation proteins; and (2) the regulation of intracellular protein turnover.

Shalini Shenoy, MD, 9S St. Louis Children’s Hospital, 454-6018. Investigation of immunologic basis of graft versus host disease and the development of novel therapies in bone marrow transplant.

Gregory A. Storch, MD, Max Q. Arens, PhD, Richard S. Buller, PhD, and staff, 2N52 St. Louis Children’s Hospital, 454-6079. Rapid diagnosis of viral and other unconventional infections. The Diagnostic Virology Laboratory is studying the use of the polymerase chain reaction and oligonucleotide sequencing for the diagnosis of infections caused by viruses and other unconventional pathogens, and the detection of resistance to antimicrobial agents. Current projects include: (1) the detection of herpes viruses and polyomaviruses in blood or organ transplant recipients; (2) the detection of respiratory pathogens; and (3) the molecular detection and epidemiology of antibiotic resistance. Future projects will explore other infections caused by other unconventional pathogens that are not easily diagnosed using existing methods, and the application of PCR for quantitation of infectious agents and the detection of resistance to antiviral agents.

Robert C. Strunk, MD, 10th Floor Northwest Tower, 454-2694. Clinical studies of patients with asthma aimed at understanding the mechanisms of death due to asthma in children.

Phillip I. Tarr, MD, 6 McDonnell Pediatric Research Building, 286-2848. Research in pediatric gastroenterology and nutrition. Students have opportunities to participate in broadly encompassing research projects. Investigators in the Division have funded and vibrant projects in liver disease (fatty liver disease, acute liver failure, biliary atresia, liver transplants), inflammatory bowel diseases (Crohn's Disease and ulcerative colitis), infections of the gastrointestinal tract (cholangitis, diarrhea), nutrition (especially the nutritional consequences of cystic fibrosis), necrotizing enterocolitis and functional gastrointestinal disorders. Short- and long-term projects can be arranged around these and other related efforts. The exact nature of the project depends on the time that the student can contribute to the effort and the availability of any of the Division faculty, who all have established track records as mentors. Interested students should contact any of our faculty, or Dr. Tarr, to discuss the possibilities.

Neil H. White, MD, CDE, 9th Floor Northwest Tower, 286-1157. Our work involves patient-oriented research in the management of diabetes in children. Arrangements can be made for involvement in or development of projects aimed at improving outcome or prevention of diabetes mellitus and its complications.
David B. Wilson, MD, PhD, 3102 McDonnell Pediatric Research Building, 286-2834. Research is focused on the molecular switches that regulate control genes during early embryonic development and differentiation.

Faculty

ALAN L SCHWARTZ, MD, PHD Harriet B Spoehrer Professor of Pediatrics, Head of the Department of Pediatrics
SUSAN E ADAMS, MD, PHD, BS Assistant Professor of Clinical Pediatrics
WILLIAM S ADAMS, MD Assistant Professor of Clinical Pediatrics
SUN - YOUNG AHN, MD Instructor in Pediatrics
ETIHAD S. AL - FALAHI Instructor in Clinical Pediatrics
SUZANNE G ALBRECHT Instructor in Clinical Pediatrics
ARDIS KAY ALLISON, DOST Instructor in Clinical Pediatrics
DENIS IAN ALTMAN, MBBCH Assistant Professor of Clinical Pediatrics
PATRICIA J AMATO, MD Associate Professor of Clinical Pediatrics
MOHAMAD T AMJAD, MD Professor of Clinical Pediatrics
DANA EANKNEY, MD Instructor in Pediatrics
AMAL F. ANTOUN Instructor in Clinical Pediatrics
ANA MARIE ARBELAEZ PEREZ, MD Assistant Professor of Pediatrics
MAX QUIRIN ARENS, PHD Associate Professor of Pediatrics
JENNIFER L. ARTER Instructor in Clinical Pediatrics
SARAH BETH ZEFF ASCHKENASI, MD Instructor in Pediatrics
ELIZABETH L ATKINSON, MD Instructor in Clinical Pediatrics
JEFFREY JAY ATKINSON, MD, BS Assistant Professor of Pediatrics
ROBERT K ATTEBERRY Instructor in Clinical Pediatrics
SARA AYERS, MD Instructor in Clinical Pediatrics
JILL GLASSBERG AZOK, MD Instructor in Pediatrics
LEONARD B BACHARIER, MD Associate Professor of Pediatrics
JILL M BAER, MD Assistant Professor of Clinical Pediatrics
DAVID T BALZER, MD Associate Professor of Pediatrics
ANGELA L BARD, MD Associate Professor of Clinical Pediatrics
MARIA S BASZIS Instructor in Clinical Pediatrics
SUSAN L BAUMER, MD Associate Professor of Clinical Pediatrics
CHRISTIE A. BAYER, MD Instructor in Clinical Pediatrics
SUSAN JOY BAYLISS, MD Professor of Pediatrics
ANNE MARIE BECK, MD, BS Associate Professor of Pediatrics
JULIA M. BECKER, MD Instructor in Clinical Pediatrics
EARL C BEEKS, JR, MD Associate Professor of Clinical Pediatrics
AVRAHAM BEIGELMAN, MD Instructor in Pediatrics
WALTER F BENOIST, MD Associate Professor of Clinical Pediatrics
KATHLEEN MARY BERCHELMANN, MD Instructor in Pediatrics
MARY ELLEN BERTRAND, MD Assistant Professor of Pediatrics
SHOBA BHASKAR, MBBS Instructor in Pediatrics
JEAN E BIRMINGHAM, MD Assistant Professor of Clinical Pediatrics
HULDAH C BLAMOVILLE, MD Assistant Professor of Clinical Pediatrics
KEVIN J BLANTON Instructor in Clinical Pediatrics
GORDON R BLOOMBERG, MD, BS Associate Professor of Pediatrics
TRINA BLYTHE, MD Instructor in Clinical Pediatrics
JOSHUA P BOLDT Instructor in Clinical Pediatrics
ANNE M BOWCOCK, PHD Professor of Pediatrics
ROBERT J BRADSHAW, MD, BS Instructor in Clinical Pediatrics
YOLETTE V BROWN, MD Assistant Professor of Clinical Pediatrics
EARLINE A BROWN RIDGE, MD Instructor in Clinical Pediatrics
SETH J BROWN RIDGE, MD Assistant Professor of Clinical Pediatrics
JANICE E BRUNSTROM-HERNANDEZ, MD Associate Professor of Pediatrics
GUOJUN BU, PHD Professor of Pediatrics
TARA M. BUDETTI Instructor in Clinical Pediatrics
LORENA BUFFA, MD Instructor in Clinical Pediatrics
RICHARD S BULLER, PHD Research Assistant Professor of Pediatrics
REBECCA KAY BULLIVANT, MD Instructor in Clinical Pediatrics
MAX H BURGDORF, MD Assistant Professor of Clinical Pediatrics
CAREY-ANN DAWN BURNHAM, PHD Instructor in Pediatrics
GARRETT C BURRIS, MD Associate Professor of Clinical Pediatrics
ARCHNA CALFEE, MD Instructor in Clinical Pediatrics
JOSEPH EDWARD CANGAS Instructor in Clinical Pediatrics
CHARLES E CANTER, MD, BS Professor of Pediatrics
CELESTE CAPERS, MD Instructor in Pediatrics
JOHN R CARLILE, MD Instructor in Clinical Pediatrics
DOUGLAS W CARLSON, MD Professor of Pediatrics
MICHAEL J. CARNEY, MD Instructor in Clinical Pediatrics
RUBILINDA Q CASINO, MD Instructor in Clinical Pediatrics
MARIO CASTRO, MD Professor of Pediatrics
TATTAMANGALAM P CHANDRIKA Associate Professor of Clinical Pediatrics
WILLIAM T CHAO, MD Instructor in Clinical Pediatrics
SONIA CHAUDHRY, MD Instructor in Pediatrics
PAUL A CHECCHIA, MD Associate Professor of Pediatrics
GLENN S CHENG, MD Instructor in Clinical Pediatrics
WAK S CHIA, MD Instructor in Clinical Pediatrics
JONATHAN C CHILES, MD Instructor in Pediatrics
DARRYL S COHEN, DOST Assistant Professor of Clinical Pediatrics
F. SESSIONS COLE, MD Park J White, M.D. Professor of Pediatrics
JOHN C. COLE, MD, PHD Instructor in Clinical Pediatrics
SUSAN CONGER Instructor in Clinical Pediatrics
ANNE MAUREEN CONNOLLY, MD Professor of Pediatrics
JOHN NICHOLAS CONSTANTINO, MD Professor of Pediatrics
MARY MICHAEL ONE CRADOCK Assistant Professor of Clinical Pediatrics
ANDREW CRONYN, MD Instructor in Clinical Pediatrics
BETTY CROSS, MD Instructor in Clinical Pediatrics
CLAYTON CUMMINGS, MD Instructor in Pediatrics
TRACEY M. DALY, MD, BS Instructor in Clinical Pediatrics
MICHAEL E DANTER, MD Assistant Professor of Clinical Pediatrics
YASMEEN DAUD, MD Assistant Professor of Pediatrics
JOHN C DAVIS, MD Associate Professor of Clinical Pediatrics
RAY S DAVIS, MD Professor of Clinical Pediatrics
JEFFREY G DAWSON, MD Associate Professor of Pediatrics
MICHAEL R DEBAUN, MD, MS Professor of Pediatrics
JANE E. DEFalCO, MD Instructor in Clinical Pediatrics
LOUIS P DEHNER, MD Professor of Pathology in Pediatrics
CAROLYN DELANEY, MD Instructor in Pediatrics
MISTY LANELL DEMING, MD Instructor in Pediatrics
GERRY DESCHAMPS, MD, PHS Instructor in Clinical Pediatrics
DAVID GUSTAD DEVITRE Instructor in Clinical Pediatrics
DONALD V. DICHESEN, MD Instructor in Clinical Pediatrics
LIZBETH H DIDRIKEN Assistant Professor of Clinical Pediatrics
DENNIS J. DIETZEN, PHD Associate Professor of Pediatrics
PAtRICK A DILLON, MD Associate Professor of Pediatrics
TULAY F DI NCER, MD Assistant Professor of Clinical Pediatrics
JOHN F DIPERSIO, MD, PHD Associate Professor of Pediatrics
ALLAN DOCTOR, MD Associate Professor of Pediatrics
PHILIP ROGERS DODGE, MD Professor Emeritus of Pediatrics
WILLIAM EDWIN DODSON, MD Professor of Pediatrics
ALLA DORFM AN, MD Instructor in Clinical Pediatrics
CATHERINE J DOTY Instructor in Clinical Pediatrics
CHARLES H DOUGHERTY, MD Professor of Clinical Pediatrics
MATTHEW P DOUGHERTY Instructor in Clinical Pediatrics
JOAN CATHERINE DOWNEY, MD Assistant Professor of Pediatrics
TODD DRULEY, MD, PHD Instructor in Pediatrics
JENNIFER GRIES DUNCAN, MD Assistant Professor of Pediatrics
JENNIFER M DUNN, MD Instructor in Clinical Pediatrics
WILLIAM MICHAEL DUNNE, JR., PHD Professor of Pediatrics
ADAM C. EATON, MD  Instructor in Clinical Pediatrics
LORI L EBERHART  Instructor in Clinical Pediatrics
ROBERT W EDMONDS, MD  Assistant Professor Emeritus of Clinical Pediatrics
ALEXIS M ELWARD, MD  Assistant Professor of Pediatrics
AMANDA R. EMKE, MD  Instructor in Pediatrics
JAY S EPSTEIN, MD  Professor of Clinical Pediatrics
DIANE M ESCHMANN, MD  Instructor in Clinical Pediatrics
JENNIFER ESS  Instructor in Clinical Pediatrics
LAURA ANN ESSWEIN, MD  Instructor in Clinical Pediatrics
MICHELE MARIE ESTABROOK, MD  Professor of Pediatrics
NANCY FAHIM, MD  Assistant Professor of Pediatrics
ELLIOTT H FARBERMAN, MD  Assistant Professor of Clinical Pediatrics
ALBERT FARO, MD  Associate Professor of Pediatrics
JAMES J FEHR, III, MD  Associate Professor of Pediatrics
RICHARD A. FELKEL, JR  Instructor in Clinical Pediatrics
THOMAS W FERKOL, MD  Professor of Pediatrics
ISABEL FERNANDEZ-HOLTZMAN  Instructor in Clinical Pediatrics
GREGORY K FINN, MD  Assistant Professor of Clinical Pediatrics
ANNA M FITZ-JAMES, MD  Instructor in Clinical Pediatrics
EDWARD B FLIESHER, MD  Instructor in Clinical Pediatrics
PAMELA LORENA FLORES-SANCHEZ, MD  Instructor in Pediatrics
SUSAN R FOERSTER, MD  Assistant Professor of Pediatrics
MYRTO FRANGOS, MD  Instructor in Clinical Pediatrics
ANTHONY RAYMOND FRENCH, MD, PHD  Assistant Professor of Pediatrics
IRA J FRIEDMAN, MD  Assistant Professor of Clinical Pediatrics
STEPHANIE ANN FRITZ, MD  Instructor in Pediatrics
JOHN P GALGANI, JR, MD  Associate Professor of Clinical Pediatrics
MARIA VIRGINIA GANNINGER  Instructor in Clinical Pediatrics
JANE M. GARBU TT, MBCHB  Research Associate Professor of Pediatrics
TESSA D GARDNER, MD  Assistant Professor of Clinical Pediatrics
CARYN GARRIGA  Instructor in Clinical Pediatrics
SARAH KATHRYN GARWOOD, MD  Instructor in Pediatrics
KAREN J GARZIA  Instructor in Clinical Pediatrics
AVIHU GAZIT, MD  Assistant Professor of Pediatrics
ELLiot FIELD GELLMAN, MD  Professor of Pediatrics
JAMES A GERST, MD  Professor of Clinical Pediatrics
JONATHAN D GITLIN, MD  Adjunct Professor of Pediatrics
JOSEPH K GOLDENBERG, MD  Associate Professor of Clinical Pediatrics
MATTHEW I GOLDSMITH, MD  Assistant Professor of Pediatrics
PAUL T GOLUMBEK, MD, PHD  Assistant Professor of Pediatrics
GARY M GOODMAN, MD Instructor in Clinical Pediatrics
RONALD M GRADY, MD Assistant Professor of Pediatrics
LAQUITA A GRAHAM, MD Instructor in Clinical Pediatrics
DOROTHY K. GRANGE, MD Professor of Pediatrics
ALICE B GRANOFF, MD Instructor in Clinical Pediatrics
REBECCA P GREEN, MD, PHD Assistant Professor of Pediatrics
M ARSHALL B GREENMAN, MD Associate Professor of Clinical Pediatrics
JOSEPH DONALD GUNN, MD Assistant Professor of Pediatrics
SANTOSH K GUPTA, DC Assistant Professor of Clinical Pediatrics
CHRISTINA A. GURNETT, MD, PHD Assistant Professor of Pediatrics
DAVID H GUTMANN, MD, PHD Professor of Pediatrics
BRIAN P HACKETT, MD, PHD Associate Professor of Pediatrics
MARK E. HALSTEAD, MD Assistant Professor of Pediatrics
KIM P HAMLIN, MD Instructor in Pediatrics
ROMAN E HAMMES, MD Instructor in Clinical Pediatrics
MELANIE G HAMPTON, MD Assistant Professor of Clinical Pediatrics
AARON HAMVAS, MD James P. Keating, M.D. Professor of Pediatrics
ELINOR F HANCOCK, MD Instructor in Clinical Pediatrics
JENNIFER LYNN HANSICK, MD, BS Instructor in Pediatrics
ROBIN D HANSON, MD, PHD Instructor in Clinical Pediatrics
SUZANNE M HANSON, MD Assistant Professor of Clinical Pediatrics
MICHAEL AVRAM HARRIS, PHD Adjunct Research Instructor in Pediatrics
MICHAEL RAYMOND HARRIS, MD, PHD Assistant Professor of Pediatrics
THOMAS J. HARRISON, JR, MD Instructor in Clinical Pediatrics
DAVID E HARTENBACH, MD Associate Professor of Clinical Pediatrics
JOHN EDWARD HARTWEGER Instructor in Clinical Pediatrics
JAMES LARRY HARWELL, MD Assistant Professor of Clinical Pediatrics
DAVID B HASLAM, MD Associate Professor of Pediatrics
SHERRIE M HAFT, MD Professor of Pediatrics
ROBERT J HAYASHI, MD Associate Professor of Pediatrics
ERICKA V. HAYES, MD Assistant Professor of Pediatrics
NATHAN HENNINGER Instructor in Clinical Pediatrics
GEETHA G HERATH, MD Instructor in Pediatrics
MARY JO HERNANDEZ-ZIPFEL, MD Instructor in Clinical Pediatrics
JOHN C HERWEG, MD Professor Emeritus of Pediatrics
ROBERT O HEUCKEROTH, MD, PHD Associate Professor of Pediatrics
LAURA HILL Instructor in Clinical Pediatrics
JENNIFER M HINTON Instructor in Clinical Pediatrics
KEIKO HIROSE, MD Associate Professor of Pediatrics
GARY E HIRSHBERG, MD Professor of Anesthesiology in Pediatrics
STANLEY P HMIEL, MD, PHD Associate Professor of Pediatrics
SHARON HO, MD Instructor in Clinical Pediatrics
DEE HODGE, III, MD Associate Professor of Pediatrics
ROBERT J HOFFMAN, MD Professor of Clinical Pediatrics
RUSSELL G. HOFFMANN, PHD Instructor in Clinical Pediatrics
NICHOLAS ALAN HOLEKAMP, MD Instructor in Clinical Pediatrics
MARK R. HOLLAND, PHD Research Assistant Professor of Pediatrics
ABBY SOLOMON HOLLANDER, MD Associate Professor of Pediatrics
MARY ANN HOLLMAN, MD Instructor in Clinical Pediatrics
NANCY E HOLMES, MD Professor of Clinical Pediatrics
J. JOSEPH HORAN, MD Instructor in Clinical Pediatrics
CAROLINE CLARE HORNER, MD Assistant Professor of Pediatrics
CHRISTINE M HRACH, MD Instructor in Pediatrics
KEITH A HRUSKA, MD Professor of Pediatrics
PAUL W. HRUZ, MD, PHD Assistant Professor of Pediatrics
DONALD V HUEBENER, DDENT, MS Instructor in Pediatric Dentistry
DAVID A HUNSTAD, MD Assistant Professor of Pediatrics
DENISE KUNG IHNAT, MD Instructor in Clinical Pediatrics
TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Pediatrics
CARL S INGBER, MD Instructor in Clinical Pediatrics
CHRISTINA LYNN INGRAM, MD Instructor in Pediatrics
AIDAN W IP, MD Instructor in Clinical Pediatrics
DAVID M JAFFE, MD Dana Brown Professor of Pediatrics
SUE E JAGLER Instructor in Clinical Pediatrics
PATRICIA A JAMERSON Instructor in Clinical Pediatrics
PARISA JAMSHIDI Instructor in Clinical Pediatrics
PATRICK Y JAY, MD, PHD Assistant Professor of Pediatrics
YASANGI MAINA JAYASIHA, MD Instructor in Clinical Pediatrics
DENISE R JOHNSON, MD Associate Professor of Clinical Pediatrics
JOYCE D JOHNSON, MD Instructor in Clinical Pediatrics
MARK C JOHNSON, MD Associate Professor of Pediatrics
STACI R. JOHNSON, MD Instructor in Clinical Pediatrics
WILLIAM LEE JOHNSON, MD Adjunct Associate Professor of Pediatrics, Associate Professor of Clinical Pediatrics
ANGELA MARIE JONES, MD Instructor in Clinical Pediatrics
LARRY A JONES, MD Assistant Professor of Clinical Pediatrics
ERZSEBET JUNG, MD Instructor in Clinical Pediatrics
JOSEPH A KAHN, MD Assistant Professor of Clinical Pediatrics
LAWRENCE I KAHN, MD Professor Emeritus of Pediatrics
PAMELA B KANE, MD Instructor in Clinical Pediatrics
THOMAS J KASPER Instructor in Clinical Pediatrics
SUZANNE LEE MILLER, MD Instructor in Clinical Pediatrics
SHAKIR MOHAMED, MD, BS Instructor in Pediatrics
CHRISTOPHER MOLITOR Instructor in Clinical Pediatrics
DARLENE A. MOORE, MD Instructor in Clinical Pediatrics
MARY R MORGAN, MD Instructor in Clinical Pediatrics
SHARON CELESTE MORLEY, MD, PHD Instructor in Pediatrics
DANIEL R. MORRA Instructor in Clinical Pediatrics
LISA MAE MOSCOSO, MD, PHD Assistant Professor of Pediatrics
JANET GWEN MUELLER, MD Instructor in Clinical Pediatrics
MARGARET M MUELLER Instructor in Clinical Pediatrics
JARED T. MUENZER, MD Instructor in Pediatrics
STEVEN MUETH Instructor in Clinical Pediatrics
SUPARNA MULLICK Instructor in Clinical Pediatrics
MANOHARA MUNIMUDDAPPA Instructor in Clinical Pediatrics
JOSHUA J MURPHY, MD Instructor in Pediatrics
KEVIN J MURPHY, MD Professor of Clinical Pediatrics
GIAN MARCO MUSARRA, MD Instructor in Pediatrics
JOHN A MYERS Instructor in Clinical Pediatrics
VENKATA S. NAGIREDDI Instructor in Clinical Pediatrics
TASNIM A NAJAF, MD Instructor in Pediatrics
AYESHA NAJIB Instructor in Clinical Pediatrics
ALISON C NASH, MD Professor of Clinical Pediatrics
HELEN E NASH, MD Professor Emerita of Clinical Pediatrics
HOMER E NASH, JR, MD Professor of Clinical Pediatrics
JEFFREY J NEIL, MD, PHD Professor of Pediatrics
APRIL ERWIN NESIN Instructor in Clinical Pediatrics
KHAI NGO, MD Instructor in Clinical Pediatrics
ELLEN MARGARET NICASTRO Instructor in Clinical Pediatrics
RAMZI T NICOLAS Adjunct Instructor in Pediatrics
DAVID A NILE, MD Assistant Professor of Clinical Pediatrics
MICHAEL JUSTIN NOETZEL, MD Professor of Pediatrics
DAVID CRAIG NORMAN, MD Instructor in Clinical Pediatrics
KAREN K NORTON, MD Assistant Professor of Clinical Pediatrics
JEROME H O'NEIL, JR, MD Instructor in Clinical Pediatrics
AUDREY R ODOM, MD, PHD Instructor in Pediatrics
JUSTIN O OGBEVDEN, MBBS Instructor in Clinical Pediatrics
CHRISTINE L OHLEMEYER, MD Associate Professor of Clinical Pediatrics
PHINEAS PHILLIP OREN, MD Assistant Professor of Pediatrics
RACHEL C. OROSHCHENKO, MD Assistant Professor of Pediatrics
IRMA I ORTIZ-ARROYO, MD Instructor in Clinical Pediatrics
ALISON H OSWALD  Instructor in Clinical Pediatrics
NATALIA L PACIORKOWSKI, MD, PHD  Instructor in Pediatrics
JOSEPH J PALERMO, JR, MD, PHD  Instructor in Pediatrics
TAE SUNG PARK, MD  Professor of Pediatrics
ROBERT T PASCHALL, MD  Associate Professor of Pediatrics
ANAND C PATEL, MD  Assistant Professor of Pediatrics
DONNA T PERDAN, MD  Instructor in Clinical Pediatrics
MARIA ISABEL PEREZ CANDAL, MD  Instructor in Pediatrics
FREDERICK D PETERSON, MD  Professor of Clinical Pediatrics
EUGENIA M PIERCE, MD  Instructor in Clinical Pediatrics
SELVI PILLAI, MD  Instructor in Pediatrics
JOSE A PINEDA SOTO, MD  Assistant Professor of Pediatrics
SUSAN PITTMAN, MD  Assistant Professor of Clinical Pediatrics
DANIEL S PLAX, MD  Instructor in Clinical Pediatrics
KATHRYN L. PLAX, MD  Associate Professor of Pediatrics
STEVEN I PLAX, MD, BA  Professor Emeritus of Clinical Pediatrics
SANTIAGO BOYE PLURAD, JR, MD  Instructor in Clinical Pediatrics
JUANITA C POLITO-COLVIN, MD  Associate Professor of Clinical Pediatrics
CLAUDIA PREUSCHOFF, MD  Instructor in Clinical Pediatrics
PETER J PUTNAM, MD  Instructor in Clinical Pediatrics
JENNA M PUTZEL  Instructor in Clinical Pediatrics
ROBERT LOUIS QUAAS, MD, BS  Instructor in Clinical Pediatrics
KIMBERLY S QUAYLE, MD  Associate Professor of Pediatrics
JENNIFER QUINN, MD  Instructor in Clinical Pediatrics
MOHAMMAD H RAHMAN  Instructor in Clinical Pediatrics
VIDYA RAMAN  Instructor in Clinical Pediatrics
PATHMAWATHY T RAMESVARA  Instructor in Clinical Pediatrics
RAKESH RAO, MBBS, MD  Assistant Professor of Pediatrics
EMANUEL RASHET, MD  Instructor in Clinical Pediatrics
SHERYL S REAM, MD  Instructor in Clinical Pediatrics
NEIL F. REBBE, MD, PHS  Instructor in Clinical Pediatrics
TIMOTHY REED  Instructor in Clinical Pediatrics
PHILLIP D REICHERT  Instructor in Clinical Pediatrics
CATHERINE R REMUS, MD  Instructor in Clinical Pediatrics
JEAN K. REX, MD  Instructor in Pediatrics
GEORGE H REZABEK, DOST  Instructor in Clinical Pediatrics
EDWARD K RHEE, MD  Adjunct Assistant Professor of Pediatrics
JOAN K. RILEY, PHD  Instructor in Pediatrics
KATHERINE RIVERA-SPOHARIC, MD  Instructor in Pediatrics
WILLIAM L. RIVES, MD  Instructor in Pediatrics
JANIS B ROBINSON, MD Associate Professor of Clinical Pediatrics
VERNON J RODEN, MD Instructor in Clinical Pediatrics
SANDEEP ROHATGI, MD Instructor in Clinical Pediatrics
JAMES R ROHRBAUGH, MD Associate Professor of Clinical Pediatrics
JOAN LEE ROSENBAUM, MD Professor of Pediatrics
ISABEL L ROSENBLOOM, MD Assistant Professor of Clinical Pediatrics
DANIEL B ROSENBLUTH, MD Professor of Pediatrics
KELLY ROSS, MD Assistant Professor of Pediatrics
WILLIAM J ROSS, MD Associate Professor of Clinical Pediatrics
ROBERT J ROTHBAUM, MD Professor of Pediatrics
ELLA ROZIN Instructor in Clinical Pediatrics
JOSHUA BENNETT RUBIN, MD, PHD Assistant Professor of Pediatrics
CHRISTINA M RUBY, MD Instructor in Clinical Pediatrics
MARTIN D RUDLOFF, MD Assistant Professor of Clinical Pediatrics
DAVID RUDNICK, MD, PHD Assistant Professor of Pediatrics
DANIEL G. RUDOLPH, MD Instructor in Clinical Pediatrics
YORAM RUDY Professor of Pediatrics
DIANE MARY RUP, MD Instructor in Clinical Pediatrics
LISA A RYAN Instructor in Clinical Pediatrics
NICHOLE P SAMUY, MD Instructor in Pediatrics
GRETCHEN A SANDER, MD Instructor in Clinical Pediatrics
HEIDI L SANDIGE, MD, MA Instructor in Pediatrics
DIANA M SATER-ROUKOZ Instructor in Clinical Pediatrics
GEORGE SATO, MD Professor of Clinical Pediatrics
RICHARD WILLIAM SATO, MD Assistant Professor of Clinical Pediatrics
SCOTT SAUNDERS, MD, PHD Associate Professor of Pediatrics
BRIAN J. SAVILLE, MD Instructor in Clinical Pediatrics
BLAINE M SAYRE, MD Professor of Clinical Pediatrics
JOSEPH SCHACHTER, MD Instructor in Clinical Pediatrics
BRADLEY L SCHLAGGAR, MD, PHD Associate Professor of Pediatrics
HOWARD J SCHLANSKY, MD Instructor in Clinical Pediatrics
MARGARET ANN SCHMANDT, MD Associate Professor of Clinical Pediatrics
MARTIN P SCHMIDT, MD, BS Instructor in Clinical Pediatrics
JACQUELYN C SCHNIDMAN, MD Instructor in Clinical Pediatrics
COLLEEN ERIKA SEEMATTER Instructor in Clinical Pediatrics
MARTHA PAPAY SEWALL, MD Instructor in Clinical Pediatrics
PENELOPE G SHACKELFORD, MD Professor Emerita of Pediatrics
PURVI SHAH, MD Instructor in Pediatrics
LARRY J SHAPIRO, MD Spencer T and Ann W Olin Distinguished Professor of Pediatrics
ANGELA M. SHARKEY, MD Professor of Pediatrics
ELEANOR MARIA SHAW, MD Assistant Professor of Clinical Pediatrics
SHALINI SHENOY, MBBS, MD Associate Professor of Pediatrics
WARREN G SHERMAN, MD Professor of Clinical Pediatrics
MARWAN SHINAWI, MD Assistant Professor of Pediatrics
MIN-YI KATHERIN SHIUE, MD Instructor in Clinical Pediatrics
MARILYN J SIEGEL, MD Professor of Radiology in Pediatrics
JENNIFER N SILVA, MD Instructor in Pediatrics
PAUL S SIMONS, MD Associate Professor of Pediatrics
GAUTAM K SINGH, MBBS, MD Associate Professor of Pediatrics
CARL JEFFREY SIPPEL, MD, PHD Assistant Professor of Clinical Pediatrics
HAROLD B SITRIN, MD Assistant Professor of Clinical Pediatrics
ALAN JOSEPH SKOULTCHI, MD Instructor in Clinical Pediatrics
CARL HUGH SMITH, MD Professor Emeritus of Pediatrics
JOSHUA C SMITH Instructor in Clinical Pediatrics
MATTHEW D SMYTH, MD Associate Professor of Pediatrics
NARESHKUMAR J SOLANKI Assistant Professor of Clinical Pediatrics
ROBERT D SPEWAK, MD Instructor in Clinical Pediatrics
CRAIG A SPIEGEL, MD Instructor in Clinical Pediatrics
MYTHILI SRINIVASAN, MD, PHD Instructor in Pediatrics
DANIELLE R ST LEGER Instructor in Clinical Pediatrics
NORMAN P STEELE, MD Instructor in Clinical Pediatrics
RANDALL S STERKEL, MD Instructor in Clinical Pediatrics
ANITA R STIFFELMAN, MD Associate Professor of Clinical Pediatrics
GREGORY A STORCH, MD Ruth L. Siteman Professor of Pediatrics
ROBERT H STRASHUN, MD Assistant Professor of Clinical Pediatrics
SUSAN KAY STRECKER, DPT Assistant Professor of Pediatrics
M. ANNE STREET, MD Assistant Professor of Clinical Pediatrics
ROBERT C STRUNK, MD Professor of Pediatrics
JUDITH M. STUCKI-SIMEON, MD Instructor in Clinical Pediatrics
ROSA M SUAREZ-SOLAR, MD Instructor in Clinical Pediatrics
LISA SUFFIAN, MD Instructor in Clinical Pediatrics
TOSHIFUMI SUGATANI, DDENT, PHD Research Instructor in Pediatrics (Pending Dean's Approval)
SARAH ELIZABETH SULLIVAN, MD Instructor in Pediatrics
STUART C SWEET, MD, PHD Associate Professor of Pediatrics
AMANDA SWEETLAND Instructor in Clinical Pediatrics
SUSAN C. SYLVI A Instructor in Clinical Pediatrics
PHILLIP IRWIN TARR, MD Melvin E Carnahan Professor of Pediatrics
JEFFREY H TECKMAN, MD Adjunct Assistant Professor of Pediatrics
JESSIE L TERNBERG, MD, PHD Professor Emeritus of Surgery in Pediatrics
KRISTEN A TERRILL Instructor in Clinical Pediatrics
BRADLEY TERRILL THACH, MD Professor of Pediatrics
STEPHEN THIERAUF Instructor in Clinical Pediatrics
KWEE L THIO, MD, PHD Assistant Professor of Pediatrics
JEAN HOLOWACH THURSTON, MD Professor Emeritus of Pediatrics
MARY A TILLMAN, MD Professor of Clinical Pediatrics
ROBERT W TOLAN, JR., MD Instructor in Clinical Pediatrics
SCOTT A. TRAIL, MD Instructor in Clinical Pediatrics
JEANNE M TRIMMER, MD Instructor in Clinical Pediatrics
GARLAND R TSCHUDIN, MD Instructor in Clinical Pediatrics
MICHAEL P TURMELLE, MD Assistant Professor of Pediatrics
YUMIRLE PADRON TURMELLE, MD, AA Assistant Professor of Pediatrics
SARAH ANN TYCAST, MD Instructor in Pediatrics
ROBERT LAWRENCE TYCHSEN, MD Professor of Ophthalmology and Visual Sciences in Pediatrics
APRIL L TYUS Instructor in Clinical Pediatrics
ZSOLT URBAN, PHD Assistant Professor of Pediatrics
AKSHAYA J VACHHRARJANI, MBBS, MD Assistant Professor of Pediatrics
GEORGE FREDERIC VAN HARE, III, MD Louis Larrick Ward Professor of Pediatrics
LAIRD HENRY VERMONT Instructor in Clinical Pediatrics
TERESA JANE VIETTI, MD Professor Emeritus of Pediatrics, Professor Emeritus of Radiology
MARY KRISTIN VOELLINGER, MD Instructor in Clinical Neurology
LORI F WAGNER, MD Instructor in Pediatrics
COLLEEN M WALLACE, MD Instructor in Pediatrics
JENNIFER ANNE WAMBACH, MD Instructor in Pediatrics
BARBARA B. WARNER, MD Associate Professor of Pediatrics
BRAD W. WARNER, MD Professor of Pediatrics
MICHAEL S WATSON, PHD Adjunct Professor of Pediatrics
ROGER J WAXELMAN, MD Instructor in Clinical Pediatrics
MARCE WEBER, MD, JD Assistant Professor of Clinical Pediatrics
SCOTT J WEINER, MD, PHD Instructor in Clinical Pediatrics
BENJAMIN DAVID WEINTRAUB Instructor in Clinical Pediatrics
DON WEISS, MD Instructor in Clinical Pediatrics
ALEXANDER WEYMANN, MD Instructor in Pediatrics
ANDREW J WHITE, MD Assistant Professor of Pediatrics
NEIL HARRIS WHITE, MD Professor of Pediatrics
NICOLE IZETTA WHITE, MD Instructor in Clinical Pediatrics
KAREN WHITESIDE Instructor in Clinical Pediatrics
MICHAEL PETER WHYTE, MD Professor of Pediatrics
KAREN MORI WICKLINE, MD Associate Professor of Pediatrics
DENISE WILFLEY, PHD Professor of Pediatrics
GEORGE T WILKINS, JR, MD Assistant Professor of Clinical Pediatrics
Instruction in psychiatry is given during the second, third and fourth years of the medical curriculum. Emphasis is on the teaching of psychiatry as a medical discipline, including the biological, social and psychological mechanisms and manifestations of psychiatric illness, as well as psychological reactions to other illnesses. Psychiatric disorders are common and disabling illnesses. An explosion of knowledge resulting from research in neuroscience, genetics and epidemiology is leading to exciting advances in understanding and treating these disorders. Our department is heavily involved in this research, and our didactic curriculum integrates current clinical information with research advances to help students develop the knowledge, skills and attitudes to recognize these illnesses and understand the basic principles of treatment.

William Greenleaf Eliot Division of Child Psychiatry

The Division of Child Psychiatry offers a varied teaching program for medical students, residents in psychiatry and fellows at St. Louis Children’s Hospital and the Child Psychiatry Center. The center provides outpatient services to children with an array of mental disorders. Trainees are assigned to these various services, where they participate in diagnostic evaluations and see patients in treatment, under supervision of a fellow and attending physician.

Courses

Second Year

M85 676A DISEASES OF THE NERVOUS SYSTEM: PSYCHIATRY
Instructor: Melissa A. Swallow MD, 362-2440
This course emphasizes the diagnosis of major psychiatric illnesses in adults and children. Psychiatric diseases are described in terms of epidemiology, clinical presentation, natural history, genetics, differential diagnosis and clinical management. Interviewing techniques and performance of the mental status exam will be demonstrated by patient interviews.

Third Year

M85 770 PSYCHIATRY CLERKSHIP
Instructor: Kevin J. Black, MD, 362-2469
Up to 11 students spend four weeks on the inpatient psychiatry service of either Barnes-Jewish Hospital or Metropolitan St. Louis Psychiatric Center. At either site, students evaluate and treat patients under the supervision of house staff and an attending physician, attend teaching conferences, including small group sessions with a psychiatrist to learn psychiatric interviewing and the mental status exam, and complete other assigned learning experiences. See www.psychiatry.wustl.edu/c/Education/MedicalStudent.aspx for current details or to review the goals of the clerkship.

M85 771 AMBULATORY CLERKSHIP: PSYCHIATRY FOR GENERALISTS
Instructor: Kevin J. Black, MD, 362-2469
Up to four students may elect to pursue their ambulatory medicine selective through the Department of Psychiatry. Students submit a written review of a relevant clinical topic of their choice and participate in clinical duties. Students will be assigned to one of the following clinical options: Barnes-Jewish Hospital adult psychiatry clinic and community psychiatry, psychiatry consultation service, BJC Behavioral Health or child psychiatry clinic. As of this writing, there is no night call at any site. See www.nil.wustl.edu/labs/kevin/psy/options.htm for further details.

Fourth Year

Electives

M85 805 PSYCHIATRY CONSULT SERVICE
Instructor: Dan Haupt, MD, 362-2465
Location: 17301A West Pavilion, Barnes-Jewish Hospital, South Campus
Elective Contact: Mehmet E. Dokucu, MD, PhD, 747-4583
Other Information: Students should contact the consult team by voice mail at 848-2402, 8 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The fourth-year student will work closely with the consult resident and consult team that also includes the attending and advanced practice nurse in the evaluation and treatment of patients referred to the psychiatry consult service. Students will attend weekly consult/liaison teaching conferences during the summer, and Grand Rounds and Research Rounds in non-summer months.

Student time distribution: Inpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents and advanced practice nurses
Patients seen/weekly: 3 workups per week expected; follow up to 10 or more
On call/weekend responsibility: None

M85 810 OUTPATIENT COMMUNITY PSYCHIATRY
Instructor: Keith Garcia, MD, PhD, 362-1222
Location: Wohl Clinic and community sites  
Elective Contact: Keith Garcia, MD, PhD, 362-1222
Other Information: Location of first meeting will be specified in a mailing.

Enrollment limit per period: minimum 2; maximum 3.  
Valid start weeks for 4-week blocks are: Weeks 13 and 17.

This is a flexible clerkship where effort is made to tailor the activities to the students’ interests. Students will assist in diagnosis and treatment of adult psychiatric clinic and ER patients. The patients present with a wide variety of psychological and interpersonal problems, as encountered in an everyday office practice of an internist or general practice specialist. In this setting, the student will have the opportunity to learn a variety of treatment techniques under supervision. Students completing the clerkship have indicated their enjoyment of the opportunity for independent patient management.

Student time distribution: Outpatient/ER 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 20
On call/weekend responsibility: None

**M85 811 OUTPATIENT SHADOWING AND READING ELECTIVE**
Instructor: Richard W. Hudgens, MD, 286-1712
Location: 24 S. Kingshighway, Psychiatry Clinic
Elective Contact: Christina Lickel, 286-1712
Other Information: Report to 24 S. Kingshighway, Psychiatry Clinic 1 p.m. first day of elective.

Enrollment limit per period: 1  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

Student will chose a reading topic relevant to psychiatry. Student will shadow Dr. Hudgens on inpatient rounds and sit in with Dr. Hudgens during outpatient clinic hours.

Student time distribution: 100% Outpatient; 100% Subspecialty Care
Major teaching responsibility: Coursemaster
Patients seen/weekly: 40
On call/weekend responsibility: None

**M85 831 ELECTROCONVULSIVE THERAPY (ECT)**
Instructors: Michael Jarvis, PhD, MD, and ECT staff, 362-1819
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Michael Jarvis, PhD, MD, 362-1819
Other Information: Students should call Dr. Jarvis prior to scheduling the elective.

Enrollment limit per period: 1  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will be involved in the neuropsychiatric assessment of patients referred for ECT. In addition, the student will receive training in the application of ECT and in the clinical management of patients receiving ECT. The student will be encouraged to review appropriate literature and make clinically relevant case-oriented presentations.

Student time distribution: Inpatient 80%, Outpatient 15%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: Michael Jarvis, PhD, MD
Patients seen/weekly: 20
On call/weekend responsibility: Saturday morning
M85 836 CLINICAL PSYCHIATRY — INPATIENT PSYCHIATRIC SERVICE  
Instructor: Michael Jarvis, PhD, MD, 362-1819  
Location: Barnes-Jewish Hospital, South Campus  
Elective Contact: Michael Jarvis, PhD, MD, 362-1819  
Other Information: Contact Cindy Bander prior to first day of elective at 362-1816.

Enrollment limit per period: 3  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This is a senior rotation that provides the students with an opportunity to expand their knowledge of inpatient clinical psychiatry by functioning as interns. Students attend all staffing and teaching conferences given to first-year psychiatry residents, take patients in rotation and share night call with first-year residents approximately every fifth night.

Immediate supervision is provided by the inpatient attending, and additional supervision can be arranged as desired. Teaching emphasis is directed toward psychiatric diagnosis, appropriate use of psychopharmacologic agents, psychotherapeutic intervention, use of community resources and pursuit of the psychiatric scientific literature.  
Student time distribution: Inpatient 85%, Conferences/Lectures 15%  
Major teaching responsibility: Clinical attending, teaching attendings and residents
Patients seen/weekly: 5-7
On call/weekend responsibility: Every fifth night

M85 840 CHILD PSYCHIATRY  
Instructor: Anne Glowinski, MD, 286-2217  
Location: Montclair Building, 24 S. Kingshighway, Outpatient Psychiatry Clinic  
Elective Contact: Anne Glowinski, MD, 286-2217  
Other Information: Interested students should contact Dr. Anne Glowinski at 286-2217 in the Department of Psychiatry.

Enrollment limit per period: 2  
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective in child psychiatry uses the Child Psychiatry Outpatient Clinic at St. Louis Children’s Hospital. It provides experience in age-appropriate diagnostic and treatment methods in children and adolescents. Experience is also provided on the Consultation Service of St. Louis Children’s Hospital. A paper on a topic of the student's choosing is required.

Student time distribution: Outpatient 75%, Conferences/Lectures 25%; Subspecialty Care 100%  
Major teaching responsibility: Attendings and fellows
Patients seen/weekly: 15-20
On call/weekend responsibility: No, but can shadow fellow during call if requested by student

M85 841 CHILD PSYCHIATRY—INPATIENT  
Instructors: Tahir Rizvi, MD; Wajiha Karatella, MD; and Cristiana Teodorescu, MD  
Location: Hawthorn Hospital  
Elective Contact: Anne Glowinski, MD, 286-2217  
Other Information: Contact Dr. Glowinski at least three months in advance at 286-2217. This elective requires a specific background check due to Hawthorn Hospital's regulations.

Enrollment limit per period: 2  
Valid start weeks for 4-week blocks are: Weeks 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This elective in child psychiatry uses the Child Psychiatry Inpatient Hospital Hawthorn, a Missouri state hospital for children with an average length of stay of two weeks. Hawthorn provides multidisciplinary care for youngsters with typically multiple problems (e.g., cognitive, familial, emotional, behavioral)
and is a rich clinical experience.

Student time distribution: Inpatient 75%, Conferences/Lectures 25%; Subspecialty Care 100%
Major teaching responsibility: Attendings and fellows
Patients seen/weekly: 20
On call/weekend responsibility: No, but can shadow fellow during call if requested by student

**M85 880 SCHIZOPHRENIA Precursors AND PRODROMAL STATES**

Instructor: Angela M. Reiersen, MD, 747-6793
Location: Dr. Reiersen’s office, Suite 1153-Room B, East Building
Elective Contact: Angela M. Reiersen, MD, 747-6793
Other Information: Students report to Dr. Reiersen’s office, Suite 1153-Room B, East Building, 9:30 a.m. first day of elective

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This is an opportunity for trainees to gain experience in the evaluation of children, adolescents and young adults with symptoms suggestive of a schizophrenia prodrome. The rotation would center around the “First Contact Clinic,” which evaluates patients who show characteristics suggestive of prodromal schizophrenia. Since the full symptoms of schizophrenia are often preceded by a wide range of childhood behavioral and developmental abnormalities, this rotation would also help trainees integrate information regarding the continuity between childhood development and adult psychopathology. Trainee would observe all aspects of First Contact Clinic evaluation (including semi-structured diagnostic interviews and cognitive testing) and meet weekly with the supervising attending for discussion of cases and required weekly readings. Trainee would also be required to write a literature review on a topic relevant to the rotation.

Student time distribution: Outpatient 10%, Conferences/Lectures 90%; Subspecialty Care 100%
Major teaching responsibility: Coursemaster and/or psychiatry attending
Patients seen/weekly: 1
On call/weekend responsibility: None

**Research**

**(M85 900)**

Andrey Anokhin, PhD, Central Institute for the Deaf (CID) Building, Suite 1, 660 S. Euclid Ave., 286-2201, andrey@matlock.wustl.edu. Genetics of brain function and behavior. This research elective is intended for students interested in biological psychology, psychophysiology, psychopharmacology of drugs of abuse, and behavior genetics. Dr. Anokhin is conducting experimental studies with human volunteers, including twins, in order to better understand biobehavioral mechanisms underlying vulnerability to addiction, as well as possible mediators of genetic risk, such as behavioral disinhibition and negative affect. An ongoing longitudinal study of adolescent twins explores genetic influences on brain activity and autonomic measures related to inhibitory control of behavior and processing of emotional information. Young adult twins are assessed using quantitative electroencephalogram (EEG) and event-related brain potentials (ERPs) recording during a variety of behavioral tasks. In addition, extensive information is obtained using diagnostic interviews and questionnaires administered to twins and their parents, and blood samples are taken for genotyping. Another longitudinal twin study is concerned with substance use and other behaviors in high school and college students. Other studies look at acute effects of cigarette smoking or moderate dose of alcohol on brain function and performance. Interested students will be able to learn a variety of methods used in these studies, such as the recording and analysis of digital EEG, cognitive ERPs, startle response, and autonomic measures, administration of neuropsychological and behavioral tests, and statistical analysis of data. Format of this research elective may include: (1) directed reading; (2) participation in laboratory experiments with human subjects; (3) analysis of existing data from alcohol and smoking challenge
experiments; (4) designing and piloting new behavioral tests. Qualifications: Reliability and responsibility, ability to commit specified amount of time per week and work on schedule (can be negotiated on an individual basis), PC experience and willingness to obtain short training and certification in ethical issues related to human studies.

Deanna M. Barch, PhD, 6612 Renard Hospital, 747-2160. Cognitive and affective neuroscience of schizophrenia and depression. Students may participate in the conduct of clinical studies of schizophrenia and depression. Involvement in clinical studies can include training and experience in interviewing psychiatric patients or gaining experience in the techniques of assessing cognitive and emotional function using behavioral and brain imaging methods.

Laura Jean Bierut, MD, Maternity Hospital, 362-3492. This research elective will focus on analyzing data from high-risk studies of addiction. Substance dependent individuals were recruited from chemical dependency treatment centers and their relatives were interviewed. Students will have the opportunity to examine family and environmental factors that place some at risk for developing alcohol and other substance dependence and protect others from the development of these disorders.

Kevin J. Black, MD, 4408 Renard Hospital, 362-2469, Kevin@wustl.edu. Students will participate in ongoing neuroimaging studies of movement disorders or neuropsychiatric illnesses. Degree of participation will relate to the student’s available research time, skills and interest. See www.nil.wustl.edu/labs/kevin for examples of past research.

Linda B. Cottler, PhD, MPH, Parc Frontenac Building, 286-2252. Our grants focus on public health psychiatry among community and offender populations and include: (1) the short- and long-term effectiveness of interventions to reduce drug use and sexual risks among women in St. Louis and Bangalore, India; (2) Pre- and Post-doctoral training for NIDA drug abuse comorbidity and biostatistics; (3) Applicability, reliability and validity of abuse and dependence concepts with special emphasis on new and emerging substances such as Ecstasy and prescription drug misuse; (4) development of interviews that assess psychiatric and substance use disorders, and environmental risk factors for such disorders, and (5) the link between STDs and self-reported behavioral risk factors.

Linda B. Cottler, PhD, MPH, Arpana Agrawal, PhD, Kathleen Bucholz, PhD, MPE, Catina Callahan O'Leary, PhD, Rick Grucza, PhD, MPE, Angela Reiersen, MD, MPE, Ed Spitznagel, PhD, Catherine Striley, PhD, ACSW, MPE, 40 N. Kingshighway, Suite 4, 286-2252. (1) Introduction to General Epidemiology. Epidemiology is the study of health and disease in the population. This course, while introducing epidemiologic methods and classic medical studies, emphasizes the clinical importance of psychiatric epidemiology; (2) Instruments of Psychiatric Diagnoses and Assessment. Introduction to commonly used interviews, both structured and semi-structured, and questionnaire developed since 1940 for the diagnosis of specific psychiatric disorders in children and adults; (3) Drug Epidemiology Seminar I: Recent Trends in Drug Epidemiology. Speaker series with topics determined each year to cover important emerging and ongoing research in addiction epidemiology; (4) General Epidemiology Seminar II: Recent Trends and Progress in Substance Use and Psychiatric Epidemiology. Speaker series with topics determined each year to cover important emerging and ongoing research in substance use and psychiatric epidemiology; (5) Psychiatric and Drug Abuse Epidemiology Seminar III: PostDoc Presentations. Prepares students for independent research presentations through presenting and critiquing each other’s work with faculty guidance; (6) Landmarks in Psychiatric Epidemiology. A review of the major studies in psychiatric epidemiology, describing methods and results, from the 1920s to the present; (7) Applied Statistics for Behavioral Scientists. Instruction designed for those behavioral researchers who want to expand their knowledge of statistical methods in statistics, with an emphasis on statistical and epidemiological concepts, applications, practical hints, and a hands-on approach to data, and using SAS; (8) Research Methods. A hands-on approach to psychiatric and substance abuse research through participating in the work of an epidemiology research lab. Enrollees attend confidential project meetings, where the ins and outs of the project’s daily operations are discussed. Students prepare a research methods project for a final presentation.
Gabriel A. de Erausquin, MD, PhD, G02 Biotechnology Center, 362-5186. Susceptibility of dopaminergic neurons to excitotoxic neuronal death. Susceptibility of dopaminergic neurons (DNs) underlies the pathophysiology of Parkinson’s disease (PD) and is possibly related to developmental injury in schizophrenia. However, the molecular substrates for this susceptibility are not well understood. We developed an in vitro model of selective susceptibility of DNs and characterized some of the molecular signaling pathway leading to this particular form of neuronal death (de Erausquin et al 1994b, Isaacs et al 1996, de Erausquin et al 2003, Dorsey et al 2006). The use of an in vitro model makes possible direct assessment and pharmacologic manipulation of electrophysiologic properties, second messengers and transcription factors of identified individual DNs. In vitro, as well as in vivo, activation of GluRAMPA causes concentration-dependent, severe pruning of neurites and selective death of DNs. In primary cultures of mesencephalon, this form of injury is mediated through release of calcium from intracellular stores (CICR) leading to loss of calcium homeostasis, oxidative stress, and activation of the transcription factor NFkB and the cell death protein p53. We assess whether DN differ from other mesencephalic neurons in synaptic responses or in GluRAMPA mediated responses to exogenously applied AMPA, to evaluate if excessive GluRAMPA stimulation leads to a CICR-mediated decrease in expression or desensitization of the sustained calcium-activated potassium current (SK), resulting in sustained depolarization and in prolonged opening of an IK delayed rectifier, leading to DNs death, and to establish the relevance of this mechanism of susceptibility in intact animals, and in particular to study if the susceptibility of DNs is developmentally modulated. We hope that the knowledge gained from a better understanding of the relationship between phenotype-specific signaling and susceptibility to environmental stress in DNs may yield new insights in the pathophysiology of PD and schizophrenia.

Alison Goate, DPhil, G04A Biotechnology Center, 362-8691. Genetic studies of Alzheimer’s disease. Studies can involve laboratory-based projects on the genetics or cell biology of Alzheimer’s disease or clinical studies involving the collection of data through telephone or personal interview of individuals with a family history of dementia.

John W. Newcomer, MD, 4412 Renard Building, 362-5939. Translational research in psychiatry, including clinical trials focused on the role of NMDA glutamate receptors in regulating risk for psychiatric symptoms, pain, clinical memory research and research concerning the effect of psychotropic medications on the regulation of body weight, glucose and lipid metabolism, and other cardiometabolic biomarkers. This elective offers the student a broad exposure to clinical research protocols relevant to mental disorders, including protocols in patients with schizophrenia. Students will have an opportunity to focus on a particular project of interest.

Rumi Kato Price, PhD, MPE, 4560 Clayton Rd., Central Institute for the Deaf (CID) Building, 286-2282. The student will work closely with Dr. Price on ongoing research projects in substance abuse, psychiatric epidemiology and human-genome epidemiology. The current projects include: a 30-year longitudinal study of the impact of drug abuse and war trauma; a focused study on protective factors mitigating suicidal risk; an epidemiologic study of post-traumatic stress disorder with embedded virtual reality exposure experiments; human-genome epidemiology studies focusing on models for substance abuse and psychiatric disorder comorbidity, admixture, and on translational research to integrate genetic findings to reduce disparities in substance abuse; and epidemiologic applications of highly-flexible computational techniques to identify interactions of risk and protective factors.

Yvette Sheline, MD, 1115 Renard Hospital, 2204 East Building, 362-8422. Two-month minimum. Opportunity for students with computer skills to work closely with Dr. Sheline in a neuroimaging project; (1) investigating brain activation in the limbic system in response to emotional stimuli. Students will be involved in acquiring and analyzing fMRI data, interviewing patients and writing up results or (2) recruiting depressed subjects and matched controls, measuring brain structures affected in major depression, examining diffusion tensor imaging data (DTI) and correlating these findings with neuropsychological performance.
NOTE TO STUDENTS: There are always a number of research projects in the Department of Psychiatry. For additional information contact Dr. Rubin, 362-2462.

Faculty

CHARLES F ZORUMSKI, MD Samuel B. Guze Professor of Psychiatry, Head of the Department of Psychiatry
ARPANA AGRAWAL, PHD Assistant Professor of Psychiatry
AQEEB AHMAD Instructor in Clinical Psychiatry
DALE J ANDERSON, MD Instructor in Clinical Psychiatry
RICHARD H ANDERSON, MD, PHD Instructor in Clinical Psychiatry
ANDREY P ANOKHIN, PHD Research Associate Professor of Psychiatry
E. JAMES ANTHONY, MD, PHD Professor Emeritus of Psychiatry (Child Psychiatry)
SCOTT J ARBAUGH, MD Instructor in Clinical Psychiatry
AHMAD BEHESHTI ARDEKANI, MD Assistant Professor of Clinical Psychiatry
MICHAEL ROMAN BANTON, MD Instructor in Clinical Psychiatry (Child Psychiatry)
DEANNA BARCH, PHD Assistant Professor of Psychology in Psychiatry
RONALD BEACH, MD Instructor in Clinical Psychiatry
ANDREW CURRY BELDEN Research Instructor in Psychiatry
SAVITA BHAT, MS Instructor in Clinical Psychiatry
LAURA J BIERUT, MD Professor of Psychiatry
MONICA E. BISHOP Instructor in Psychiatry
KEVIN J. BLACK, MD Associate Professor of Psychiatry
KELLY N BOTTERON, MD Associate Professor of Psychiatry (Child Psychiatry)
GARY BOXER, MD Associate Professor of Psychiatry (Child Psychiatry)
SUSAN KATHLEEN BOYER, MD Instructor in Clinical Psychiatry
ALLYSON BOYLE, MD Instructor in Clinical Psychiatry
ROBERT HARRY BRADY, MD Instructor in Clinical Psychiatry (Child Psychiatry), Adjunct Instructor in Psychiatry (Child Psychiatry)
STEVEN E. BRUCE, PHD Visiting Assistant Professor of Psychiatry
KATHLEEN K BUCHOLZ, PHD, MS Professor of Psychiatry
JOAN RACHEL BUTCHER Instructor in Clinical Psychiatry
JAMES BYRD, MD Instructor in Clinical Psychiatry (Child Psychiatry)
WILMA J. CALVERT, PHD Adjunct Instructor in Psychiatry
ROBERT MICHAEL CARNEY, PHD Professor of Psychiatry
PATRICIA A CAVAZOS-REHG, PHD Research Instructor in Psychiatry
LI-SHIUN CHEN, MD, PHS Instructor in Psychiatry
ZHOUFENG CHEN, PHD Associate Professor of Psychiatry
VESSELIN M. CHORBOV Research Instructor in Psychiatry
THEODORE J CICERO, PHD Vice Chairman for Research, Department of Psychiatry, Professor of Neuropharmacology in Psychiatry
ERIK J SIREVAAG, PHD Research Assistant Professor of Psychiatry
JAMES B SMITH, MD Associate Professor Emeritus of Clinical Psychiatry
STACEY L SMITH, MD Assistant Professor of Clinical Psychiatry
WAYNE A STILLINGS, MD Assistant Professor of Clinical Psychiatry
CATHERINE STRILEY Research Assistant Professor of Psychiatry
BRIAN K SUAREZ, PHD Professor of Psychiatry
YUN JU SUNG, PHD Assistant Professor of Psychiatry
JAGDISH C SURI, MD Assistant Professor of Clinical Psychiatry (Child Psychiatry)
VINOD SURI Instructor in Clinical Psychiatry (Child Psychiatry) (Full-Time at Hawthorn Children's Psychiatric Hospital)
DRAGAN M SVRAKIC, MD, PHD Professor of Psychiatry
ALEXANDRE TODOROV, PHD Research Associate Professor of Psychiatry
DOROTHY J. VAN BUREN, PSYD Research Assistant Professor of Psychiatry
MICHELE VAN EERDEWEGH, MD Instructor in Clinical Psychiatry
JEFFREY A. VANDER KOOI, MD Instructor in Clinical Psychiatry
GARRY M. VICKAR Instructor in Clinical Psychiatry
SARA WALKER, MD Instructor in Clinical Psychiatry
JEN-CHYONG WANG, PHD Research Assistant Professor of Psychiatry
R. ROBINSON WELCH, PHD Assistant Professor of Psychiatry
ZILA WELNER, MD Associate Professor of Clinical Psychiatry (Child Psychiatry)
RICHARD D WETZEL, PHD Professor of Psychiatry
JOHN BAIR WHITFIELD Adjunct Instructor in Psychiatry
DENISE WILFLEY, PHD Professor of Psychiatry
CONSUELO WILKINS, MD Associate Professor of Psychiatry
MONIQUE MARIE WILLIAMS, MD Instructor in Psychiatry
MATTHEW STEWART WILSON Instructor in Clinical Psychiatry
HAROLD D WOLFF, MD, BS Associate Professor of Clinical Psychiatry
EDWIN D WOLFGRAM, MD Assistant Professor of Clinical Psychiatry
DAVID F WOZNIAK, PHD Research Professor of Psychiatry
CHRISTOPHER WUERTZ, MD Assistant Professor of Clinical Psychiatry
HONG XIAN, PHD Research Associate Professor of Psychiatry
LUIS H ZAYAS, PHD, MS Professor of Psychiatry

Department's Web Site
http://www.psychiatry.wustl.edu/

Department of Radiation Oncology

The Department of Radiation Oncology was created on July 1, 2001, having been part of the Mallinkcrodt Institute of Radiology for many years. The department has a broad academic program that focuses on excellence in patient care and the development of new treatment paradigms;
innovative research in each of the four divisions of clinical, physics, biology and bioinformatics; and

teaching for residents in radiation oncology, medical students and allied health personnel. The
department is one of the largest, most academically balanced and best equipped in the country, and is
responsible for all radiation therapy procedures at Washington University Medical Center. Our faculty
has gained international recognition for innovative technological advances in physics and treatment
planning, biological research, computer applications and clinical investigation.

Milestones

- demonstration of a hypoxic subpopulation in tumors in vivo
- demonstrated the importance of the cell cycle in the sensitivity to ionizing radiation
- customized (Cerrobind) shielding system to protect normal tissues during irradiation
- design and construction of the first small dedicated computer for radiation therapy treatment
  planning
- in collaboration with Varian Associates and NCI, design and construction of the first generation of
  high-energy, dual-modality, multiple-energies linear accelerator (Clinac 35)
- development of three-dimensional radiation therapy treatment planning and delivery systems
- clinical applications of 3-D conformal and intensity-modulated radiation therapy
- use of multiple imaging modalities in treatment planning in radiation therapy, including CT, PET and
  MRI scanning
- implementation of novel respiratory gating algorithms
- development of biomarkers of DNA repair capacity of tumors

The Department of Radiation Oncology currently occupies a large, attractive and convenient clinical
facility on the ground floor of the Center for Advanced Medicine. The clinical facilities include nine
linear accelerator rooms, four simulator rooms and a brachytherapy center with two high dose-rate
treatment units. Furthermore, the facility houses the latest Gamma Knife unit, called Perfexion, which
is operated in collaboration with HealthSouth Corporation. We have advanced treatment planning
computer systems for 3-D conformal and intensity-modulated radiation therapy. We have four linear
accelerators with on-board CT imaging capability. The brachytherapy suite includes capability for high
dose-rate remote afterloading and for image-guided permanent prostate seed implants. Interstitial
and external hyperthermia treatments are also available. Plans are in progress for the installation of a
new type of proton treatment facility, using a miniaturized cyclotron mounted on a gantry.

The Physics faculty and the Bioinformatics group have research laboratories and offices on the fourth
floor of the Clinical Sciences Research Building plus designated areas adjacent to the clinical facility in
the CAM building. The Radiation Biology laboratory and faculty offices are housed at the 4511 Forest
Park Building, where there has been a significant expansion of biology research space.

Courses

Third Year

M90 740 Radiation Oncology Clerkship
Instructor: Joseph R. Simpson, MD, PhD, FACS, 362-8567
The four-week clerkship in radiation oncology will provide students with an introduction to the
evaluation and management of a broad range of patients referred for consultation regarding radiation
therapy. Clerkship activities will take place entirely within the Barnes-Jewish Hospital/Siteman Cancer
Center complex. Students will conduct inpatient and outpatient evaluations under the supervision of
radiation oncology department residents and faculty. Students will also attend and participate in
regularly scheduled departmental conferences at noon Monday through Wednesday and 8 a.m. on
Friday. Students will also have the opportunity to attend the appropriate multidisciplinary conferences
(such as pediatric neuro-oncology, cardiothoracic oncology, lymphoma, GYN oncology, neuro-oncology
and ENT) pertaining to their rotation schedule.

Instructional materials are available for students on the rotation. (Students are NOT expected to
purchase any curricular materials for the clerkship.) Student performance will be evaluated by faculty
members who supervise the student over the course of the four-week clerkship.

**Fourth Year**

**Elective**

**M90 840 CLINICAL RADIATION ONCOLOGY**
Instructor: Joseph Simpson, MD, PhD, 362-8567
Location: Center for Advanced Medicine, Lower Level
Elective Contact: Joseph Simpson, MD, PhD, 362-8567
Other Information: Students should meet the Chief Resident in the Department of Radiation Oncology in the Siteman Cancer Center on the lower level of the CAM Building.

Enrollment limit per period: 3
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The clinical division offers an elective with emphasis on the evaluation, planning of and administration of radiation therapy in patients with malignant tumors. The students have the opportunity to enhance their knowledge on the natural history, pathological and biological features of cancer and to sharpen their clinical skills participating in the management of these patients.

Student time distribution: Inpatient 7%, Outpatient 78%, Conferences/ Lectures 15%; Subspecialty Care 100%
Major teaching responsibility: Attendings, residents and staff
Patients seen/weekly: 20-35 per physician
On call/weekend responsibility: None

**Research**

**(M90 900)**

Joseph Deasy, PhD, Radiation Oncology, Division of Bioinformatics, 362-8610. Broad range of opportunities for investigation in: (1) computer applications in data analysis and information systems; and (2) clinical outcome analysis projects.

Jeff Michalski, MD, Radiation Oncology, Clinical Division, 362-8566. Broad range of opportunities for investigation in: (1) prognostic factors and therapy outcome in a variety of patients with cancer; (2) three-dimensional treatment conformal and intensity-modulated radiation therapy in the treatment of patients with head and neck, lung, pancreas, rectal or prostate cancer.

**Faculty**

**DENNIS E HALLAHAN, MD** Professor of Radiation Oncology, Head of the Department of Radiation Oncology

**KATHY BAGLAN** Instructor in Clinical Radiation Oncology

**CHARLES D BLOCH, PHD** Associate Professor of Radiation Oncology (Pending Executive Faculty Approval)

**WALTER R BOSCH, PHS** Research Assistant Professor of Radiation Oncology

**JEFFREY D BRADLEY, MD** S. Lee Kling Associate Professor of Radiation Oncology

**RYAN SCOTT BRAME, PHD** Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval)

**JOSEPH O. DEASY, PHD** Professor of Radiation Oncology

**VENKATA RAO DEVINENI, MD** Associate Professor of Clinical Radiation Oncology
ROBERT E DRZYMALA, PHD  Associate Professor of Radiation Oncology
ISSAM M EL NAQI, PHD  Assistant Professor of Radiation Oncology
JACQUELINE ESTHAPPAN, PHD  Assistant Professor of Radiation Oncology
SEYMOUR FOX, PHD  Instructor in Radiation Oncology
JOSE L GARCIA  Instructor in Radiation Oncology
HIRAM ALBERTO GAY, MD  Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval)
SREEKRISHNA M GODDU, PHD  Assistant Professor of Radiation Oncology
SUSANA GONZALO HERVAS, PHD  Assistant Professor of Radiation Oncology
PERRY W GRIGSBY, MD, MS  Professor of Radiation Oncology
LANNIS E HALL-DANIELS, MD  Assistant Professor of Clinical Radiation Oncology
RYUJI HIGASHIKUBO, PHD  Research Associate Professor of Radiation Oncology
ENRIQUE WILMAR IZAGUIRRE, PHD  Instructor in Radiation Oncology
ERIC E. KLEIN, PHD  Professor of Radiation Oncology
ANDREI LASZLO, PHD  Associate Professor of Radiation Oncology
HUI LI, PHD  Assistant Professor of Radiation Oncology
DANIEL ABRAHAM LOW, PHD  Professor of Radiation Oncology
WEI LU, PHD  Instructor in Radiation Oncology
MUHAMMAD SALEEM MAHMOOD, MD  Instructor in Clinical Radiation Oncology
DAVID B MANSUR, MD  Associate Professor of Radiation Oncology
JOHN W MATTHEWS, D SC  Research Assistant Professor of Radiation Oncology
JEFF MICHAEL MICHALSKI, MD  Professor of Radiation Oncology, Vice Chairman of Radiation Oncology
KEVIN LAWRENCE MOORE, PHD  Instructor in Radiation Oncology
SASA MUTIC  Associate Professor of Radiation Oncology
ROBERT J MYERSON, MD, PHD  Professor of Radiation Oncology
OSCAR D. NORTON, MD  Instructor in Clinical Radiation Oncology
GILBERT H NUSSBAUM, PHD  Associate Professor Emeritus of Radiation Oncology
TEJ K PANDITA, PHD  Associate Professor of Radiation Oncology
PARAG J. PARIKH, MD  Assistant Professor of Radiation Oncology
CARLOS A PEREZ, MD  Professor Emeritus of Radiation Oncology
JAMES VERNON PIEPHOFF, MD  Instructor in Clinical Radiation Oncology
JAMES A PURDY, PHD  Adjunct Professor of Radiation Oncology
DHARANIPATHY RANGARAJ, PHD  Instructor in Radiation Oncology
GARY A RATKIN, MD  Instructor in Clinical Radiation Oncology
KEITH M RICH, MD  Professor of Radiation Oncology
SUSAN LYNN RICHARDSON, PHD  Instructor in Radiation Oncology
CLIFFORD GRANT ROBINSON, MD  Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval)
BUCK EDWARD ROGERS, PHD  Associate Professor of Radiation Oncology
JOSEPH L ROTI ROTI, PHD  Professor of Radiation Oncology
TAPAN ROY  Instructor in Clinical Radiation Oncology
LAKSHMI SANTANAM, PHD  Instructor in Radiation Oncology
Department's Web Site
http://radonc.wustl.edu/

Department of Radiology

The Edward Mallinckrodt Institute of Radiology (more commonly known as Mallinckrodt Institute of Radiology or MIR) serves as the Department of Radiology for Washington University in St. Louis School of Medicine, helping to guide the consulting physician in the discovery, treatment and, ultimately, the healing of disease. Established in 1930, MIR is one of the largest and most scientifically sophisticated radiology centers worldwide.

Internationally recognized for its groundbreaking research, the Institute continues to pioneer new radiological techniques for better patient care.

Milestones
• development of the first diagnostic test for gallbladder disease
• design and construction of the first cross-sectional X-ray laminagraph
• collaboration on design and installation of the first cyclotron located in a U.S. medical center
• development of positron emission tomography (PET)
• installation of one of the world’s first computed tomography (CT) and magnetic resonance (MR) scanners
• interfacing of a minicomputer with a gamma camera, improving accuracy and efficiency of nuclear medicine procedures
• establishment of the first mobile mammography van west of the Mississippi River
• integration of CT and MR scans with three-dimensional technology
• application of organic chemistry to the preparation of radiopharmaceuticals used in medical imaging
• measurement of cerebral blood flow and metabolism
• establishment of one of the largest, most comprehensive interventional radiology services in the United States
• application of PET for measuring metabolic activity in relation to cardiac blood flow

The Institute occupies more than 400,000 total square feet, comprising its own 13-story building, with
satellite facilities in Barnes-Jewish and St. Louis Children’s hospitals; the Clinical Sciences Research and East buildings; the Scott Avenue Imaging Center; the Center for Advanced Medicine; and the Knight Emergency and Trauma Center. The department provides diagnostic radiology, nuclear medicine and radiation physics services for all hospitals in the Washington University Medical Center, Barnes-Jewish West County and Barnes-Jewish St. Peters hospitals. The Institute provides diagnostic radiology for the Washington University Orthopedics and Barnes-Jewish Hospital Outpatient Orthopedic center.

MIR clinical facilities are on the second floor of the Institute (general diagnostic radiology); third floor (neuroradiology, MRI, angiography); fourth floor (gastrointestinal and genitourinary radiology, and ultrasonography); and the fifth floor (MRI). A comprehensive interventional radiology center occupies the eighth floor. Nuclear medicine is on the ninth floor of the Barnes-Jewish Hospital West Pavilion. Orthopaedic imaging and musculoskeletal radiology services are on the sixth floor of the Center for Advanced Medicine. The Breast Health Center, on the fifth floor of the Center for Advanced Medicine, is a multidisciplinary facility that provides a full range of breast imaging services and interventional procedures. In the north wing of St. Louis Children’s Hospital is a complete pediatric radiology facility, offering ultrasound, nuclear medicine, CT and MRI. The diagnostic radiology facilities at Barnes-Jewish Hospital north offer state-of-the-art equipment and a staff of talented specialists in abdominal and thoracic imaging, MRI, CT, nuclear medicine, and interventional radiology.

The Institute has 102 examination rooms used for diagnostic radiology. Clinical and research equipment includes three PET/CT scanners, 14 CT scanners, four PET scanners, 15 MR scanners (including an 11.7-Tesla research scanner), 12 high-end ultrasound machines plus seven portable units, seven interventional radiology systems, six digital chest units, 10 computer radiography units, three neurointerventional radiology systems and six mammography units. In addition, as part of the department’s community outreach effort, the Institute cosponsors with the Alvin J. Siteman Cancer Center a mobile mammography van that provides screening services at corporate and public sites in the St. Louis area.

MIR has approximately 200,000 square feet devoted to research, with facilities in the Clinical Sciences Research Building (radiological sciences), in the East Building (electronic radiology), in the Scott Avenue Imaging Center (neurological PET, molecular pharmacology, biomedical MR imaging, optical imaging and cardiovascular imaging), and in the Center for Clinical Imaging Research (a bioimaging facility for basic and translational inpatient and outpatient clinical research).

Administrative, teaching and support functions occupy the sixth floor and the ninth through the 12th floors of the Institute.

In 2003, Washington University and the School of Medicine launched BioMed 21, a strategic plan for developing a multidisciplinary approach to basic and clinical research. Mallinckrodt Institute’s 75-plus years of imaging experience will be evident in BioMed 21’s Center for Biological Imaging, where biological imaging will progress from focusing on gross anatomy to the delicate molecular interactions that underlie cellular and general processes.

Courses

**Second Year**
Coursemaster: Sanjeev Bhalla, MD; bhallas@mir.wustl.edu

Twelve hours of lecture are devoted to an introduction to radiology. The majority of the course is devoted to diagnostic radiology, including computed tomography, ultrasound, nuclear medicine and magnetic resonance. Radiation biology also is introduced. The course also includes review of individual teaching file cases at small group sessions.

Sanjeev Bhalla, MD
**Third Year**

**M90 701 GENERAL RADIOLOGY CLERKSHIP**  
Coursemasters: Michelle Miller-Thomas, MD, 362-5949, miller-thomas@mir.wustl.edu, Matthew Parsons, MD, 362-5950, parsonsm@mir.wustl.edu  
Contact Person: Melissa Varner, Radiology Staff Library, 362-5139, varnerm@mir.wustl.edu

This four-week introductory radiology elective will be offered to third-year medical students. Each student will rotate through four of the following radiology services: Emergency Department, Pediatric Radiology, Cardiothoracic Imaging, Mammography, Abdominal Imaging, Musculoskeletal Radiology, Neuroradiology, and Interventional Radiology. The primary course objective is to familiarize students with the scope of diagnostic radiology, including the consulting role radiologists provide to primary care and specialty providers, risks/benefits and cost effectiveness of radiologic examinations, and guidelines for ordering common studies.

Students will report each morning for a service conference. These conferences are both case-based and didactic. Students will have a predominantly observational role in conferences, as they are principally designed for radiology resident teaching. Students will then spend mornings in the reading rooms with residents, fellows and attending radiology faculty. This time will consist of interactive teaching based on daily clinical cases. Each student will be expected to keep a log of cases they see to facilitate reading around cases and also to provide a vehicle for follow-up of interesting cases. One case per week should be chosen for its teaching value. During this time, students will be responsible for identifying a case of interest. These brief (5 to 10 minutes) presentations will be presented at 3 p.m. on Friday of each week to the other students and will be evaluated by a resident or attending radiologist.

Monday through Thursday at 3 p.m., students will meet with a designated radiology resident who will present either a didactic or case-based lecture appropriate for third-year medical student teaching.

Students will select two of their four presented cases for submission to a digital teaching file. Reading lists, references and textbooks will be provided. The first and final days of the elective are mandatory. No high honors will be awarded if a student is absent for more than five days of the rotation. The course will accommodate four to eight students each month. The course will not be offered if enrollment falls below four.

**Fourth Year**

**Electives**

**M90 801 GENERAL RADIOLOGY**  
Instructors: Michelle Miller-Thomas, MD, 362-5949, miller-thomas@mir.wustl.edu, Matthew Parsons, MD, 362-5950, parsonsm@mir.wustl.edu  
Location: Radiology Staff Library (First floor Mallinckrodt Tower, Room 117)  
Elective Contact: Melissa Varner, 362-5139, varnerm@mir.wustl.edu  
Other Information: Students meet in Mini-Scarpellino, 1st Floor Mallinckrodt Institute of Radiology Building, 8 a.m. first day of elective.

Enrollment limit per period: 5  
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This four-week introductory radiology elective will be offered to third- and fourth-year medical students. Each student will rotate through four of the following radiology services: Emergency Department, Mammography, Pediatrics, Chest, Abdominal Imaging, Musculoskeletal, Neuroradiology and Interventional Radiology. Weekly rotations will be assigned after a preference list is made by the student. The primary course objective is to familiarize students with the scope of diagnostic radiology including: the consulting role radiologists provide to primary care and specialty providers,
risks/benefits and cost effectiveness of radiologic examinations, and guidelines for ordering common studies as well as specific disease entities and their radiologic appearance and work-up.

Students will report each morning for a service conference. These conferences are both case-based and didactic. Students will have a predominantly observational role in conferences, as they are principally designed for radiology resident teaching. Students will then spend mornings in the reading rooms with residents, fellows and attending radiology faculty. This time will consist of interactive teaching based on daily clinical cases. From noon to 1 p.m. the student will attend the daily department-wide conference and then return to the reading room. At 3 p.m., students will convene with a radiology resident who will present a didactic lecture on a scheduled topic. During the elective, four interesting cases, one per week, should be identified and presented in PowerPoint format on Fridays at 3 p.m. Students will select two of their case presentations for submission to a digital teaching file.

Students will keep a logbook of good cases seen daily to provide a foundation for further reading, as well as an opportunity for clinical or radiologic follow-up of good cases seen in the reading room. This log will be submitted to the coursemaster at the end of the elective.

Students taking this elective for a second time who have a special interest in a particular area of radiology pertinent to their intended career choice may tailor their experience to focus on one or more services if desired (i.e., fourth-year student going into neurosurgery may spend up to four full weeks in neuroradiology). This will be considered on a case-by-case basis by the coursemaster. These returning students will be expected to keep a log of cases seen but will be exempt from attending the daily afternoon teaching sessions and case presentations. In lieu of these sessions, the student will develop an independent study project to be completed by the end of the rotation. Please see the separate course listings for Nuclear Medicine and Interventional Radiology.

Reading lists, references and textbooks will be provided. The first and final days of the elective are mandatory. No honors will be awarded if a student is absent for more than 5 days of the rotation.

Student time distribution: Inpatient 40%, Outpatient 30%, Conferences/Lectures 30%; Subspecialty Care 100%
Major teaching responsibility: Attendings, fellows and residents
Patients seen/weekly: N/A
On call/weekend responsibility: None

M90 820 CLINICAL NUCLEAR MEDICINE
Instructor: Akash Sharma, MD, 362-2809
Location: 956 West Pavilion
Elective Contact: Akash Sharma, MD, 362-2809
Other Information: Students report to 956 West Pavilion, 8 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will be exposed to the full range of clinical nuclear medicine. In conjunction with the staff, the student will be responsible for planning and interpreting imaging studies in patients referred to the Department. Opportunity exists to learn instrumentation techniques, including computer applications. There are daily conferences and scan interpretation sessions.

Student time distribution: Inpatient 30%, Outpatient 50%, Conferences/Lectures 20%; Primary Care 50%, Subspecialty Care 50%
Major teaching responsibility: Multiple attendings and fellows
Patients seen/weekly: 200
On call/weekend responsibility: None

M90 830 INTERVENTIONAL RADIOLOGY
Instructor: Robert Pallow, MD, 362-2900
Location: Mallinckrodt Institute of Radiology
Elective Contact: Robert Pallow, MD, 362-2900
Other Information: Students should contact Dr. Pallow to discuss meeting location and time for first
day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41

Students will be exposed to all clinical and procedural aspects of interventional radiology including:
patient evaluation and consultation, preparation of patients for procedures, performance of a wide
range of vascular and non-vascular procedures, post-procedure patient management and longitudinal
patient follow-up. Students will actively participate in interventional procedures. Students will attend
the departmental noon conference (daily) and section conferences including didactic lectures,
morbidity and mortality conference, and case conferences (3-4 times per week).

Student time distribution: Inpatient 60%, Outpatient 30%, Conferences 10%
Major teaching responsibility: Attending Interventional Radiology physicians will provide the majority
of teaching. Fellows and residents will provide additional teaching.
Patients seen/weekly: Approximately 150 patients per week are seen in consultation or for procedures
in the south campus Interventional facility
On call/weekend responsibility: None

Research

(M90 900)

Interested students should contact the appropriate individual in each division regarding the types of
research projects available.

Tom Conturo, MD, PhD, 2nd Floor East Building, Rm 2120, 362-8421. Magnetic resonance (MR)
imaging is a noninvasive means of providing images of the human body at high spatial resolution and
contrast sensitivity. The contrast can be manipulated to depend on different properties of tissue water,
allowing the study of a variety of biological processes. In some cases, endogenous or exogenous
paramagnetic MR contrast agents are used to alter the MRI contrast by perturbing the tissue water
environment. Recently, new MRI hardware has also enabled techniques having high temporal
resolution. Using the unique contrast properties of MRI and the higher spatial/temporal resolution,
noninvasive techniques can be devised to study neuronal activity, tissue perfusion, water mobility
(diffusion) and neuronal fiber pathways in the human brain. The goals of Dr. Conturo's research lab
are to develop and apply MR imaging techniques for quantitative imaging of cerebral perfusion, brain
function, water diffusion and neuronal fiber pathways. These techniques utilize the MR signal effects of
exogenous bolus-injected contrast agents, endogenous hemoglobin and microscopic water diffusion.
Long-term goals are to apply these methodologies toward imaging and understanding tissue structure,
function and physiology in the brain and other organs in normal and abnormal conditions. The
approaches that are used in this laboratory cover a broad range of areas, including MRI physics, MRI
pulse sequence development, theoretical derivations, computer simulations, image-processing,
custom contrast agent design and syntheois, phantom studies, animal models, human studies, clinical patient studies and comparison with other imaging modalities.

Farrokh Dehdashti, MD, Nuclear Medicine PET Facility, 7th Floor Mallinckrodt Institute of Radiology,
362-1474. Positron emission tomography (PET) is an imaging technique that produces images
reflective of biochemical processes of normal and abnormal tissues. PET is complementary to anatomic
imaging modalities such as computed tomography (CT) and magnetic resonance imaging (MRI). The
ability of PET to quantify fundamental processes, such as blood flow, oxygen metabolism, glucose
metabolism and receptor density, makes this technique very desirable to both investigators and
clinicians. Dr. Dehdashti’s research utilizes the conventional PET radiopharmaceutical, F-18
fluorodeoxyglucose (FDG), as well as a variety of unique PET radiopharmaceuticals such as 16α[18F]-fluoro-17β-estradiol (FES), an estrogen receptor based imaging tracer, Cu-60-diacetyl-bis[N4-methylthiosemicarbazone (Cu-60 ATSM), a hypoxic imaging tracer, and 94mTc-sestamibi to assess the functional capacity of multidrug drug resistance. Below is a partial list of the research projects relating to PET: (1) PET assessment of response to hormone therapy in advanced hormone-sensitive breast cancer (the major goal of this project is to predict response to hormone therapy in breast cancer based on PET assessment of flare reaction); (2) Imaging MDR1 P-glycoprotein transport activity in vivo with 94mTc-sestamibi PET to predict response to chemotherapy (the major goal of this project is to assess whether 94mTc-sestamibi PET will provide a functional assessment of MDR1 Pgp in advanced lung cancer and whether tumor uptake of 94mTc-sestamibi prior to chemotherapy will predict treatment failure in these patients); (3) To determine if quantitative measures of the change in tumor FDG uptake after 24 hours after starting estradiol therapy is a surrogate biomarker of the efficacy in patients with hormone-sensitive metastatic breast cancer. In an exploratory analysis, the effect of the two doses of estradiol on tumor glucose metabolism will be compared; (4) PET assessment of tumor hypoxia using Cu-ATSM in patients with breast cancer (the major goal of this project is to predict prognosis and response to neoadjuvant chemotherapy); (5) Functional assessment of P-glycoprotein with conventional nuclear medicine imaging and 99mTc-sestamibi in patients with advanced breast cancer; (6) PET assessment of prostate cancer using C-11 acetate; (7) To investigate the effects of letrozole therapy on tumor FES uptake in patients with hormone-sensitive breast cancer (to determine whether the up regulation of ER expression as a result of estrogen deprivation caused by letrozole therapy can be detected by FES-PET.

Rob J. Gropler, MD, Room 1307 East Building, 747-3878. Cardiovascular imaging research. The research in the Cardiovascular Imaging Laboratory is designed to better understand the relationship between myocardial perfusion, intermediary metabolism and mechanical function in both normal and abnormal cardiac states. The research involves the integration of several imaging techniques with diverse strengths such as PET, MRI, CT and echocardiography. The success of the research requires several paths of investigation to be pursued in parallel. For example, imaging the biologic processes of interest requires continued technical developments for each of the imaging methods listed above. There are ongoing efforts to permit more-accurate PET measurements of myocardial substrate metabolism. They include the development of novel tracers of extracted substrates, the development of acquisition schemes to assess endogenous substrate metabolism, and the validation of mathematical approaches to correlate the tracer kinetics with the underlying metabolic processes. These studies are being pursued in small and large animal models and then in humans. Another example includes the current efforts to develop approaches to image the coronary arteries noninvasively by MRI using novel contrast agents and acquisition schemes. In addition, techniques are being developed to permit MR-guided interventions on the coronary arteries. This undertaking includes the development of novel guide-wire tracking and catheter tracking schemes using both passive and active approaches. Finally, to permit assessments of myocardial oxygenation and thus, perfusion, techniques are being developed to permit BOLD imaging the myocardium. Another path of the research is to determine how this perfusional-metabolic-functional relation is altered by normal life changes and then determine how disease states alter the relationship. For example, both PET and echocardiography are being used to characterize the age and gender related changes on myocardial perfusion, substrate metabolism and function. To study the relationship in disease states, similar studies are being performed in patients with diabetes and obesity. A third path to determine the mechanisms responsible for these changes in this metabolic-functional relation and identify potential interventions that may reverse or ameliorate them. In this regard, similar imaging studies are being performed to determine the importance of nitric oxide and the PPARα system in defining this metabolic-functional relation.

Charles Hildebolt, DDS, PhD, 3rd Floor East Building, 362-8410. The assessment of oral bone by digital radiographic imaging, including new assessment methods based on photostimulable phosphor radiography. Assessments are focused on the use of radiographic imaging of oral bone to determine osteoporosis risk and the association between oral bone mass and dietary intake of calcium and vitamin D.
Positron emission tomography (PET). We use positron emission tomography (PET) in human subjects as a tool in the investigation of two distinct areas: The first area of research involves the study of the metabolic needs of the brain during neural work. While cerebral blood flow (CBF) augmentation is considered to be a hallmark of intensified neural activity, recent data from our laboratory have shown that in healthy human subjects the CBF response to physiological stimulation is not altered by stepped hypoglycemia or hypoxia and is driven by factors other than local requirements in glucose or oxygen. Theoretical modeling of oxygen delivery to human brain and actual measurements in healthy humans showed that adequate tissue levels of oxygen could be maintained without the need for increased CBF or oxygen delivery. Brain oxygen utilization increases during continuous physiological stimulation. The time course and magnitude of these changes suggest that the energy demands of neuronal activation are initially met predominantly by increased glycolysis whereas continued neuronal activation eventually requires increased oxidative metabolism. We suggest that the redox potential of the neural cells (NADH/NAD+ or lactate/pyruvate ratio) is an important sensor of blood flow need. This hypothesis was supported by the data obtained in animals and humans with CBF activation studies with lactate and pyruvate injections.

A second area of our research involves the use of PET to study the biology of depression treatment as well as other related neuropsychiatric diseases. The current interest in the laboratory is the use of serotonergic measures to probe the changes in brain receptor function during treatment of depression with different antidepressant drugs. We have previously shown with PET that the serotonin system in untreated depressed patients has decreased responsiveness to pharmacological challenge. Recently we have shown that, using the highly selective radioligand [18F]-altanserin to image serotonin-2A receptors in vivo, depressed patients have substantially decreased serotonin-2A receptors in the hippocampus compared to normal control subjects. The effect of antidepressant treatment on receptor density is being studied in order to study the responsiveness and down-regulation of this system. Other ongoing research has focused on the biology of addiction and involves the imaging of dopamine receptors in the basal ganglia, measuring the release of dopamine after pharmacologic challenges, and the measure of GABA-A receptors in different patient populations.

Stephen M. Moerlein, PhD, Radiological Sciences, 362-8466. Research interests lie in the general area of labeled tracer development for nuclear medicine imaging, especially positron-emission tomography (PET). Developmental effort begins with synthesis of target structures, preclinical screening that involves in vitro biochemistry and pharmacological testing, and ex vivo biodistribution studies in small animals. Promising tracers are then examined by in vivo imaging of animal subjects and tracer kinetic modeling. The final step in the transition of a radiochemical into a labeled drug takes into account radiation dosimetry, pharmaceutical quality, and the development of automated production to streamline delivery to human subjects. Each of these aspects are researched, with a primary interest in novel agents for examination of neurological processes by PET.

David Piwnica-Worms, MD, PhD, 3rd Floor East Building, 362-9356. Research projects in molecular imaging are available. Molecular imaging is broadly defined as the characterization and measurement of biological processes in living animals, model systems and humans at the molecular and cellular level using remote imaging detectors such as PET, SPECT, MRI, bioluminescence, and near-infrared fluorescence. Our goal is to advance the understanding of normal biology and pathophysiology through noninvasive investigation of molecular and cellular events in vivo. Projects focus on creation, validation and use of luciferase reporters and bioluminescence imaging as well as PET reporters to investigate protein-protein interactions, signal transduction, and gene expression in cancer and infectious disease, development of peptide conjugates for membrane transduction of PET, SPECT and optical contrast agents, and investigations of the transport functions of the multidrug resistance (MDR1) P-glycoprotein family of membrane transporters in cancer and Alzheimer’s Disease.

Marc Raichle, MD, 2nd Floor East Building, 362-6907. We use functional imaging techniques, both positron emission tomography and functional magnetic resonance imaging, to study the normal organization of the human brain and the effect of selected diseases. The research focuses on both the...
methodology (imaging and experimental) and specific questions in cognitive neuroscience.

Michael J. Welch, PhD, 4th Floor Clinical Sciences Research Building, 362-8435. Short-lived positron emitting radionuclides such as carbon-11 and fluorine-18 can be used to trace physiologic and pharmacologic processes in humans. Tracers are being developed to probe brain receptors, tumor receptors and enzyme systems.

Bruce R. Whiting, PhD, Room 3352 East Building, 362-6965. Quantitative computed tomography (CT). By developing accurate models of the physics of CT image acquisition and incorporating these models into image reconstruction algorithms, improved quantitative information can be obtained from clinical CT images. Applications include 3D localization of cochlear implants, protocols to minimize CT radiation dose, brachytherapy dose planning and monitoring bone regrowth in hip implant revision surgery. There are opportunities for computer programming and algorithm development, experimental data collection, conducting observer studies and analyzing clinical patient data.

Faculty

R. GILBERT JOST, MD  Elizabeth E Mallinckrodt Professor of Radiology, Head of The Department of Radiology, Director of The Edward Mallinckrodt Institute of Radiology
SAMUEL I ACHILEFU, PHD  Professor of Radiology
JOSEPH J.H. ACKERMAN, PHD  Professor of Radiology
WALTER JOHN AKERS, DVM, PHD  Instructor in Radiology
MARYELLEN AMATO, MD  Instructor in Clinical Radiology
CAROLYN J ANDERSON, PHD  Professor of Radiology
DEE CLAIRE ANDERSON, MD  Professor of Radiology
CATHERINE M APPLETON, MD  Assistant Professor of Radiology
KYONGTAE T BAE, MD, PHD, MS  Adjunct Associate Professor of Radiology
DENNIS M BALFE, MD  Professor of Radiology
DEANNA BARCH, PHD  Associate Professor of Radiology
PREMSRI TANG BARTON, MD  Associate Professor of Radiology
ADIL BASHIR, PHD  Research Instructor in Radiology
TAMMIE LEE SMIT BENZINGER, MD, PHD  Assistant Professor of Radiology
MIKHAIL Y BEREZIN, PHD  Instructor in Radiology
SANJEEV BHALLA, MD  Associate Professor of Radiology
ANDREW J BIERHALS, MD  Assistant Professor of Radiology
JOELLE BIERNACKI, MD  Instructor in Radiology
KEVIN J. BLACK, MD  Associate Professor of Radiology
KELLY N BOTTERON, MD  Associate Professor of Radiology
TODD BRAVER, PHD  Associate Professor of Radiology
G. LARRY BRETHORST, PHD  Research Associate Professor of Radiology
JEFFREY J BROWN, MD  Professor of Radiology
HAROLD BURTON, PHD  Professor of Radiology
MEREDITH S BYERS, MD  Instructor in Radiology
DELPINE L. CHEN, MD  Assistant Professor of Radiology
WENHUA CHU, PHD  Research Instructor in Radiology
PAUL KEVIN COMMEAN Research Instructor in Radiology
LISA TABOR CONNOR, PHD  Assistant Professor of Radiology
MARK STEPHEN CONRADI, PHD  Professor of Radiology
THOMAS E CONTURO, MD, PHD  Associate Professor of Radiology
MAURIZIO CORBETTA, MD  Professor of Radiology
CONSTANCE STONE COURTOIS, MD  Assistant Professor of Radiology
JAMES P CRANE, MD  Professor of Radiology
DEWITTE T CROSS, III, MD  Professor of Radiology
MICHAEL G CROWLEY, PHD  Instructor in Radiology
JOSEPH P CULVER, PHD, BS  Assistant Professor of Radiology
KRISTOPHER W CUMMINGS, MD  Instructor in Radiology
NIRVIKAR Dahiya, MD  Assistant Professor of Radiology
MICHAEL D DARCY, MD  Professor of Radiology
VICTOR G DAVILA-ROMAN, MD  Professor of Radiology
GENE LAYTON DAVIS, JR, MD  Assistant Professor of Clinical Radiology
WILLIAM B DAWSON, MD  Associate Professor of Radiology
FARROKH DEHDASHTI, MD  Professor of Radiology
JENNIFER LEE DEMERTZIS, MD  Instructor in Radiology
CARMEN S DENCE  Research Associate Professor of Radiology
COLIN PIETER DERDEYN, MD  Professor of Radiology
STEVEN DON, MD  Associate Professor of Radiology
JAMES R DUNCAN, MD, PHD  Associate Professor of Radiology
WILSON B EDWARDS, PHD  Assistant Professor of Radiology
IGOR R EFIMOV, PHD  Associate Professor of Radiology
RONALD G EVENS, MD  Professor of Clinical Radiology
DIONE M FARRIA, MD  Associate Professor of Radiology
KEITH C FISCHER, MD  Associate Professor of Radiology
M. WAYNE FLYE, MD, PHD, MA  Professor of Radiology
MOKHTAR H GADO, MBBCH  Professor of Radiology
JOEL RICHARD GARBOW, PHD  Research Associate Professor of Radiology
HEATHER VALLHON GARRETT, MD  Instructor in Radiology
CHARLES F GARVIN, MD  Instructor in Clinical Radiology
EDWARD M GELTMAN, MD  Assistant Professor of Radiology
DAVID S GIERADA, MD  Professor of Radiology
LOUIS ARNOLD GILULA, MD  Professor of Radiology
HARVEY S GLAZER, MD  Professor of Radiology
JENNIFER E GOULD, MD  Assistant Professor of Radiology
DIANA LEE GRAY, MD  Professor of Radiology
BENNETT S GREENSPAN, MD  Assistant Professor of Radiology
PERRY W GRIGSBY, MD, MS Professor of Radiology
ROBERT JOHN GROPLER, MD Professor of Radiology
ROBERT L GRUBB, JR, MD Professor of Radiology
PUNITA GUPTA, MD Instructor in Radiology
DEBRA A. GUSNARD, MD Assistant Professor of Radiology
FERNANDO R GUTIERREZ, MD Professor of Radiology
XIANG HE, PHD Instructor in Radiology
DENISE P. HEAD, PHD Research Assistant Professor of Radiology
JAY PAUL HEIKEN, MD Professor of Radiology
CHERYL R HERMAN, MD Instructor in Radiology
THOMAS EUGENE HERMAN, MD Associate Professor of Radiology
PILAR HERRERO, MS Research Associate Professor of Radiology
TAMARA G HERSHEY, PHD Associate Professor of Radiology
ALBERT E HESKER, MD Assistant Professor of Clinical Radiology
CHARLES F HILDEBOLT, DDENT, PHD Professor of Radiology
SUMNER HOLTZ, MD Associate Professor of Clinical Radiology
REBECCA L HULETT, MD Assistant Professor of Radiology
TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Radiology
WILLIAM P JAMES, MD Assistant Professor of Radiology
CYLENE JAVIDAN-NEJAD, MD Assistant Professor of Radiology
JACK W JENNINGS, MD, PHD Instructor in Radiology
JAMES A JUNKER, MD Instructor in Clinical Radiology
KEITH A KASTELIC, MD Instructor in Radiology
GEETIKA KHANNA, MBBS Assistant Professor of Radiology
JOONG HEE KIM Instructor in Radiology
SEUNG KWON KIM, MD Assistant Professor of Radiology (Pending Executive Faculty Approval)
ZULFIA KISRIEVA-WARE, MD, PHD Research Instructor in Radiology
JOSEPH W. KLAESNER, PHD, BS Research Associate Professor of Radiology
LAWRENCE M KOTNER, MD Associate Professor of Radiology
JOHN JAY KOTYK, PHD Research Associate Professor of Radiology
RICHARD A KRAUS, MD Assistant Professor of Radiology
RICHARD LAFOREST, PHD Associate Professor of Radiology
SUSAN M LANGHORST, PHD Assistant Professor of Radiology
SUZANNE ELIZABE LAPI, PHD Assistant Professor of Radiology (Pending Executive Faculty Approval)
LINDA J LARSON-PRIOR, PHD Research Associate Professor of Radiology
DANIEL JOSEPH LEARY, JR, MD Assistant Professor of Clinical Radiology
HYERAN LEE, PHD Instructor in Radiology
JIN-MOO LEE, MD, PHD Associate Professor of Radiology
ROBERT G LEVITT, MD Associate Professor of Radiology
MICHAEL FU-YEN LIN, MD Instructor in Radiology
PHILIP A LUDBROOK, MBBS Professor of Radiology
ROBERT H MACH, PHD Professor of Radiology
NAGANATHAN B MANI, MBBS Instructor in Radiology
DANIEL SCOTT MARCUS, PHD, BS Research Assistant Professor of Radiology
JOANNE MARKHAM Research Associate Professor of Radiology
BEN R MAYES, JR, MD Assistant Professor of Clinical Radiology
WILLIAM H MICALISTER, MD Professor of Radiology
MARK P. MCAVOY, PHD Research Assistant Professor of Radiology
KATHLEEN BLYTH MCDERMOTT, PHD Research Assistant Professor of Radiology
ROBERT CAROLIN MCKINSTRY, III, MD, PHD Associate Professor of Radiology
CHRISTINE ONSY MENIAS, MD, BS Associate Professor of Radiology
MARY ANN MIDDLETON, MD Assistant Professor of Radiology
WILLIAM D MIDDLETON, MD Professor of Radiology
FRANCIS M MIEZIN Research Associate Professor of Radiology
MICHELLE M MILLER-THOMAS, MD Instructor in Radiology
MARK A MINTUN, MD Professor of Radiology, Vice Chair for Research in Radiology
STEPHEN M MOERLEIN, PHD Associate Professor of Radiology
BARBARA S MONSEES, MD Professor of Radiology
STEPHEN M MOORE, BS Research Assistant Professor of Radiology
CHRISTOPHER J MORAN, MD Professor of Radiology
MICHAEL JEFFREY MUELLER, PHD Professor of Radiology
VAMSI R. NARRA, MD Associate Professor of Radiology
JEFFREY J NEIL, MD, PHD Professor of Radiology
JOHN HART NIEMEYER, MD Instructor in Clinical Radiology
JOSEPH A. O’SULLIVAN, PHD Associate Professor of Radiology
GARY H OMELL, MD Assistant Professor of Clinical Radiology
IBRAHIM ALPAY OZCAN, D SC, MEE, BS Research Assistant Professor of Radiology
ROBERT JAMES PALLOW, JR, MD Instructor in Radiology
MATTHEW S PARSONS, MD Assistant Professor of Radiology
MICHAEL K PASQUE, MD Professor of Radiology
MICHAEL W PENNEY, MD Assistant Professor of Radiology
JOEL S PERLMUTTER, MD Professor of Radiology
STEVEN E PETERSEN, PHD Professor of Radiology
LINDA R PETERSON, MD Associate Professor of Radiology
DANIEL D PICUS, MD, BS Professor of Radiology, Vice Chair for Diagnostic Radiology in Radiology
THOMAS KURT PILGRAM, PHD Instructor in Radiology
DAVID R PIWNICA-WORMS, MD, PHD Professor of Radiology
DAVID GERARD POLITTE, D SC Research Instructor in Radiology
FRED W PRIOR, PHD, MA Research Associate Professor of Radiology
JAMES D QUIRK, PHD Research Instructor in Radiology
Mary Culver Department of Surgery

The formal instruction in surgery begins in the third year with the required, 12-week Integrated Surgical Disciplines Clerkship. During this surgical clerkship, students are assigned to clinical rotations, mostly within the Department of Surgery, with some exposure to other surgical-related disciplines outside the department. The clerkship allows students opportunities to participate in the care of surgical patients, both in- and outpatient; spend time in the operating rooms; and attend seminars, teaching conferences and didactic sessions on a regular basis. In the fourth year, students may select “subinternship” electives within the Division of General Surgery, which includes a variety of general surgical specialties. In addition to the general surgery subinternships, electives are available in pediatric surgery, transplant surgery, vascular surgery, cardiovascular and thoracic surgery, urologic surgery, and plastic and reconstructive surgery.

Courses

Third Year

M95 790 INTEGRATED SURGICAL DISCIPLINES CLERKSHIP
During the 12-week surgery clerkship, students are assigned to three four-week rotations, one of which is a required four-week general surgery rotation at Barnes-Jewish Hospital, with alternative rotation sites available at St. Louis Connect Care and the Veterans Administration Medical Center. In addition to the general surgery rotation, each student selects two elective rotations from a variety of surgical specialties and/or related disciplines, such as critical care/anesthesia or musculoskeletal. The 12-week clerkship focuses on the diagnosis, care and management of surgical patients. The student is an active participant in the daily care of patients on each service and attends clinics, rounds, operating rooms, call nights and teaching conferences. Central to the 12-week clerkship are weekly small-group didactic sessions with assigned faculty members and a biweekly lecture/workshop series that covers a wide range of surgical topics and specialties, as well as provides opportunity for practice of basic clinical skills in simulated settings.

Fourth Year

There is ample opportunity for fourth-year students to participate in elective rotations within each division of the Department of Surgery. Many of the fourth-year surgery electives are structured to allow the student to participate as a “subintern,” facilitating experiences in preoperative, intraoperative and postoperative patient management. Generally, the minimum duration of a fourth-year elective rotation in the Department of Surgery is four weeks. Research electives are also available.

Electives

M95 818 SURGICAL NIGHT FLOAT AND ER SUBINTERNSHIP
Instructors: John Kirby, MD, and L. Michael Brunt, MD
Location: ER
Elective Contact: Jackie Fleming, 362-8029
Other Information: Student should contact instructor prior to first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.
This subinternship is specifically designed to give senior medical students an intern level experience in managing acute on-call problems in surgical patients and in evaluating urgent and emergent problems in the ED. The rotation will be divided into two two-week segments — one segment in the ED and the second on night float call on the surgical floors. Students will gain experience evaluating and managing the types of acute problems they will encounter as surgical interns as first responders to patients with acute abdominal pain, chest pain, hypotension, mental status changes, and other ER/on-call type problems. They will be assigned to the on-call surgical resident and will have a structured experience in order to maximize development of their diagnostic, management and case presentation skills in the acute care setting so that they may more smoothly make the transition to a surgical internship.

Student time distribution: Inpatient 50%, Outpatient 50%, Conferences/Lectures TBD; Primary Care 100%
Major teaching responsibility: John Kirby, MD, and Surgical Residents
Patients seen/weekly: 20-30 each week
On call/weekend responsibility: No weekend call, rotation is nighttime based Tuesday through Friday for Floor two-week component and Tuesday, Wednesday and Friday for ED two-week component

M95 863 ACTING INTERNSHIP, SURGICAL ONCOLOGY AND ENDOCRINE SURGERY
Instructors: Timothy Eberlein, MD, Jeffrey Moley, MD, Rebecca Aft, MD, William Gillanders, MD, and Julie Margenthaler, MD
Location: 11th Floor Northwest Tower
Elective Contact: Jackie Fleming, 362-8029
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior arrangements to work more closely with a specific attending (based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This subinternship elective is designed to give students in-depth experience in the clinical management of patients on the Endocrine and Surgical Oncology Service (Unit I Service). Students will serve as clerks and will be responsible for patient management with house staff under the guidance of the chief resident and attending surgeons. Clinical exposure is focused on thyroid, parathyroid and adrenal surgery, as well as breast oncology, GI oncology, melanoma and soft-tissue sarcomas. The course will offer opportunities for students to gain experience in preoperative, intraoperative and postoperative patient management. There will be opportunity for students to evaluate patients, decide on a diagnostic and management strategy and provide care under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences.

Note: If a student desires to work more closely with a “specific attending,” he/she must make special arrangements with the faculty member prior to beginning this elective. If you have any questions regarding this notice, please call Jackie Fleming in the Surgical Education Office (362-8029).

Student time distribution: Inpatient 75%, Outpatient 15%, Conferences/Lectures 10%; Primary Care 100%
Major teaching responsibility: Attending, chief resident and junior residents
Patients seen/weekly: 20-40 (varies)
On call/weekend responsibility: Every third or fourth night with a resident who will directly supervise

M95 879 ACTING INTERNSHIP, HEPATOBILIARY PANCREATIC SURGERY
Instructors: Steven Strasberg, MD, William Hawkins, MD, and David Linehan, MD, 362-7147
Location: 11th Floor Northwest Tower
Elective Contact: Jackie Fleming, 362-8029
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior arrangements to work more closely with a specific attending on this service (based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.
This subinternship elective is designed to give students in-depth experience in the clinical management of patients on the Hepatobiliary/Pancreatic (Unit II) Service. The Unit II Service is a busy upper gastrointestinal service with a focus on hepatobiliary and pancreatic diseases and their treatment. The course will offer opportunities for students to gain experience in preoperative, intraoperative and postoperative patient management. Students will serve as clerks and will be responsible for patient management with house staff under the guidance of the chief resident and attending surgeons. There will be opportunity for students to evaluate patients, decide on a diagnostic and management strategy and provide care under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences. Note: If a student desires to work more closely with a “specific attending,” he/she must make special arrangements with the faculty member prior to beginning this elective. If you have any questions regarding this notice, please call Jackie Fleming in the Surgical Education Office (362-8029).

Student time distribution: Inpatient 75%, Outpatient 15%, Conferences/Lectures 10%; Primary Care 100%
Major teaching responsibility: Attending, chief resident and junior residents
Patients seen/weekly: Varies
On call/weekend responsibility: Every third or fourth night with a resident who will directly supervise

M95 814 ACTING INTERNSHIP, TRAUMA SERVICE
Instructors: Timothy G. Buchman, PhD, MD, Bradley Freeman, MD, John Kirby, MD, Douglas Schuerer, MD, John Mazuski, MD, and John Green, MD
Location: 6104 Queeny Tower
Elective Contact: Vicki Amelung, 362-9347
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior arrangements to work more closely with particular attendings on this service (based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student on this elective will function as a subintern on the Trauma and Acute Care Surgical Service within the Section of Acute and Critical Care Surgery. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge. Practical experience will focus on the initial evaluation and resuscitation of traumatized patients and other emergency care patients. The student will also participate in regular rounds, conferences and in-house call. Note: If a student desires to work more closely with a “specific attending,” he/she must make special arrangements with the faculty member prior to beginning this elective. If you have any questions regarding this notice, please call Jackie Fleming in the Surgical Education Office (362-8029).

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Primary Care 20%, Subspecialty Care 80%
Major teaching responsibility: Attendings, residents and fellows
Patients seen/weekly: 30
On call/weekend responsibility: Yes

M95 893 ACTING INTERNSHIP, MINIMALLY INVASIVE SURGERY
Instructor(s): L. Michael Brunt, MD, and Brent Matthews, MD, 454-7194
Location: 11th Floor Northwest Tower
Elective Contact: Student should contact Dr. Brunt at 454-7194 prior to the first day of the elective.
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior arrangements to work more closely with Dr. Brunt on this elective (based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This subinternship elective in minimally invasive surgery is offered by L. Michael Brunt, M.D., a
member of the Section of Minimally Invasive Surgery in the General Surgery Division. Surgeons in the
Minimally Invasive Surgery group regularly perform the following procedures laparoscopically:
cholecystectomy, splenectomy, adrenalectomy, hiatal hernia repair, inguinal hernia repair, ventral
hernia repair and gastric bypass for morbid obesity. The medical student electing this rotation will
participate in the outpatient office and direct patient care, assist and observe in a wide range of
laparoscopic procedures and participate in teaching rounds and conferences. During this rotation, the
student may also have the opportunity to observe and participate in minimally invasive surgical
procedures performed by various surgeons within the Division of General Surgery. Additionally, the
student may also elect to participate in the laboratory of the Washington University Institute for
Minimally Invasive Surgery one or two days per week. Notice: If a student desires to work more
closely with a “specific attending,” he/she must make special arrangements with the faculty member
prior to beginning this elective. If you have any questions regarding this notice, please call Jackie
Fleming in the Surgical Education Office (362-8029).

Student time distribution: Inpatient/Operating Room 60%, Outpatient 30%, Conferences/Lectures
10%; Subspecialty Care 100%
Major teaching responsibility: Attending and residents
Patients seen/weekly: ~25 (varies)
On call/weekend responsibility: None

M95 871 ACTING INTERNSHIP, VASCULAR SURGERY
Instructors: Gregorio Sicard, MD, Brian Rubin, MD, M. Wayne Flye, MD, Eric Choi, MD, Patrick
Geraghty, MD, and Luis Sanchez, MD, 362-7841
Location: 5103 Queeny Tower
Elective Contact: Students should contact Debbie Swap in Dr. Sicard’s office prior to the start of this
rotation at 362-7841
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior
arrangements to work more closely with Dr. Sicard (362-7841) or other attendings on this service
(based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This subinternship elective is designed to give students in-depth experience in the clinical
management of patients on the Vascular Surgery Service. The elective will offer opportunities for
students to gain experience in preoperative, intraoperative and postoperative management of patients
with surgically treated vascular diseases/conditions. Students will serve as clerks and will be
responsible for patient management with house staff under the guidance of the chief resident and
attending surgeons. There will be opportunity for students to evaluate patients, decide on a diagnostic
and management strategy and provide care under house staff and faculty guidance, as well as ample
opportunity to attend and participate in conferences. Notice: If a student desires to work more closely
with a “specific attending,” he/she must make special arrangements with the faculty member prior to
beginning this elective. If you have any questions regarding this notice, please call Jackie Fleming in
the Surgical Education Office (362-8029).

Student time distribution: Inpatient 70%, Outpatient 20%, Conferences/Lectures 10%; Primary Care
10%, Subspecialty Care 90%
Major teaching responsibility: Attending, fellows, chief resident, and junior residents
Patients seen/weekly: 100+ (varies)
On call/weekend responsibility: Student’s option

M95 862 ACTING INTERNSHIP, COLON AND RECTAL SURGERY
Instructors: James W. Fleschman, MD, Elisa Birnbaum, MD, Anne Lin, MD, Steve Hunt, MD, Ira Kodner,
MD, Matthew Mutch, MD, and Bashar Safar, MD, 454-7182
Location: 14102 Queeny Tower, South Campus
Elective Contact: Joni Menke, 454-7182
Other Information: This is NOT a “preceptor” elective. However, students may elect to make prior
arrangements to work more closely with a specific attending on this elective (based on availability).

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This subinternship elective is designed to give students in-depth experience in the clinical management of patients on the Colorectal Surgery Service. Students work closely with the attendings within the Section of Colon and Rectal Surgery, and clinical exposure is focused on a wide range of benign and malignant colorectal diseases. There is exposure to radiation oncology and the specialized areas of nursing related to care of patients with colorectal cancer and inflammatory bowel disease. The course will offer opportunities for students to gain experience in preoperative, intraoperative and postoperative patient management under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences. Notice: If a student desires to work more closely with a “specific attending,” he/she must make special arrangements with the Colorectal Surgery Office prior to beginning this elective.

Student time distribution: Inpatient 75%, Outpatient 20%, Conferences/Lectures 5%; Subspecialty Care 100%
Major teaching responsibility: James W. Fleshman, MD, Steven Hunt, MD, and colorectal fellows
Patients seen/weekly: 25-50
On call/weekend responsibility: Every fifth night or negotiable

M95 891 ORGAN TRANSPLANTATION
Instructors: Surendra Shenoy, MD, PhD, 362-4338; Martin Jendrisak, MD, 362-5701; William Chapman, MD, 362-7792; Niraj Desai, MD, 747-1393; Majella Doyle, MD, 362-2880; Jeffrey Lowell, MD, 362-2820; and Christopher Anderson, MD, 362-2880
Location: Barnes-Jewish Hospital
Elective Contact: Dr. Shenoy’s secretary (362-4338)
Other Information: Student should contact instructor if interested in scheduling elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The care of transplant patients requires the integration of multiple diverse medical and surgical disciplines. This elective clerkship in organ transplantation encompasses the preoperative evaluation and management of adult and pediatric recipients of liver, kidney and pancreas. Students participate in procurement of allografts from cadaveric or living donors, organ preservation and transplantation. Emphasis is also placed on postoperative care, multimodality immunosuppression and management of allograft rejection. Basic hepatic and renal physiology, fluid and electrolyte balance, and transplantation immunology are stressed. Rotation provides an elaborate exposure to different facets of management of end stage renal and liver disease. Management of the complications of diabetes, hypertension, portal hypertension and infectious problems are an integral part of pre- and post-transplant care. This course is designed to offer the student an overview of the field of organ transplantation; however, in addition to transplant surgery, students will also get some exposure to vascular access and hepatobiliary surgery. The student functions as a member of the transplant team and assumes appropriate responsibilities under supervision.

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Full attending and resident staff
Patients seen/weekly: 40
On call/weekend responsibility: Yes

M95 820 CARDIOTHORACIC SURGERY
Instructors: Jennifer Lawton, MD, Michael Avidan, MBBCH, Traves Crabtree, MD, Ralph Damiano, MD, Sanjiv Gandhi, MD, Charles B. Huddleston, MD, Dan Kreisel, MD, PhD, Sasha Krupnick, MD, Bryan Meyers, MD, Nader Moazami, MD, Marc Moon, MD, Michael K. Pasque, MD, G. Alexander Patterson,
The senior elective in cardiothoracic surgery is a four-week clinical rotation with two-week blocks divided between adult cardiac, pediatric cardiothoracic and general thoracic surgery according to the student’s preference. Students will participate in morning work rounds, attend the operative procedures of their choice, and attend weekly conferences and teaching rounds. Students will be introduced not only to the surgical procedures but also to the postoperative care of the surgical patients.

On the pediatric and adult cardiac services, students will be introduced to the principles of cardiopulmonary bypass, ventricular assist devices, cardiac transplantation, coronary artery bypass surgery (on and off pump), valve repair and replacement, complex aortic surgery, the MAZE procedures and others.

On the adult cardiac surgery service, students will function as subinterns under the direct supervision of a faculty member.

On the thoracic surgical rotation students will have the opportunity of performing bronchoscopy, esophagoscopy, gastroscopy and participate in surgical resections of lung cancer and esophageal cancer, as well as surgery for emphysema and for benign esophageal conditions. Students will also participate in lung transplantation surgery.

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 20
On call/weekend responsibility: One in three, no weekend call

M95 830 PLASTIC RECONSTRUCTIVE SURGERY
Instructors: Susan E. Mackinnon, MD, Gregory Borschel, MD, Keith E. Brandt, MD, Alex Kane, MD, Terence Myckatyn, MD, Thomas Tung, MD, Albert Woo, MD, and Ida Fox, MD
Location: 11th Floor Northwest Tower
Elective Contact: Alex Kane, MD, 454-6063
Other Information: Students should meet on the 11th Floor, Northwest Tower, 8:30 a.m. first day of elective.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The period on plastic surgery may either be spent as a clinical clerkship or conducting a basic laboratory project. The purpose of the clinical clerkship is to familiarize the student with the basic principles of tissue repair and reconstruction. The student will have successive assignments to each of the attending staff and the ward resident during the four weeks. This will expose the student to the breadth and depth of plastic surgery. Alternatively, if the student has identified a focus of interest, the student may participate on those services of special interest, such as hand or pediatric plastic surgery. The student will assume an active role on the plastic surgery service and will participate in the total management of a wide variety of surgical problems including congenital anomalies, microvascular surgery, surgery of the upper extremity, peripheral nerve surgery, cosmetic surgery and general reconstructive plastic surgery.

Student time distribution: Inpatient 70%, Outpatient 20%, Conferences/Lectures 10%; Subspecialty Care 100%
M95 831 PLASTIC SURGERY AMBULATORY CARE
Instructors: Susan E. Mackinnon, MD, Keith E. Brandt, MD, Alex Kane, MD, Terence Myckatyn, MD, Ida Fox, MD, and Thomas Tung, MD
Location: 11th Floor Northwest Tower
Elective Contact: Alex Kane, MD, 454-6063
Other Information: Students should meet on the 11th Floor, Northwest Tower, 8:30 a.m. first day of elective.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The period on plastic surgery ambulatory care will focus on outpatient management of hand fractures, nerve injuries, facial trauma, wound healing/repair, pediatric injury, skin lesions and general outpatient plastic surgery. This rotation will focus on teaching outpatient management, radiology related duties, casting and splinting.

Student time distribution: Outpatient 90%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings and residents
Patients seen/weekly: 150
On call/weekend responsibility: Recommended

M95 850 UROLOGY
Instructors: Gerald Andriole, MD, 362-8212
Location: Wohl Hospital
Elective Contact: Sally Wahlbrink, 362-8212
Other Information: Students should contact Dr. Andriole’s office at 362-8212 prior to first day for room assignment.

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

A four-week clinical clerkship in pediatric and/or adult urology will offer the interested student experience with a spectrum of problems in clinical urology. The student will learn the basic diagnostic procedures and management of surgical and non-surgical aspects of patient care on the private and ward services under the supervision of the attending staff and house staff. Clinical conferences are held four days per week.

Student time distribution: Inpatient 80%, Outpatient 10%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Several attendings, chief resident and resident staff
Patients seen/weekly: >20
On call/weekend responsibility: None

M95 880 PEDIATRIC SURGERY
Instructors: Patrick A. Dillon, MD, and Marty Keller, MD
Location: SS60 St. Louis Children’s Hospital
Elective Contact: Brad Warner, MD, 454-6066
Other Information: Students should report at 8:30 a.m. on the first day of the rotation. Call Dr. Warner’s office for location.

Enrollment limit per period: 1
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

The student will participate as a subintern in all aspects of pediatric surgical patient care and will be exposed to a wide variety of pediatric surgical cases. This includes the preoperative and postoperative evaluation of patients as well as the care of pediatric trauma patients. Daily rounds are made with both the resident and attending staff and active participation is expected in the pediatric surgery clinic and the operating room. Weekly conferences include Mortality and Morbidity, Radiology, Pathology and case presentations with the student expected to prepare a conference presentation on a topic of interest.

Student time distribution: Inpatient 60%, Outpatient 30%, Conferences/Lectures 10%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 35
On call/weekend responsibility: Optional

M95 864 ETHICAL CHALLENGES IN SURGERY AND MEDICINE
Instructor: Ira J. Kodner, MD, 454-7177
Location: 14th Floor, Queeny Tower, Suite 14102
Elective Contact: Students should contact Dr. Kodner at ijkodner@aol.com or Kodner@wudosis.wustl.edu prior to the first day of the elective.
Other Information: Coordinate time to report first day of elective with Liz Nordike 454-7183 or nordikel@wudosis.wustl.edu

Enrollment limit per period: 2
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 33, 37 and 41.

This elective will involve exploration of the ethical challenges discussed during four years of presentations at the monthly "Surgery/Ethics/Pizza Rounds" conducted by the Department of Surgery at Washington University School of Medicine and the WU Center for the Study of Ethics and Human Values. The readings, discussions and conclusions will be guided by Washington University and Barnes-Jewish Hospital ethicists and will result in a finished manuscript to be published, with the student as co-author, in the journal Surgery. This elective provides the opportunity to work closely with the faculty in surgery and ethics and to participate in the many activities within the School, the Center and Barnes-Jewish Hospital. It should appeal to any in the medical system interested in the ethical and humanitarian challenges facing medicine and society in general.

Student time distribution: Conferences/Lectures 100%
Major teaching responsibility: Ira J. Kodner, MD
Patients seen/weekly: N/A
On call/weekend responsibility: None

M10 820 CRITICAL CARE
Instructors: Timothy G. Buchman, PhD, MD, 362-9347, Walter Boyle, MD, J. Perren Cobb, MD, Lee Collins, MD, Craig Coopersmith, MD, Alex Evers, MD, David Grosshans, DO, Richard Hotchkiss, MD, John Kirby, MD, George Tseng, MD, John Mazuski, MD, and Doug Schuerer, MD
Location: Barnes-Jewish Hospital, South Campus
Elective Contact: Vicki Amelung, 362-9347
Other Information: Students should meet in the 8400 Surgical Intensive Care Unit, 7 a.m. first day of elective

Enrollment limit per period: 4
Valid start weeks for 4-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41.

This clinical elective is designated to familiarize the student with the management of the critically ill surgical patient. This is accomplished by direct involvement in patient care in the 8400 Surgical Intensive Care Unit at Barnes-Jewish Hospital. The student will receive individualized teaching and
training in critical care management and procedures with emphasis on cardiovascular support and invasive hemodynamic monitoring, airway management and support of respiratory failure, fluid and electrolyte management, sedation and pain relief, nutritional support, management of perioperative hemorrhage and coagulation abnormalities, and management of surgical infections including sepsis and septic shock. The student will function as an integral member of the critical care team and will actively participate in management of critically ill patients from all the surgical specialties except cardiothoracic and neurological surgery. Practical experience will also be gained in placement of arterial and central venous lines, interpretation of laboratory and cardiovascular monitoring data, recognition and treatment of shock syndromes, and use of mechanical ventilation.

Student time distribution: Inpatient 80%, Conferences/Lectures 20%; Subspecialty Care 100%
Major teaching responsibility: Attendings
Patients seen/weekly: 50
On call/weekend responsibility: Variable

Research

(M95 900)

L. Michael Brunt, MD, 3503 Kingshighway Building, Barnes-Jewish Hospital, North Campus, 454-7194. Minimally invasive surgery, including endocrine applications. Minimum rotation length: four weeks. Under the auspices of the Washington University Institute for Minimally Invasive Surgery (WUIMIS), a number of surgeons are investigating the physiologic consequences of laparoscopic surgery and new applications for procedures and technologies. Dr. Brunt is currently investigating clinical outcomes of various laparoscopic surgical procedures evaluating new biomechanical tissue prostheses for use in laparoscopic hiatal hernia surgery, and is carrying out education related research of skills training for senior medical students planning to enter a surgical internship.

Susan E. Mackinnon, MD, 660 S. Euclid Ave., Box 8238, 362-4586. Peripheral nerve surgical research. Our laboratory investigates nerve injury and regeneration including nerve transplantation. The student will be encouraged to design and complete his/her own research study during the elective.

Susan E. Mackinnon, MD, 660 S. Euclid Ave., Box 8238, 362-4586. Plastic surgery research laboratories. Minimum rotation length: six weeks. The research rotation can be conducted in the plastic surgery laboratories under the direction of Drs. Kane, Borschel, Tung, Myckatyn, Fox or Mackinnon. A project will be designed with the student prior to his/her rotation on plastic surgery so that all the materials and methods will be available at the beginning of the rotation. Ongoing projects include: (1) nerve repair and regeneration; (2) nerve and composite tissue transplantation; (3) in vivo tissue generation and tissue differentiation; (4) the mechanical, structural and biochemical effects of stress on scar tissue maturation; (5) in vivo anatomy of craniofacial deformities; and (6) outcome analysis of methods of cleft lip and palate management.

Brent D. Matthews, MD, 1160 Northwest Tower, Barnes-Jewish Hospital, 454-7195. Laparoscopic ventral hernia repair: prospective outcomes study. Insurance companies, HMOs and patients are interested in quantifying the outcomes of surgeons and hospital systems for complex surgical procedures and high-volume operations in search of the best possible care available. Year 2003 data from the National Center for Health Statistics revealed that approximately 800,000 inguinal hernia repairs and 90,000 ventral hernia repairs were performed in the United States. This underscores the importance of developing and implementing a surgical program with expertise in the care of hernia disease. Through the support of the Washington University Institute for Minimally Invasive Surgery (WUIMIS), this Washington University Medical Center Human Studies Committee-approved prospective outcomes study will investigate outcomes in patients undergoing laparoscopic ventral hernia repair in an attempt to define preoperative patient variables as surrogate markers for risk factors for a difficult laparoscopic repair. The student will participate in the perioperative evaluation of study patients, attend operative procedures, coordinate data collection and contribute in outcomes
Faculty

TIMOTHY J EBERLEIN, MD  Head of the Department of Surgery, Bixby Professor of Surgery (General Surgery)
REBECCA L AFT, MD, PHD  Associate Professor of Surgery (General Surgery)
CHRISTOPHER D ANDERSON, MD  Assistant Professor of Surgery (General Surgery)
DOROTHY A ANDRIOLE, MD  Associate Professor of Surgery (General Surgery)
GERALD L ANDRIOLE, MD  Professor of Surgery (Urologic Surgery)
JEFFREY MICHAEL ARBEIT, MD  Professor of Surgery (Urologic Surgery)
KENNETH J ARNOLD, MD  Assistant Professor of Clinical Surgery (General Surgery)
PAUL F AUSTIN, MD  Associate Professor of Surgery (Urologic Surgery)
MICHAEL SIMON AVIDAN, MBBCH  Associate Professor of Surgery (Cardiothoracic Surgery)
MICHAEL MAGDI AWAD, MD, PHD  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval)
WALTER F BALLINGER, MD  Professor Emeritus of Surgery (General Surgery)
JOAQUIN BARNOYA, MD  Research Assistant Professor of Surgery (General Surgery)
MARK EDWARD BEEHNER, DDENT, MD  Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)
KENNETH J BENNETT, MD  Associate Professor of Clinical Surgery (General Surgery)
MARTIN BERGMANN, MD  Associate Professor Emeritus of Clinical Surgery (Cardiothoracic Surgery)
SAM B BHAYANI, MD  Assistant Professor of Surgery (Urologic Surgery)
LAWRENCE J BILLY, MD  Instructor in Clinical Surgery (General Surgery)
ELISA H BIRNBAUM, MD  Professor of Surgery (General Surgery)
THOMAS J BLANKE, SR, MD  Instructor in Surgery (General Surgery)
JOHN P BOINEAU, MD  Professor of Surgery (Cardiothoracic Surgery)
WALTER A BOYLE, III, MD  Professor of Surgery (General Surgery)
RICHARD V BRADLEY, MD  Associate Professor Emeritus of Clinical Surgery (General Surgery)
STEVEN B BRANDES, MD  Professor of Surgery (Urologic Surgery)
KEITH E BRANDT, MD  William G. Hamm Professor of Surgery (Plastic and Reconstructive Surgery)
ROSS C BROWNSON, PHD  Professor of Surgery (General Surgery)
L. MICHAEL BRUNT, MD  Professor of Surgery (General Surgery)
JOHN B BUETTNER, MD  Instructor in Clinical Surgery (General Surgery)
ARNOLD D BULLOCK, MD  Associate Professor of Surgery (Urologic Surgery)
DAVID ANTHONY CAPLIN, MD  Instructor in Clinical Surgery (Plastic and Reconstructive Surgery)
M. RICHARD CARLIN, MD  Associate Professor Emeritus of Clinical Surgery (Urologic Surgery)
WILL C CHAPMAN, MD  Professor of Surgery (General Surgery)
ERIC THAI KUN CHOI, MD  Associate Professor of Surgery (General Surgery)
JOHN E. CODD, MD  Professor of Clinical Surgery (Cardiothoracic Surgery)
GRAHAM A COLDITZ, MD, PHD  Niess-Gain Professor of Surgery (General Surgery)
H. GROVES COOKE, III, DDENT  Instructor in Clinical Surgery (Plastic and Reconstructive Surgery)
CRAIG M COOPERSMITH, MD  Professor of Surgery (General Surgery)
DOUGLAS E COPLEN, MD Associate Professor of Surgery (Urologic Surgery)
JAMES L COX, MD Evarts A. Graham Professor Emeritus of Surgery (Cardiothoracic Surgery)
TRAVES D. CRABTREE, MD Assistant Professor of Surgery (Cardiothoracic Surgery)
BRIAN P. CUPPS, PHD Research Assistant Professor of Surgery (Cardiothoracic Surgery)
JOHN A CURCI, MD, BS Assistant Professor of Surgery (General Surgery)
RALPH JAMES DAMIANO, JR, MD John M. Shoenberg Professor of Surgery (Cardiothoracic Surgery)
MICHAEL D DARCY, MD Associate Professor of Surgery (General Surgery)
CHARL JOHAN DE WET, MBCHB Associate Professor of Surgery (Cardiothoracic Surgery)
COREY RENEE DEEKEN, PHD Instructor in Surgery (General Surgery)
ALANA C DESAI, MD Assistant Professor of Surgery (Urologic Surgery)
PATRICK A DILLON, MD Associate Professor of Surgery (Pediatric Surgery)
JESSICA A. DOMINGUEZ, PHD Assistant Professor of Surgery (General Surgery)
MARIA BERNADETT DOYLE, MD Assistant Professor of Surgery (General Surgery)
BETTINA DRAKE, PHD Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval)
JOSEPH W EADES, MD Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)
J. CHRIS EAGON, MD Assistant Professor of Surgery (General Surgery)
CHRISTOPHER R. ERWIN, PHD Research Associate Professor of Surgery (Pediatric Surgery)
THOMAS BRUCE FERGUSON, MD, BS Professor Emeritus of Surgery (Cardiothoracic Surgery)
ROBERT S FIGENSHAU, MD Professor of Surgery (Urologic Surgery)
TIMOTHY PETER FLEMING, PHD Research Professor of Surgery (General Surgery)
JAMES W FLESHMAN, JR, MD Professor of Surgery (General Surgery)
M. WAYNE FLYE, MD, PHD, MA Professor of Surgery (General Surgery)
IDA K FOX, MD Assistant Professor of Surgery (Plastic and Reconstructive Surgery)
BRADLEY D. FREEMAN, MD Associate Professor of Surgery (General Surgery)
SANJIV K. GANDHI, MD Associate Professor of Surgery (Cardiothoracic Surgery)
WILLIAM A GAY, MD Professor of Surgery (Cardiothoracic Surgery)
ANDREW E. GELMAN, PHD Assistant Professor of Surgery (Cardiothoracic Surgery)
PATRICK J GERAGHTY, MD Associate Professor of Surgery (General Surgery)
WILLIAM EWALD GILLANDERS, MD Associate Professor of Surgery (General Surgery)
LOUIS ARNOLD GILULA, MD Professor of Surgery (Plastic and Reconstructive Surgery)
SIMON P GOEDEGEBUURE, PHD Research Associate Professor of Surgery (General Surgery)
PAUL JOSEPH GOODFELLOW, PHD Professor of Surgery (General Surgery)
ROBERT LEE GRUBB III, MD Assistant Professor of Surgery (Urologic Surgery)
JUN GUO, PHS Research Assistant Professor of Surgery (Pediatric Surgery)
BRUCE LEE HALL, MD, PHD Professor of Surgery (General Surgery)
DAVID A. HARDY, MD Instructor in Surgery (Urologic Surgery)
WILLIAM G. HAWKINS, MD Associate Professor of Surgery (General Surgery)
MICHAEL E HAYEK, MD Instructor in Clinical Surgery (General Surgery)
LAUREEN L HILL, MD Associate Professor of Surgery (Cardiothoracic Surgery)
ELIZABETH HILLIKER, MD Assistant Professor of Surgery (General Surgery)
CHRISTINE MICHE HOEHNER, PHS  Assistant Professor of Surgery (General Surgery)
RICHARD S HOTCHKISS, MD  Professor of Surgery (General Surgery)
CHARLES B HUDDELESTON, MD  Professor of Surgery (Cardiothoracic Surgery)
M'LISS ANN HUDSON, MD  Associate Professor of Surgery (Urologic Surgery)
DONALD V HUEBENER, DDENT, MS  Professor of Surgery (Plastic and Reconstructive Surgery)
PETER A HUMPHREY, MD, PHD  Professor of Surgery (Urologic Surgery)
STEVEN R HUNT, MD  Assistant Professor of Surgery (General Surgery)
JENNIFER LYNN IVANOVICH, MS  Research Instructor in Surgery (General Surgery)
AIMEE S. JAMES, PHD, MA  Assistant Professor of Surgery (General Surgery)
DAVID P. JAQUES  Professor of Surgery (General Surgery)
MARTIN DAVID JENDRISAK, MD  Assistant Professor of Surgery (General Surgery)
PHILIP J JOHNSON  Assistant Professor of Surgery (Plastic and Reconstructive Surgery) (Pending Executive Faculty Approval)
ALEX A KANE, MD  Joseph B. Kimbrough Associate Professor of Pediatric Dentistry in Surgery (Plastic and Reconstructive Surgery)
KIMBERLY ANNE KAPHINGST, PHD, MA  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval)
DEMETRIOS KATSIKAS, MD  Instructor in Clinical Surgery (Urological Surgery)
MARTIN S KELLER, MD  Associate Professor of Surgery (Pediatric Surgery)
ADAM S KIBEL, MD  Professor of Surgery (Urologic Surgery)
ALICIA NICOLE KIENINGER, MD  Assistant Professor of Surgery (General Surgery)
ANDREW M KIM, DDENT  Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)
JOHN P. KIRBY, MD  Assistant Professor of Surgery (General Surgery)
SAUL KLEIN, MD  Instructor in Clinical Surgery (Urologic Surgery)
MARY E KLINGENSMITH, MD  Professor of Surgery (General Surgery)
ALLEN P KLIPPEL, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery)
CARL G KLUTKE, MD  Professor of Surgery (Urologic Surgery)
IRA JOE KODNER, MD  Solon and Bettie Gershman Professor of Surgery (General Surgery)
DAVID PAUL KRAJCOVIC, MD  Instructor in Clinical Surgery (General Surgery)
DANIEL KREISEL, MD  Assistant Professor of Surgery (Cardiothoracic Surgery)
ALEXANDER S. KRUPNICK, MD  Assistant Professor of Surgery (Cardiothoracic Surgery)
HING HUNG H LAI, MD  Assistant Professor of Surgery (Urologic Surgery)
PAUL J LANGLOIS, MD  Instructor in Surgery (Urologic Surgery)
JENNIFER S LAWTON, MD  Associate Professor of Surgery (Cardiothoracic Surgery)
JEROME F LEVY  Professor Emeritus of Surgery (General Surgery)
ANNE Y. LIN, MD  Assistant Professor of Surgery (General Surgery)
DAVID C LINEHAN, MD  Associate Professor of Surgery (General Surgery)
PENGYUAN LIU, PHD  Research Assistant Professor of Surgery (General Surgery)
ALAN M LONDE, MD  Instructor in Clinical Surgery (General Surgery)
STANLEY L LONDON, MD  Associate Professor Emeritus of Clinical Surgery (General Surgery)
JEFFREY A LOWELL, MD  Professor of Surgery (General Surgery)
YAN LU, PHD  Research Assistant Professor of Surgery (General Surgery)

ZHI HONG LU, PHD  Research Assistant Professor of Surgery (Urologic Surgery)

MARK A LUDWIG, MD  Instructor in Clinical Surgery (General Surgery)

SUSAN E MACKINNON, MD  Sydney M., Jr. and Robert H. Shoenberg Professor of Surgery (Plastic and Reconstructive Surgery)

JULIE ANN MARGENTHALER, MD  Assistant Professor of Surgery (General Surgery)

BRENT D. MATTHEWS, MD  Associate Professor of Surgery (General Surgery)

JOHN E. MAZUSKI, MD, PHD  Associate Professor of Surgery (General Surgery)

PATRICIA A MCGUIRE, MD  Instructor in Clinical Surgery (Plastic and Reconstructive Surgery)

BRYAN F MEYERS, MD  Professor of Surgery (Cardiothoracic Surgery)

JERRY R MEYERS, MD  Assistant Professor of Clinical Surgery (General Surgery)

KEVIN JOSEPH MITCHELL, MD  Instructor in Clinical Surgery (General Surgery)

NADER MOAZAMI, MD  Associate Professor of Surgery (Cardiothoracic Surgery)

THALACHALLOUR MOHANAKUMAR, PHD  Jacqueline G. and William E. Maritz Professor of Surgery (General Surgery)

JEFFREY F MOLEY, MD  Professor of Surgery (General Surgery)

MARC R MOON, MD  Professor of Surgery (Cardiothoracic Surgery)

JULIAN C MOSLEY, MD  Instructor in Clinical Surgery (General Surgery)

NABIL A MUNFAKH, MD  Professor of Surgery (Cardiothoracic Surgery)

MATTHEW G MUTCHEL, MD  Associate Professor of Surgery (General Surgery)

TERENCE M. MYCKATYN, MD  Assistant Professor of Surgery (Plastic and Reconstructive Surgery)

NEAL NEUMAN, MD  Instructor in Clinical Surgery (Urologic Surgery)

THOMAS E NIESEN, MD  Instructor in Clinical Surgery (General Surgery)

RICHARD JAMES NISSEN, DDS  Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)

GEORGE A OLIVER, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery)

JEN-JUNG PAN  Assistant Professor of Surgery (General Surgery)

SHARAD P PARikh  Instructor in Clinical Surgery (General Surgery)

CHARLES L PARKS, MD  Instructor in Clinical Surgery (General Surgery)

JEFFREY ANDREW PARRIS, MD  Instructor in Clinical Surgery (Urologic Surgery)

MICHAEL K PASQUE, MD  Professor of Surgery (Cardiothoracic Surgery)

G. ALEXANDER PATTERSON, MD  Evarts A. Graham Professor of Surgery (Cardiothoracic Surgery)

ENRIQUE PEDRO PERINETTI, MD, PHD  Instructor in Clinical Surgery (Urologic Surgery)

GORDON W PHILPOTT, MD  Professor Emeritus of Surgery (General Surgery)

DANIEL D PICUS, MD, BS  Professor of Surgery (General Surgery)

MARY POLITI, PHD  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval)

JOSEPH M PRIMROSE, MD  Assistant Professor of Surgery (General Surgery)

VARUN PURI, MD  Assistant Professor of Surgery (Cardiothoracic Surgery) (Pending Executive Faculty Approval)

SABARINATHAN RAMACHANDRAN, PHD  Research Instructor in Surgery (General Surgery)

KATHLEEN G RAMAN, MD  Assistant Professor of Surgery (General Surgery)

RICARDO RAO, MD  Instructor in Clinical Surgery (General Surgery)

ANTONELLA LUISA RASTELLI, MD  Instructor in Surgery (General Surgery)
FRANK O RICHARDS, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery)
SHALE M RIFKIN, MD  Assistant Professor of Clinical Surgery (General Surgery)
CHARLES L ROPER, MD  Professor Emeritus of Surgery (Cardiothoracic Surgery)
BRIAN G RUBIN, MD  Professor of Surgery (General Surgery)
BASHAR SAFAR, MD  Assistant Professor of Surgery (General Surgery)
JACQUELINE MITS SAITO, MD  Assistant Professor of Surgery (Pediatric Surgery)
SHELLY SAKIYAMA-ELBERT, PHD  Instructor in Surgery (Plastic and Reconstructive Surgery)
DOUGLAS M SAMMER, MD  Assistant Professor of Surgery (Plastic and Reconstructive Surgery)
LUI S A SANCHEZ, MD  Professor of Surgery (General Surgery)
DONALD C SAUER, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery)
DOUGLAS J SCHUERER, MD  Associate Professor of Surgery (General Surgery)
RICHARD B SCHUESSLER, PHD  Research Professor of Surgery (Cardiothoracic Surgery)
MARYLS E SCHUH, MD, BS  Instructor in Clinical Surgery (General Surgery)
HOMAYOUN SEDIGHI, DDS  Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)
BRADLEY J SEGURA  Assistant Professor of Surgery (Pediatric Surgery)
DEBRA L SEOANE, MD  Instructor in Clinical Surgery (General Surgery)
COURTNEY SHANDS, III, MD  Instructor in Clinical Surgery (Urologic Surgery)
SURENDRA SHENOY, MD, PHD  Professor of Surgery (General Surgery)
GREGORIO A SICARD, MD  Eugene M. Bricker Professor of Surgery (General Surgery)
NASIR H SIDDIQI, MBBS  Assistant Professor of Surgery (General Surgery)
DAVID SIROOSPOUR, MD  Assistant Professor of Clinical Surgery (General Surgery)
RICHARD G Sisson, MD  Associate Professor Emeritus of Clinical Surgery (General Surgery)
DEBORAH S SMITH, PHD  Adjunct Research Assistant Professor of Surgery (Urologic Surgery)
ROBERT ELLIS SOUTHARD, MD  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval)
KATHERINE ANNE STAMATAKIS, PHS  Assistant Professor of Surgery (General Surgery)
ALAN JOEL STEIN, MD  Assistant Professor of Clinical Surgery (Urologic Surgery)
STEVEN M STRASBERG, MD  Pruett Professor of Surgery (General Surgery)
SETH A STROPE  Assistant Professor of Surgery (Urologic Surgery)
HERBERT SUNSHINE, MD  Instructor in Clinical Surgery (Urologic Surgery)
SIOBHAN SUTCLIFFE, PHD, MS  Assistant Professor of Surgery (General Surgery)
MARISSA MORNING TENENBAUM, MD  Assistant Professor of Surgery (Plastic and Reconstructive Surgery)
JESSIE L TERNBERG, MD, PHD  Professor Emeritus of Surgery (Pediatric Surgery)
ROBERT W THOMPSON, MD  Professor of Surgery (General Surgery)
JAY W. TICHELAAR, PHD  Research Assistant Professor of Surgery (General Surgery)
RALPH J TORRENCE, MD  Instructor in Clinical Surgery (Urologic Surgery)
ERICA J TRAXEL, MD  Assistant Professor of Surgery (Urologic Surgery)
THOMAS H TUNG, MD  Associate Professor of Surgery (Plastic and Reconstructive Surgery)
SURESH VEDANTHAM, MD  Professor of Surgery (General Surgery)
VIJAYA M VEMULAKONDA, MD, JD  Assistant Professor of Surgery (Urologic Surgery)
HARIS G. VIKIS, PHD  Research Assistant Professor of Surgery (General Surgery)
HOWARD S WALKER, MD Instructor in Clinical Surgery (Cardiothoracic Surgery)
WILLARD B WALKER, MD Associate Professor Emeritus of Clinical Surgery (General Surgery)
MICHAEL HAROLD WALL, MD Associate Professor of Surgery (Cardiothoracic Surgery)
I-WEN WANG, MD, PHE Assistant Professor of Surgery (Cardiothoracic Surgery)
JEAN S WANG Assistant Professor of Surgery (General Surgery)
YIAN WANG, MD, PHD Professor of Surgery (General Surgery)
BRAD W. WARNER, MD Jessie L. Ternberg, M.D., PhD. Distinguished Professor of Pediatric Surgery in Surgery (Pediatric Surgery)
JOHN WATSON Instructor in Clinical Surgery (Cardiothoracic Surgery)
LEONARD B WEINSTOCK, MD Assistant Professor of Clinical Surgery (General Surgery)
JASON R WELLEN, MD Assistant Professor of Surgery (General Surgery)
SAMUEL A WELLS, JR, MD Professor of Surgery (General Surgery)
BRAD C WHITE, MD Instructor in Clinical Surgery (Urologic Surgery)
BRUCE I WHITE, MD Instructor in Clinical Surgery (Plastic and Reconstructive Surgery)
KATHLEEN Y. WOLIN, PHD Assistant Professor of Surgery (General Surgery)
ALBERT S WOO, MD Assistant Professor of Surgery (Plastic and Reconstructive Surgery)
YAN YAN, MD, PHD Research Assistant Professor of Surgery (General Surgery)
WILLIAM D YATES, MD Instructor in Clinical Surgery (General Surgery)
MING YOU, MD, PHD Professor of Surgery (General Surgery)
ROBERT A YOUNG, MD, JD Instructor in Clinical Surgery (Plastic and Reconstructive Surgery)
DARRYL ADAM ZUCKERMAN, MD Assistant Professor of Surgery (General Surgery)

Department's Web Site

http://www.surgery.wustl.edu/
Alvin J. Siteman Cancer Center

Introduction

The Alvin J. Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine is designated by the National Cancer Institute as a Comprehensive Cancer Center, the only such center in Missouri and for a 240-mile radius. Siteman is world renowned for its basic science, translational and prevention and control research. Siteman enhances, promotes and supports interactions among the cancer research efforts throughout the campus and has provided an organizational focus and stimulus for researchers to continue to produce cutting-edge institutional research. The Center holds more than $135 million in extramural funding for cancer research and is organized into nine research programs (Cancer and Developmental Biology, Tumor Immunology, Hematopoietic Development and Malignancy, Cellular Proliferation, Oncologic Imaging, Prevention and Control, Clinical and Translational and Clinical Research, Breast Cancer Research, and DNA Metabolism and Repair). Siteman also provides 15 shared resource facilities, with one in development, to its more than 270 research members. Shared resource facilities include: Bioinformatics Core, Biostatistics Core, Clinical Trials Core, Embryonic Stem Cell Core, Hereditary Cancer Core, High-Speed Cell Sorter Core, Molecular Core Laboratory, Multiplexed Gene Analysis Core, Proteomics Core, Small Animal Cancer Imaging Core, Health Behavior and Outreach Core, Good Manufacturing Practice Facility, Tissue Procurement Core, Imaging Response Assessment Team (IRAT) Core, and a High Through-put Core. A Dissemination to Practice Core shared resource is in development. Siteman's Program for the Elimination of Cancer Disparities (PECaD) partners with the St. Louis community and collaborators from across the country, using education and screening strategies to reduce differences in access to cancer diagnosis, care, prevention and education/training based on race, ethnicity, socioeconomic or other status.

The Siteman Cancer Center provides numerous opportunities in cancer research education and training through seminars, conferences, courses and research opportunities. Individuals are encouraged to contact Siteman at (800) 600-3606 or via the web site, www.siteman.wustl.edu, for more information. A few educational opportunities are listed below.

Siteman Basic Science Seminar Series

Siteman sponsors a campuswide seminar series for basic cancer biology topics on the first Thursday of each month at 3 p.m. at the Eric P. Newman Education Center. Speaker information can be found on the Siteman web site at www.siteman.wustl.edu. Attendance is open.

Research Program Specific Activities

All of the Siteman Cancer Center research programs have regular internal seminars or work-in-progress discussion groups, and these frequently involve students and postdocs.

• The Cancer and Developmental Biology Program runs a monthly laboratory research presentation seminar, which meets on the third Tuesday of the month at noon. Contact David M. Ornitz, MD, PhD, for more information.

• The Tumor Immunology Program utilizes the long-standing Immunology Seminar Series sponsored by the Department of Pathology and Immunology at 4 p.m. on Mondays in the Eric P. Newman Education Center. There are also dedicated sessions allotted to the topics of Tumor Immunology. Contact Robert D. Schreiber, PhD, for more information.

• The Hematopoietic Development and Malignancy Program convenes a weekly journal club to review primary and published data. About three-fourths of the presentations are in a journal club format, with the remainder from participating laboratories. Current literature regarding hematopoiesis and current trials in gene therapy are presented and critically reviewed. Contact Dan Link, MD, or Peter
Westervelt, MD, PhD, for more information.

- The Cellular Proliferation Program sponsors a weekly seminar series titled “Signaling/Cell Cycle.” Each academic year, up to six speakers from outside the medical school are invited to present their current work. On weeks alternating with invited speakers, graduate students and postdoctoral research fellows working in the laboratories of our members present their research. Contact Helen M. Piwnica-Worms, PhD, for more information.

- The Marilyn Fixman Clinical Cancer Conference is held on the third Wednesday of each month in the Steinberg Amphitheater on the Barnes-Jewish Hospital north campus. Speakers at this conference present a disease-based clinical topic at each session. Contact the Siteman administration office at (314) 454-8439 for the schedule.

- The Prevention and Control Program has multiple regular research group meetings in nicotine dependence and smoking cessation, early detection, cancer communication and intervention research and psychosocial factors. Contact Mario Schootman, PhD, or Matthew Kreuter, PhD, for more information.

- The Breast Research Program has multiple regular research group meetings and regular seminars and discussions, including one prevention and control-focused talk per month. Contact Matthew Ellis, MB, PhD, for more information.

- The DNA Metabolism and Repair Program has ongoing seminars and external speakers. Contact Barry Sleckman, MD, PhD, or Tom Ellenberger, DVM, PhD, for more information.

- There are more than 15 weekly/biweekly disease-based clinical conferences, and these can be found on the Siteman web site.

Cancer Biology Special Emphasis Pathway

The Siteman Cancer Center launched a special emphasis pathway as part of the Division of Biology and Biomedical Sciences graduate program in 2002. Siteman sponsors six to seven total (new and continuing) students per year in the program, which focuses on multidisciplinary cancer biology research. The pathway includes participation in a cancer biology course each spring (two different courses alternating each year), the Siteman basic science seminar series, work-in-progress interlab meetings, and journal clubs with at least one of the five Siteman basic research programs. For more information on this program, contact Lee Ratner, MD, PhD.

Faculty

Timothy J Eberlein  Director, Alvin J. Siteman Cancer Center; Spencer T. and Ann W. Olin Distinguished Professor; and Bixby Professor and Chairman, Department of Surgery, Washington University School of Medicine

John F DiPersio  Deputy Director, Alvin J. Siteman Cancer Center; Lewis T. and Rosalind B. Apple Professor of Oncology in Medicine; and Chief, Division of Oncology, Washington University School of Medicine

Jeffrey F Moley  Associate Director of Translational and Clinical Investigation, Alvin J. Siteman Cancer Center; Professor of Surgery; and Chief, Section of Endocrine and Oncologic Surgery, Washington University School of Medicine

Michael J Welch  Associate Director of Oncologic Imaging, Alvin J. Siteman Cancer Center, and Professor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Melanie D Baxter  Genetic/Clinical Counselor, Siteman Cancer Center, Washington University School of Medicine

Graham A. Colditz  Associate Director, Prevention and Control, Alvin J. Siteman Cancer Center, and Niess-Gain Professor in the School of Medicine, Department of Surgery, Washington University School of Medicine

Teresa L Deshields  Manager, Psycho-Oncology Service, Alvin J. Siteman Cancer Center
Steven M Devine  Co-Director, Alvin J. Siteman Cancer Center Good Manufacturing Practice Facility, Assistant Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation and Stem Cell Biology, Washington University School of Medicine

Shannon Nanna  Psychologist, Psycho-Oncology Service, Alvin J. Siteman Cancer Center

Camille N Abboud  Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation, Washington University School of Medicine

Samuel I Achilefu  Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Joseph JH Ackerman  William Greenleaf Eliot Professor and Chair, Department of Chemistry, Washington University School of Medicine

Douglas R Adkins  Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Walter J. Akers  Instructor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Kassandra Alcaraz

Paul M Allen  Robert L. Kroc Professor of Pathology and Immunology, Division of Immunology and Molecular Pathology, Washington University School of Medicine

D. Craig Allred  Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Christopher D. Anderson  Assistant Professor of Surgery, Division of General Surgery, Sections of Transplant Surgery and Pancreatic, Hepatobiliary and Gastrointestinal Surgery, Washington University School of Medicine

Jacques U Baenziger  Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine

Elizabeth A Baker  Associate Professor of Community Health, Division of Behavioral Science and Health Education, Saint Louis University School of Public Health

Dennis M Balfe  Professor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Thomas J Baranski  Assistant Professor of Medicine, Division of Endocrinology, Diabetes and Metabolism, Washington University School of Medicine

Nancy L Bartlett  Koman Chair in Medical Oncology, Washington University School of Medicine

Premíri T Barton  Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine

David C Beebe  Janet and Bernard Becker Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine

Tammie LS Benzinger

Mikhail Y. Berezin  Instructor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Ernesto Bernal-Mizrachi  Assistant Professor of Medicine, Division of Endocrinology, Metabolism and Lipid Research, Washington University School of Medicine

Sam B Bhayani  Assistant Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Elisa H Birnbaum  Professor of Surgery, Division of General Surgery, Section of Colon and Rectal Surgery, Washington University School of Medicine

Morey A Blinder  Associate Professor of Medicine, Division of Hematology, Washington University School of Medicine

Charles Bloch

Kendall J Blumer  Professor of Cell Biology and Physiology, Washington University School of Medicine

Ingrid B Borecki  Associate Professor of Genetics, Washington University School of Medicine

Ron Bose  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Jeffrey D Bradley  Associate Professor of Radiation Oncology, Washington University School of Medicine
Steven Brandes  Associate Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Keith E Brandt  William G. Hamm Professor of Surgery, Division of Plastic and Reconstructive Surgery, Washington University School of Medicine

Thomas J Brett  Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine

Steven L Brody  Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine

Jeffrey J Brown  Professor of Radiology, Division of Diagnostic Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

L. Michael Brunt  Professor of Surgery, Division of General Surgery, Section of Minimally Invasive Surgery, Washington University School of Medicine

Arnold D Bullock  Associate Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Peter MJ Burgers  Professor of Biochemistry and Molecular Biophysics, Washington University School of Medicine

Trent Buskirk  Assistant Professor of Community Health, Division of Biostatistics, Saint Louis University School of Public Health

Charlene A. Caburnay

Dengfeng Cao  Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Beatriz M Carreno

Kenneth R. Carson  Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

William C Chapman  Professor of Surgery and Chief, Division of General Surgery and Section of Transplant Surgery, Washington University School of Medicine

Junjie Chen  Research Instructor of Medicine, Washington University School of Medicine

Zhou-Feng Chen  Assistant Professor of Anesthesiology, Washington University School of Medicine

Emily Cheng  Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine

JaeBok Choi

Kyunghhee Choi  Associate Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine

William E Clutter  Associate Professor of Medicine, Division of Endocrinology, Metabolism and Lipid Research, Washington University School of Medicine

Janet M Connolly  Research Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine

John A Cooper  Professor of Cell Biology and Physiology, Washington University School of Medicine

Douglas E Coplen  Associate Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Joseph C. Corbo  Assistant Professor of Pathology and Immunology, Division of Neuropathology, Washington University School of Medicine

C. Lynn Cornelius  Associate Professor of Medicine and Chief, Division of Dermatology, Washington University School of Medicine

Erika C. Crouch  Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Joseph P. Culver  Assistant Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Ralph G Dacey Jr  Edith R. and Henry G. Schwartz Professor and Chairman of Neurosurgery, Washington University School of Medicine

Nicholas O Davidson  Professor of Medicine and Chief, Division of Gastroenterology, Washington University School of Medicine

Rosa M Davila  Associate Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington
University School of Medicine

Joseph O Deasy

Alexander E Denes Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Aaron DiAntonio Associate Professor of Developmental Biology, Washington University School of Medicine

Brian K Dieckgraefe Assistant Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine

Patrick A Dillon Associate Professor of Surgery and of Pediatrics, Washington University School of Medicine

M.B. Majella Doyle Assistant Professor of Surgery, Division of General Surgery, Sections of Transplant Surgery and Pancreatic, Hepatobiliary and Gastrointestinal Surgery, Washington University School of Medicine

Bettina F. Drake

Todd E. Druley Instructor of Pediatrics, Division of Hematology/Oncology, Washington University School of Medicine

J. Christopher Eagon Assistant Professor of Surgery, Division of General Surgery, Section of Minimally Invasive Surgery, Washington University School of Medicine

Dayna S Early Associate Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine

Steven A Edmundowicz Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine

W. Barry Edwards Research Instructor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Seth A Eisen Professor of Medicine, Division of Rheumatology, Washington University School of Medicine

Samir K El-Mofty Associate Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Tom Ellenberger Raymond H. Wittcoff Professor and Chair, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine

Dione M Farria Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine

Todd A Fehniger Assistant Professor of Medicine, Division of Oncology, Sections of Stem Cell Biology and Bone Marrow Transplantation, Washington University School of Medicine

Thomas A Ferguson Associate Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine

Robert S Figenshau Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

James W Fleshman Professor of Surgery and Chief, Section of Colon and Rectal Surgery, Washington University School of Medicine

Ida K. Fox Assistant Professor of Surgery, Division of Plastic and Reconstructive Surgery, Washington University School of Medicine

William A Frazier Professor of Biochemistry and Molecular Biophysics, Washington University School of Medicine

Q. John Fu Assistant Professor of Community Health, Division of Biostatistics, Saint Louis University School of Public Health

Joel R Garbow Research Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

W. Donald Gay Christy J. and Richard S. Hawes III Professor of Otolaryngology and Chief, Division of Maxillofacial Prosthetics, Washington University School of Medicine

Sarah Gehlert

David S Gierada

Louis A Gilula Professor of Radiology and Chief of Musculoskeletal Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Harvey S Glazer Professor of Radiology, Division of Diagnostic Radiology, Section of Chest Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Simon P Goedegebure Assistant Professor of Surgery, Section of General Surgery, Division of Endocrine and Oncologic Surgery, Washington University School of Medicine
Timothy A Graubert Assistant Professor of Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University School of Medicine

Robert L. Grubb, III Assistant Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Robert L. Grubb, Jr. Herbert Lourie Professor of Neurological Surgery, Washington University School of Medicine

Bruce L Hall Professor of Surgery, Division of General Surgery, Section Endocrine and Oncologic Surgery, Washington University School of Medicine

Lannis E. Hall Assistant Professor of Clinical Radiation Oncology, Washington University School of Medicine

Dennis Hallahan Elizabeth H. and James S. McDonnell III Distinguished Professor in Medicine and Chairman, Department of Radiation Oncology, Washington University School of Medicine

Anjum Hassan Assistant Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine

Bruce H Haughey Dr. Joseph B. Kimbrough Chair in Maxillofacial Surgery and Prosthodontics and Chief, Division of Head and Neck Surgical Oncology, Washington University School of Medicine

William G. Hawkins Associate Professor of Surgery, Division of General Surgery, Section of Hepatobiliary, Pancreatic and Gastrointestinal Surgery, Washington University School of Medicine

Robert J Hayashi Associate Professor of Pediatrics, Division of Hematology/Oncology, Washington University School of Medicine

Andrew C Heath Spencer T. Olin Professor of Psychology in Psychiatry, Department of Psychiatry, Washington University School of Medicine

Jay P Heiken Professor of Radiology and Chief, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Cheryl R. Herman Clinical Instructor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine

Christine M. Hoehner Assistant Professor of Surgery, Division of General Surgery, Washington University in St. Louis

Chyi-Song Hsieh Assistant Professor of Medicine, Division of Rheumatology, Washington University School of Medicine

James Hsieh Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine

Andrew J.W. Huang Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine

Peter A Humphrey Ladenson Professor of Pathology and Chief, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Eva A. Hurst Assistant Professor of Medicine, Division of Dermatology, Washington University School of Medicine

Shin-Ichiro Imai Assistant Professor of Developmental Biology, Washington University School of Medicine

Jennifer L Ivanovich Research Instructor, Department of Surgery, Washington University School of Medicine

Stephen L Johnson Associate Professor of Genetics, Washington University School of Medicine

Emily S. Jungheim Instructor of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, Washington University School of Medicine

Kimberly A. Kaphingst

Cheryl M. Kelly Assistant Professor of Community Health, Division of Behavioral Science and Health Education, Saint Louis University School of Public Health

Evan D. Kharasch Russell D. and Mary B. Shelden Professor of Anesthesiology and Chief, Division of Clinical and Translational Research, Washington University School of Medicine

Seung K. Kim Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Ira J Kodner Solon and Bettie Gershman Professor of Surgery, Division of General Surgery, Section of Colon and Rectal Surgery, Washington University School of Medicine

Kerry Kornfeld Associate Professor of Developmental Biology, Washington University School of Medicine

Daniel Kreisel Assistant Professor of Surgery, Division of Cardiac Surgery, Washington University School of Medicine
Matthew W Kreuter  Professor of Public Health, George Warren Brown School of Social Work, Washington University
Timothy R. Kuklo  Associate Professor of Orthopaedic Surgery, Washington University School of Medicine
Shashikant Kulkarni
David I Kuperman  Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine
Richard Laforest  Assistant Professor of Radiology, Division of Radiological Sciences, Washington University School of Medicine
Gregory M Lanza  Professor of Medicine, Division of Cardiovascular Diseases, Washington University School of Medicine
Suzanne Lapi
Michelle Lee  Clinical Instructor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine
Deborah J. Lenschow  Assistant Professor of Medicine, Division of Rheumatology, Washington University School of Medicine
Jeffrey R. Leonard  Associate Professor of Neurosurgery, Division of Pediatric Neurosurgery, Washington University School of Medicine
Christina N. Lessov-Schlaggar  Research Instructor of Psychiatry, Washington University School of Medicine
Eric C. Leuthardt  Assistant Professor of Neurosurgery, Washington University School of Medicine
Timothy J Ley  Alan A. and Edith L. Wolff Professor of Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University School of Medicine
Mauricio Lisker-Melman  Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine
A. Craig Lockhart  Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine
Timothy M. Lohman  Marvin A. Brennecke Professor of Biological Chemistry, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine
Greg D Longmore  Professor of Medicine, Division of Hematology, Washington University School of Medicine
James B Lowe III  Assistant Professor of Surgery, Division of Plastic and Reconstructive Surgery, Washington University School of Medicine
Jeffrey A. Lowell  Professor of Surgery and of Pediatrics, Washington University School of Medicine
Dongsi Lu  Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine
Gregg T Lueder  Associate Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine
Jingqin (Rosy) Luo  Instructor of Biostatistics, Washington University School of Medicine
Robert H Mach  Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine
George A. Macones  Mitchell and Elaine Yanow Professor and Chair of Obstetrics and Gynecology, Washington University School of Medicine
Pamela AF Madden  Assistant Professor of Psychiatry, Washington University School of Medicine
Philip W Majerus  Professor of Medicine and Co-Chief, Division of Hematology, Washington University School of Medicine
Naganathan B. Mani  Instructor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine
David B Mansur  Associate Professor of Radiation Oncology, Washington University School of Medicine
Elaine Mardis
Julie A Margenthaler  Assistant Professor of Surgery, Division of General Surgery, Section of Endocrine and Oncologic Surgery, Washington University School of Medicine
L. Stewart Massad  Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology, Washington University School of Medicine
Martin L Mayse  Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine

Douglas J McDonald  Professor of Orthopaedic Surgery, Washington University School of Medicine

Robert C McKinstry III  Associate Professor of Radiology and Chief, Pediatric Radiology and Pediatric Neuroradiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Robert P Mecham  Alumni Endowed Professor of Cell Biology and Physiology, Washington University School of Medicine

Bryan F Meyers  Patrick and Joy Williamson Professor of Surgery and Chief, Section of Thoracic Surgery, Washington University School of Medicine

Craig Micchelli  Assistant Professor of Developmental Biology, Washington University School of Medicine

Loren S. Michel  Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine

Thalachallour Mohanakumar  Jacqueline G. and William E. Maritz Professor of Immunology and Oncology, Department of Surgery, Washington University School of Medicine

Barbara S Monsees  Professor of Radiology and Chief, Section of Breast Imaging, Washington University School of Medicine

Christopher J Moran  Professor of Radiology, Division of Diagnostic Radiology, Section of Neuroradiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Daniel Morgensztern  Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Jeremiah J. Morrissey  Research Professor of Anesthesiology, Division of Clinical and Translational Research, Washington University School of Medicine

Kenneth M Murphy  Professor of Pathology and Immunology, Division of Immunology and Molecular Pathology, Washington University School of Medicine

Matthew G Mutch  Associate Professor of Surgery, Division of General Surgery, Section of Colon and Rectal Surgery, Washington University School of Medicine

Terence M. Myckatyn  Assistant Professor of Surgery, Division of Plastic and Reconstructive Surgery, Washington University School of Medicine

Robert J Myerson  Professor of Radiation Oncology, Washington University School of Medicine

Michael J Naughton  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

April E Nesin  Instructor in Clinical Pediatrics, Washington University School of Medicine

Rodney Newberry  Associate Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine

Brian Nussenbaum  Associate Professor and Vice Chairman for Clinical Affairs, Department of Otolaryngology, Washington University School of Medicine

Eugene M. Oltz  Professor of Pathology and Immunology, Division of Laboratory and Genomic Medicine, Washington University School of Medicine

Dipanjan Pan  Research Instructor of Medicine, Division of Cardiovascular Diseases, Washington University School of Medicine

Randal C Paniello  Associate Professor of Otolaryngology, Division of Head and Neck Surgical Oncology, Washington University School of Medicine

Parag Parikh  Assistant Professor of Radiation Oncology, Washington University School of Medicine

Tae S Park  Shi H. Huang Professor of Neurosurgery and Chief, Division of Pediatric Neurosurgery, Washington University School of Medicine

Alec Patterson  Evarts A. Graham Professor of Surgery and Chief, Division of Cardiothoracic Surgery, Washington University School of Medicine

Jacqueline E Payton

Michele L Pergadia  Research Assistant Professor of Psychiatry, Washington University School of Medicine

Arie Perry  Professor of Pathology, Division of Neuropathology, Washington University School of Medicine

John D Pfeifer  Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine
David R Piwnica-Worms  Professor of Developmental Biology and of Radiology, Washington University Medical School
Timothy J. Pluard  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine
Mary C. Politi
Katherine P Ponder  Professor of Medicine, Division of Hematology, Washington University School of Medicine
Matthew A Powell  Assistant Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology, Washington University School of Medicine
Jason Q. Purnell
Antonella L Rastelli  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine
Lee Ratner  Professor of Medicine, of Molecular Microbiology, and of Pathology and Immunology, Washington University School of Medicine
David E Reichert  Assistant Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine
Valerie C. Reichert  Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine
Keith M Rich  Professor of Neurosurgery, Washington University School of Medicine
Caron Rigden  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine
Buck E Rogers  Assistant Professor of Radiation Oncology, Division of Radiation and Cancer Biology, Washington University School of Medicine
John W Rohrbaugh  Associate Professor of Psychiatry, Washington University School of Medicine
Daniel B Rosenbluth  Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine
Joseph L Roti Roti  Professor of Radiation Oncology and Chief, Division of Cancer and Radiation Biology, Washington University School of Medicine
Henry D Royal  Professor of Radiology and Chief, Division of Nuclear Medicine, Mallinckrodt Institute of Radiology, Washington University School of Medicine
Joshua B Rubin  Assistant Professor of Pediatrics, Division of Hematology and Oncology, Washington University School of Medicine
Nael Saad  Instructor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine
Nancy L. Saccone  Assistant Professor of Genetics, Washington University School of Medicine
Stuart S Sagel  Professor of Radiology and Chief, Section of Chest Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine
Mark S Sands  Associate Professor of Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University School of Medicine
Paul Santiago  Assistant Professor of Neurosurgery, Washington University School of Medicine
Scott Saunders  Assistant Professor of Pediatrics and of Molecular Biology and Pharmacology, Washington University School of Medicine
Kenneth B Schechtman  Associate Professor of Biostatistics, Washington University School of Medicine
Tim B Schedl  Professor of Genetics, Washington University School of Medicine
Robert D Schreiber  Alumni Endowed Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine
Alan L Schwartz  Harriet B. Spohrer Professor and Chairman, Department of Pediatrics, Washington University School of Medicine
Enbal Shacham

Shalini Shenoy Assistant Professor of Pediatrics, Division Hematology/Oncology, Washington University School of Medicine

Nasir H. Siddiqi Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Barry A Siegel Professor of Radiology and Chief, Division of Nuclear Medicine, Washington University School of Medicine

Cary L Siegel Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine

James B Skeath Associate Professor of Genetics, Washington University School of Medicine

Steven M Sorscher Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Gershon J. Spector Professor of Otolaryngology, Division of Head and Neck Surgical Oncology, Washington University School of Medicine

Philip D Stahl Edward C. Mallinckrodt Jr. Professor and Chair of Cell Biology and Physiology, Washington University Medical School

Katherine A. Stamatakis Assistant Professor of Surgery, Division of General Surgery, Washington University School of Medicine

William F Stenson Dr. Nicholas V. Costrini Professor of Gastroenterology and Inflammatory Bowel Disease, Washington University School of Medicine

Sheila A Stewart Assistant Professor of Cell Biology and Physiology, Washington University School of Medicine.

Steven M Strasberg Pruett Professor of Surgery, Section of Hepatobiliary-Pancreatic and Gastrointestinal Surgery, Washington University School of Medicine

Walton Sumner II Associate Professor of Medicine, Division of General Medical Sciences, Washington University School of Medicine

Rama Suresh Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Robert A Swarm Associate Professor of Anesthesiology and Chief, Division of Pain Management, Washington University School of Medicine

Wojciech A Swat Assistant Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine

Susan C Sylvia Clinical Psychologist and Program Director, Medical Crisis Coping Center, St. Louis Children's Hospital

Yuan-Chuan Tai Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Benjamin R Tan Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

John-Stephen A Taylor Professor of Chemistry, Washington University School of Medicine

Marie E Taylor Assistant Professor of Radiation Oncology, Washington University School of Medicine

Sharlene A Teefey Professor of Radiology, Division of Diagnostic Radiology, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Steven L Teitelbaum Wilma and Roswell Messing Professor of Pathology, Division of Anatomic Pathology, Washington University School of Medicine

Premal H. Thaker Assistant Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology, Washington University School of Medicine

Wade L Thorstad Assistant Professor of Radiation Oncology, Washington University School of Medicine

Sandeep K. Tripathy Instructor of Medicine, Division of Gastroenterology, Washington University School of Medicine

Peter G Tuteur Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine

Emil R Unanue Professor of Pathology and Immunology, Washington University School of Medicine
Ravindra Uppaluri  Assistant Professor of Otolaryngology, Division of Head and Neck Surgical Oncology, Washington University School of Medicine

Ramakrishna Venkatesh  Assistant Professor of Surgery, Division of Urologic Surgery, Washington University School of Medicine

Teresa J Vietti  Professor Emeritus of Pediatrics, Division of Hematology and Oncology, Washington University School of Medicine

Haris G. Vikis  Research Assistant Professor of Surgery, Division of General Surgery, Washington University School of Medicine

Thaddeus J. Wadas

Nina D Wagner-Johnston  Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine

Matthew J. Walter  Assistant Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation, Washington University School of Medicine

Hanlin L Wang  Assistant Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine

Lihong V. Wang

Yian Wang  Associate Professor of Surgery, Division of General Surgery, Washington University School of Medicine

Jason D Weber  Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine

Katherine N Weilbaecher  Associate Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine

Peter Westervelt  Associate Professor of Medicine and Chief, Section of Bone Marrow Transplantation, Washington University School of Medicine

Kimberly N Wiele  Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Richard K Wilson  Professor of Genetics, Washington University School of Medicine

Franz J Wippold  Professor of Radiology and Chief, Section of Neuroradiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Karen L Wooley  James S. McDonnell Distinguished University Professor in Arts and Sciences, Department of Chemistry, Washington University

Ricardo J Wray  Assistant Professor of Community Health, Division of Behavioral Science/Health Education, School of Public Health, Saint Louis University

Neill M Wright  Associate Professor of Neurosurgery, Washington University School of Medicine

Youhan Xia

Lourdes R Ylagan  Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine

Ming You  Professor of Surgery, Division of General Surgery, Washington University School of Medicine

Zhongsheng You  Assistant Professor of Cell Biology and Physiology, Washington University School of Medicine

Chenbo Zeng  Research Instructor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine

Junran Zhang  Instructor of Radiation Oncology, Washington University School of Medicine

Gregory J. Zipfel  Assistant Professor of Neurosurgery, Washington University School of Medicine

Imran Zoberi  Assistant Professor of Radiation Oncology, Washington University School of Medicine


Alvin J. Siteman Cancer Center Web Site

http://www.siteman.wustl.edu
Teaching and Research Divisions and Programs

Teaching and Research Divisions and Programs

Division of Biostatistics

The Division of Biostatistics engages in research, biostatistical consultation and training activities. Interested students may pursue intensive studies through courses offered by the division. In addition to the core research program of the division, its research activities include collaborative projects with various departments of the medical school. Biostatistical consultation represents an important activity of the division, providing expertise in both theoretical and applied areas. At the initiative of other departments, the division also offers additional short courses in biostatistics. The division participates actively in both predoctoral and postdoctoral training.

Research activities of the division span a wide range of topics dealing with a number of disorders of considerable public health importance and provide research opportunities at both theoretical and applied levels. Several research projects involve close interaction and collaboration with a number of research groups at the Medical Center. The present core research program of the division deals with genetic epidemiology, especially as it relates to cardiovascular disease. A number of theoretical and applied problems are addressed, including: nature-nurture resolution and identification of the genetic basis of risk factor domains such as lipids, obesity, blood pressure and hypertension, and insulin resistance and diabetes; exploration of temporal trends in the degree of genetic and environmental effects; and multivariate associations among multiple risk factors. Timely theoretical issues also are addressed, such as the sampling of families through patients and statistical properties of methods of data analysis. Most recent research also emphasizes gene-gene and gene-environment interactions.

Present collaborative research projects include: a coordinating center for a multicenter study to assess the genetic basis of response to exercise training (HERITAGE); a coordinating center for a multicenter NETWORK study on the genetics of hypertension (HyperGEN) and the Family Blood Pressure Program (FBPP); coordinating centers for a multicenter study to assess the genetic basis of response to intervention through incorporation of gene-environment interactions (Gensalt); a coordinating center for the Polycystic Kidney Disease Treatment Network (HALT-PKD) to evaluate hypertensive medications that may be effective in slowing progression of PKD in individuals suffering from the disease; a coordinating center for a trial in ocular hypertensives (OHTS); important collaborative studies of Alzheimer’s disease and cancer through support roles as the ADRC biostatistics core, and the Alvin J. Siteman Cancer Center biostatistics core studies on ischemic heart disease; several epidemiological research projects developing methods for increasing public awareness and utilization of measures that are known to decrease the likelihood of developing heart disease and for encouraging behaviors that will improve prognosis following a heart attack.

The division provides consultation through the Washington University Institute of Clinical and Translational Sciences (ICTS) and the Biostatistics Consulting Service in a wide range of areas including the statistical design of experiments and clinical trials, protocol development, database management, analysis of data and interpretation of results. Some of the areas of special strength and expertise include cardiovascular biostatistics, computing and statistical packages. The division is well-equipped to provide assistance at the stage of preparing grant applications, including careful discussions of study design, sample size calculations, randomization schemes, computer resources and data analysis.

The Division of Biostatistics specializes in genetic epidemiology and promotes predoctoral, doctoral and postdoctoral training in this discipline. Genetic epidemiology is the scientific discipline that deals with an analysis of the familial distribution of traits, with a view to understanding any possible genetic basis. However, one cannot study genes except as they are expressed in people living in certain environments, and one cannot study environmental factors except as they affect people who have
certain genotypes. Genetic epidemiology is a unique interdisciplinary field that seeks to understand both the genetic and environmental factors and how they interact to produce various diseases and traits in humans. These studies are carried out in relatively large samples of participants in relevant populations, thus, the population history and dynamics often come into play. Population dynamics alter the frequency and distribution of both genetic and environmental factors, and thus, their net effect on the phenotype of interest. Some population characteristics also can be exploited for the purposes of gene discovery and mapping because the history has affected the genomic structure in a way that specific genotypes associated with disease can be identified.

Human diseases have been the focal point of genetic epidemiologic studies and recent efforts are directed toward complex disorders such as coronary heart disease, hypertension, diabetes, obesity, cancer, atopy and allergies, and neurological and psychiatric disorders, to name a few. It is commonly thought that an understanding of the genetic underpinnings of such disorders will revolutionize medicine in the 21st century, enabling better preventive measures, diagnosis, prognosis and novel treatments. Given progress in the Human Genome Project, in computing power, and in the creation of powerful statistical methods of analysis, we are poised to shepherd this revolution. It is an exciting time in science, and opportunities for careers in genetic epidemiology abound.

Training Program

Summer Institute Program to Increase Diversity (SIPID) in Genetic Epidemiology with a focus on Cardiovascular and other Heart, Lung, Blood and Sleep Disorders: An all-expense-paid summer institute is offered in the summer of 2009 with funding from the NHLBI. The goal is to mentor junior faculty in underrepresented minorities and/or faculty with disabilities into independent research careers in biomedical sciences. For further information, visit the web site at [www.biostat.wustl.edu/sipid/index.html](http://www.biostat.wustl.edu/sipid/index.html) or contact the program administrator at sipid-ge@wubios.wustl.edu.

Graduate Studies

The Division of Biostatistics sponsors (with the Departments of Genetics and Psychiatry as cosponsors) graduate study leading to a Master of Science (MS) degree and to the Certificate in Genetic Epidemiology. The Division also co-sponsors with the Division of Biology and Biomedical Sciences a PhD program in Human and Statistical Genetics, which offers a multidisciplinary approach to preparing future scientists with analytical/statistical, computational and human genetic methods for the study of human disease. For further information on the PhD program, see [dbbs.wustl.edu](http://dbbs.wustl.edu).

Genetic Epidemiology Masters of Science (GEMS) Program (M21)
The Genetic Epidemiology Masters of Science (GEMS) training program provides a multidisciplinary educational opportunity for people who want to work at the dynamic nexus of genetics and medicine. There are growing needs for scientists with this training both in academia and industry. With the wealth of data from the Human Genome Project and the availability of powerful new computational approaches, abundant opportunities are now available to explore and characterize the interplay between genes and the environment that affect the biological processes that underlie disease.

Master of Science Degree (Computational and Clinical Tracks)
The core faculty for this multidisciplinary MS program come from 15 departments/divisions in the School of Medicine. The GEMS degree program is sponsored by the Division of Biostatistics and cosponsored by the departments of Genetics and Psychiatry and includes world-renowned scientific leaders in their respective areas. D.C. Rao, PhD, director of the Division of Biostatistics and the GEMS program director, is one of the founding fathers of the field. The four-semester, summer-to-summer (13-14 months), 35-credit-hour GEMS program is designed to prepare students to work at the interface of genetics, biostatistics, epidemiology and computing. The program has two distinct tracks that encompass training for both graduate student and clinical investigators. See [www.biostat.wustl.edu/gems/](http://www.biostat.wustl.edu/gems/) for details.

Certificate in Genetic Epidemiology
We offer a Certificate in Genetic Epidemiology, which is earned after successful completion (with a minimum of a "B" average) of four core courses plus labs (11 credit hours) that are normally offered to master’s candidates in Genetic Epidemiology. To earn the Certificate, these courses may be taken over one or two summers:

M21-503 Statistical Computing with SAS
M21-505 Biostatistics for Research Workers (prerequisite M21-503)
M21-505A Biostatistics for Research Workers Computer Lab
M21-515 Fundamentals of Genetic Epidemiology
M21-515A Fundamentals of Genetic Epidemiology Computer Lab
M21-550 Introduction to Bioinformatics (prerequisite M21-505)
M21-550A introduction to Bioinformatics Computer Lab

Prospective Students
Since genetic epidemiology is a multidisciplinary field, we expect applicants to come from a variety of backgrounds, but primarily from the quantitative or biological sciences, and possibly at different points in their careers: undergraduates with quantitative sciences (e.g., mathematics through calculus plus one semester of statistics) and/or biological sciences (at least through Principles of Biology II: Genetics or equivalent) background; people with terminal degrees in other (related) disciplines who seek to gain expertise in genetic epidemiology; current employees of pharmaceutical and biotechnology companies seeking additional training and formal credentials in the field. All prospective students must provide evidence of basic skills in computer programming through coursework, documented experience or by passing a proficiency exam. Promising candidates who do not meet all the prerequisites will work with the program director to take the appropriate courses or training to rectify weaknesses.

Location
The GEMS Program is located in the Division of Biostatistics, on the third floor of Shriners Building (706 S. Euclid Ave.), Rooms 3301-3312.

Further Information
See our web site, www.biostat.wustl.edu/gems, contact the program manager at (314) 362-1052 or pa@wubios.wustl.edu, or write to:
The GEMS Program
Division of Biostatistics
Campus Box 8067
660 S. Euclid Ave.
St. Louis, MO 63110-1093
Telephone: (314) 362-1052
Fax: (314) 362-2693

Registration Instructions
Students will register with the program manager in Genetic Epidemiology. Before registering, current Washington University students must obtain appropriate consent from their division or department. Students outside the GEMS program enrolling in individual courses must have permission of the coursemaster.

Academic Calendar
The GEMS program begins approximately July 1 each year with preparatory workshops, followed by four intensive summer semester courses. For the fall and spring semesters, the GEMS program follows the calendar of the College of Arts & Sciences. See the current GEMS calendar at www.biostat.wustl.edu/gems/calendars/calendars.shtml.

Courses

M21 503 STATISTICAL COMPUTING WITH SAS®
Department: Division of Biostatistics
Coursemasters: Jingqin Luo, Derek Morgan and colleagues
Credit Hours: 2 units  
Frequency: Every summer

Description: Intensive hands-on summer training in SAS® during six full weekdays. Students will learn how to use the SAS® System for handling, managing and analyzing data. Instruction is provided in the use of the SAS® programming language, procedures, macros and SAS® SQL. The course will include exercises using existing programs written by SAS® experts. Computer lab will be provided. This course meets the prerequisite for M21 505 Biostatistics for Research Workers. The registration/grade option of "Audit" is not available.

Participants are strongly encouraged to participate in the Computing/Unix workshop offered free of charge prior to this course. Contact the GEMS program manager for details and for the required permission of the coursemaster: pa@wubios.wustl.edu or (314) 362-1052.

M21 505 BIOSTATISTICS FOR RESEARCH WORKERS  
Department: Division of Biostatistics  
Coursemasters: Kenneth B. Schechtman, Chengjie Xiong and colleagues  
Credit Hours: 2 units  
Frequency: Every summer

Description: Intensive two-week summer course designed for those researchers who want to expand their knowledge of practical methods in statistics. Oriented toward statistical and epidemiological concepts, applications, practical hints and hands-on approach to data, rather than theory or derivation of formulas. Heavy use is made of SAS® for in-class examples and homework problems. We will cover classical methods (e.g., t-test, chi-square, correlation), multivariate methods (regression, logistic models, ANOVA, survival analysis), study design, probability and maximum likelihood. Some selected topics are then covered in greater detail. Prerequisite: M21 503 Statistical Computing with SAS®, or student must have practical experience with SAS®.

Participants are strongly encouraged to participate in the Computing/Unix and Statistics workshops offered free of charge prior to this course and to take the companion SAS® course, M21 503. For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 505A BIOSTATISTICS FOR RESEARCH WORKERS — COMPUTER LAB  
Department: Division of Biostatistics  
Coursemasters: Kenneth B. Schechtman, Chengjie Xiong and colleagues  
Credit Hours: 1 unit  
Frequency: Every summer

Description: Intensive two-week computer laboratory work in SAS® designed for significant hands-on practice of concepts and methods discussed as part of M21 505. Available only with concurrent registration in M21 505. Required of all Computational Track MS students. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. The registration/grade option of "Audit" is not available.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 515 FUNDAMENTALS OF GENETIC EPIDEMIOLOGY  
Department: Division of Biostatistics  
Coursemasters: Treva Rice and YunJu Sung  
Credit Hours: 2 units  
Frequency: Every summer

Description: This intensive two-week summer course covers causes of phenotypic variation, familial
resemblance and heritability (correlation, path analysis and variance components models), Hardy-Weinberg equilibrium, major genes, ascertainment, study designs and basic concepts in linkage and association analysis. Lab practice with various genetics programs (SEGPATH, PAP, SOLAR, MERLIN, QTDT) requires enrollment in M21 515A.

Participants are strongly encouraged to participate in the Computing/Unix and Statistics workshops offered free of charge prior to this course and to take the companion SAS® course M21 503. For details, to register and to obtain the required permission of the coursemaster, contact the GEMS program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 515A FUNDAMENTALS OF GENETIC EPIDEMIOLOGY — COMPUTER LAB**

*Department: Division of Biostatistics*

*Coursemasters: Treva Rice and Yun Ju Sung*

*Credit Hours: 1 unit*

*Frequency: Every summer*

Description: Intensive two-week summer computer laboratory designed as hands-on practice of fundamental concepts. This Computer Lab is an optional elective for those registered in the Clinical Track of the MS program. Students will gain practical experience with various genetics computer programs such as SEGPATH, PAP, SOLAR, MERLIN and QTDT. Available only with concurrent registration in M21 515. Required of all Computational Track MS candidates. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. The registration/grade option of "Audit" is not available.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 550 INTRODUCTION TO BIOINFORMATICS**

*Department: Division of Biostatistics*

*Coursemasters: C. Charles Gu, Gary Stormo and colleagues*

*Credit Hours: 2 units*

*Frequency: Every summer*

Description: Intensive two-week summer course designed to provide broad exposure to the basic concepts, methodology and application of bioinformatics to solve biomedical problems. Specifically, the students will learn the basics of online genomic databases and database mining tools and acquire understanding of mathematical algorithms in genome sequence analysis (alignment analysis, gene finding/predicting), gene expression microarray (genechip) analysis, and the impact of recent developments such as protein microarrays or whole-genome DNA chips for genome-wide association studies. Prerequisite: M21 505 Biostatistics for Research Workers.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 550A INTRODUCTION TO BIOINFORMATICS — COMPUTER LAB**

*Department: Division of Biostatistics*

*Coursemasters: C. Charles Gu, Gary Stormo and colleagues*

*Credit Hours: 1 unit*

*Frequency: Every summer*

Description: Intensive two-week summer computer laboratory work designed for significant hands-on practice of bioinformatics concepts. Students will learn and practice basics of the R/Bioconductor for statistical analysis and graphics, and apply specialized R packages to solve statistical and bioinformatics problems discussed in lectures of M21 550. They will also learn basics of bioinformatics tools and databases (BLAST/WUBLAST, Prospector, etc.) and practice applying the new knowledge in real medical research of human diseases. Available only with concurrent registration in M21 550.
Required of all Computational Track MS candidates. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. The registration/grade option of "Audit" is not available.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 5483 HUMAN LINKAGE AND ASSOCIATION ANALYSIS**
Department: Department of Genetics  
Coursemasters: John Rice and colleagues  
Credit Hours: 2 units  
Frequency: Every fall

Description: Basic genetic concepts: meiosis, inheritance, Hardy-Weinberg Equilibrium, Linkage, segregation analysis; Linkage analysis: definition, crossing over, map functions, phase, LOD scores, penetrance, phenocopies, liability classes, multipoint analysis, non-parametric analysis (sibpairs and pedigrees), quantitative trait analysis, determination of power for Mendelian and complex trait analysis; Linkage disequilibrium analyses: allelic association (case control designs and family bases studies), whole genome association analysis; quantitative trait analysis: measured genotypes and variance components. Prerequisite: M21 515 Fundamentals of Genetic Epidemiology.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 5485 HUMAN LINKAGE AND ASSOCIATION ANALYSIS — COMPUTER LAB**
Department: Department of Genetics  
Coursemasters: John Rice and colleagues  
Credit Hours: 1 unit  
Frequency: Every fall

Description: Hands-on experience doing parametric linkage analysis with the program LINKAGE, model free linkage analyses with Genehunter and Merlin, power computations with SLINK, quantitative trait analyses with SOLAR, LD computations with Haplovie, and family-based and case-control association analyses with UNPHASED and SAS. The methods and exercises are coordinated with the lectures of M21 5483, and students are expected to understand underlying assumptions and limitations and the basic calculations performed by these computer programs. The registration/grade option of "Audit" is not available. Available only with concurrent registration in M21 5483. Required of all Computational Track MS candidates. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

**M21 615 STUDY DESIGN AND MANAGEMENT**
Department: Division of Biostatistics  
Coursemasters: J. Philip Miller and colleagues  
Credit Hours: 3 units  
Frequency: Every fall

Description: Learn critical study design issues, optimal study designs, cost-benefit analysis, power analysis, study management issues (protocols, data entry, data flow, database management, QC), special considerations for multicenter studies, human studies, principles and issues in designing linkage and association studies, and ethical, legal and social issues concerning human studies. Permission of the coursemaster required: (314) 362-1052.
U88 588 EPIDEMIOLOGY FOR CLINICAL RESEARCH
Department: Clinical Investigation Program
Coursemaster: Mario Schootman
Credit Hours: 3 units
Frequency: Every spring

Description: The purpose of this course is to provide individuals an understanding of the use of epidemiological concepts and methods both in clinical research, in clinical issues and in understanding medical literature concerning these issues. The course includes 1) discussion of theoretical concepts related to the application of epidemiology in clinical research and 2) practical applications of the concepts covered.

For details, to register and to obtain the required permission of the coursemaster, contact the GEMS program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 621 COMPUTATIONAL STATISTICAL GENETICS
Department: Division of Biostatistics
Coursemasters: Michael Province, Aldi Kraja and colleagues
Credit Hours: 3 units
Frequency: Every spring

Description: This course is designed to give the students computational experience with the latest statistical genetics methods and concepts, so that they will be able to computationally implement the method(s)/model(s) developed as part of their thesis. Concentrating on the applications of genomics and SAS computing, it deals with creating efficient new bioinfomatic tools to interface with some of the latest, most important genetic epidemiological analysis software, as well as how to derive, design and implement new statistical genetics models. The course also includes didactic instruction on haplotype estimation and modeling of relationship to phenotype, LD mapping, DNA pooling analysis methods, analysis approaches in pharmacogenomics (with an emphasis on possible genomic role in drug response heterogeneity), and epistasis (GxG) and GxE interactions; data mining methods, including clustering, recursive partitioning, boosting and random forests; and fundamentals of meta-analysis, importance sampling, permutation tests and empirical p-values, as well as the design of monte-carlo simulation experiments. Prerequisite: M21 505 Biostatistics for Research Workers. Permission of the coursemaster required: (314) 362-1052.

M21 599 DIRECTED INDEPENDENT STUDY
Department: Division of Biostatistics
Coursemaster: D. C. Rao
Credit Hours: maximum 6 units
Frequency: Every semester

Description: A faculty member will work with the student in specific areas related to the student’s primary needs. Permission of the coursemaster required. Credit: variable, maximum 6 units.

M21 610 INDEPENDENT RESEARCH
Department: Division of Biostatistics
Course Master: D. C. Rao
Credit Hours: maximum 12 units
Frequency: Every semester

Description: Student selects a faculty mentor in consultation with the instructors to undertake a supervised research project in the mentor’s lab. The goal is to acquire independent research skills and to develop excellent writing and presentation abilities. A report based on the research must be written in the format of an actual scientific publication and presented to a select audience. Permission of the coursemaster required. Credit: maximum 12 units.
Link to Genetic Epidemiology Masters of Science

Faculty

DABEERU C RAO, PHD  Professor of Biostatistics, Director of the Division of Biostatistics
INGRID B BORECKI, PHD  Associate Professor of Biostatistics
LING CHEN, PHD, MS  Research Instructor in Biostatistics
ROBERT CULVERHOUSE, PHD  Assistant Professor of Biostatistics
GINA MARIE D’ANGELO, PHD, BS  Assistant Professor of Biostatistics
MICHAEL R DEBAUN, MD, MS  Professor of Biostatistics
FENG GAO, PHD  Research Assistant Professor of Biostatistics
MAE ETSUKO GORDON, PHD  Professor of Biostatistics
CHI GU, PHD  Associate Professor of Biostatistics
BARBARA B HIXON  Assistant Professor Emerita of Biostatistics
NAN LIN, PHD, MA  Assistant Professor of Biostatistics
JINGQIN LUO, PHD  Instructor in Biostatistics
J. PHILIP MILLER  Professor of Biostatistics
MICHAEL A PROVINCE, PHD  Professor of Biostatistics
JOHN P RICE, PHD  Professor of Biostatistics
TREVA KAY RICE, PHD  Research Associate Professor of Biostatistics
STANLEY A SAWYER, PHD  Professor of Biostatistics
KENNETH B SCHECHTMAN, PHD, MS  Associate Professor of Biostatistics
WILLIAM D SHANNON, PHD  Associate Professor of Biostatistics
GANG SHI, D SC  Research Instructor in Biostatistics
EDWARD LAWRENCE SPITZNAGEL, JR, PHD  Professor of Biostatistics
YUN JU SUNG, PHD  Assistant Professor of Biostatistics
CHENGJIE XIONG, PHD  Research Associate Professor of Biostatistics
YAN YAN, MD, PHD  Research Assistant Professor of Biostatistics

Link to Division of Biostatistics Web Site

http://www.biostat.wustl.edu/

Humanities Program in Medicine

The Humanities Program in Medicine is a University-wide program dedicated to providing students with a broadened exposure to areas other than the biological sciences during their medical education. These areas include clinical ethics, jurisprudence, history, economics, literature and health policy. The program is directed from the dean’s office at the School of Medicine and utilizes faculty at the Danforth Campus, medical school and School of Law, as well as extramural faculty.
The mission of the program is to generate an appreciation of the relationship of human experience, culture, institutions and values to medicine and thereby help to educate professionals who will apply that understanding to their activities as practicing physicians, biomedical researchers and/or medical administrators. This program is an enhancement of an already strong curriculum to prepare medical students to pursue their professional careers more effectively. It takes a major role in the Practice of Medicine course integrated over the first two years of medical school. In addition, several electives are offered during the fourth year.

Courses

**M80 541 TOPICS IN MEDICINE/MEDICAL HUMANITIES**
Instructor: Stephen S. Lefrak, MD, 454-7116
This is a required course given in the spring semester of the first year of medical school. This interdepartmental course is highly coordinated with Medical Humanities. Students select topics of interest for in-depth study initiated by discussions in a small-group, seminar format. Development of topics includes input from a broad range of disciplines, including sociology, philosophy, ethics, history, communications and economics, as well as the biological and medical sciences. It is offered as a menu of mini-courses, each limited to approximately 15 students. Each section consists of six 1.5-hour sessions with a faculty member(s) devoted to an individual subject. Each student must select one course from the menu.

**Link to Web Site**
http://pohim.wustl.edu/

**Other Courses**

**M04 582-01 ALZHEIMER'S DISEASE IN THE CLINIC AND THE LAB**
Instructors: John C. Morris, MD, James E. Galvin, MD, MPH, and faculty affiliated with the Alzheimer's Disease Research Center, Department of Neurology. For information, contact Ms. Barbara Kuntemeier at 286-2882 or kuntemeierb@abraxas.wustl.edu.

Alzheimer's disease (AD) affects more than 5 million Americans today, and this number will increase substantially as our population ages. The cost of caring for AD patients has been estimated at over $148 billion annually. The human toll on patients and family members can be devastating. Patients and families turn to primary care and specialist physicians (e.g., neurologists, psychiatrists, geriatricians) for answers to their plight. The good news for physicians is that research on AD is moving at a rapid pace. Exciting advances in our understanding of AD etiology, early diagnosis and treatment are changing the landscape of dementia care.

Students in this course are offered a dynamic overview of the most exciting areas of AD clinical and basic science research from one of the top Alzheimer's disease research centers in the world. Find out how amyloid plaques and other AD-related abnormalities form in the brain and new discoveries about their possible reversal! The course includes lecture and student presentation components, as well as opportunities to observe patients and families in an active neurology memory disorder clinic, participate in neuropathology evaluations of demented individuals, and interact with investigators from the fields of molecular genetics, cell biology and neuropathology.
Graduate Programs

Graduate Programs

Division of Biology and Biomedical Sciences

The Division of Biology and Biomedical Sciences, organized in 1973, is a consortium of University departments that together provide interdisciplinary training for full-time PhD students. This unique organization was formed because of the realization that research and training in modern biology transcend the limits of departmental structure. The faculty consists of members of seven preclinical departments in the School of Medicine — Anatomy and Neurobiology, Biochemistry and Molecular Biophysics, Cell Biology and Physiology, Genetics, Molecular Microbiology, Pathology and Immunology, and Molecular Biology and Pharmacology; 10 clinical departments — Anesthesiology, Medicine, Neurology and Neurological Surgery, Obstetrics and Gynecology, Ophthalmology and Visual Sciences, Otolaryngology, Pediatrics, Psychiatry, Radiology and Surgery; the Department of Biology; the Departments of Chemistry and Psychology in the School of Arts & Sciences; and the Departments of Computer Science and Biomedical Engineering in the School of Engineering & Applied Science. More than 400 faculty are affiliated with one or more of 12 broad training programs: Biochemistry, Computational Biology, Developmental Biology, Evolution Ecology and Population Biology, Human and Statistical Genetics, Immunology, Molecular Biophysics, Molecular Cell Biology, Molecular Genetics and Genomics, Molecular Microbiology and Microbial Pathogenesis, Neurosciences, and Plant Biology. Faculty in these programs take responsibility for all divisional activities, including recruiting, admissions, advising and research training. In addition, many divisional courses and seminars are offered by the participating faculty.

Currently, more than 650 graduate students are enrolled in the Division, including 175 students pursuing both the PhD and the MD through the Medical Scientist Training Program (see Degree Programs area of Admissions and Educational Programs section.) Requirements for the PhD include a series of courses tailored to a student's background and interests, qualifying examinations, execution of laboratory research and defense of a dissertation generated through original scientific investigation. Although students enter the Division through an affiliation with one of the 12 programs, it is possible for a student to transfer to another program as interests evolve. During the first year, advisers are appointed to assist students in selecting courses and seminars, as well as to help them in choosing three laboratory rotations in which they will spend several months becoming acquainted with a particular area of scientific research. Most students choose a research adviser by the end of the first year.

Applications for admission to the PhD programs of the Division are due December 1 for matriculation the following fall. Admission is based on demonstrated ability, future promise and the number of positions currently available. Applicants should have completed rigorous undergraduate training in biology, chemistry, physics, psychology, computer science, engineering or related fields at a high level of scholastic achievement. It is required that each applicant take the aptitude test of the Graduate Record Examination (GRE). Additional information and application for admission to the PhD programs may be obtained from our web site at dbbs.wustl.edu or by writing to the Director of Admissions, Washington University School of Medicine, Campus Box 8226, 660 S. Euclid Ave., St. Louis, Missouri 63110-1093 (e-mail: admissions@dbbs.wustl.edu). Students who wish to pursue both the PhD and MD degrees must apply to the Medical Scientist Training Program (see Degree Programs area of Admissions and Educational Programs section of this web site.)

Students admitted to the graduate programs are guaranteed full stipend and tuition support contingent upon satisfactory performance. The stipend for the 2009-10 academic year will be $27,500 annually. Tuition remission is provided to all students, and life, disability and health care also is provided by the Medical Center Student Health Service. The Division provides support for its PhD students from several sources, including federally funded training grants provided by the National
Institutes of Health.

Courses

The following graduate courses are offered by the Division of Biology and Biomedical Sciences, and they are available both to PhD and MD students who meet the prerequisites for the appropriate course. Those courses particularly relevant to a given department are cross-listed under the department in this Bulletin. Faculty members in charge of courses and their departmental affiliations are shown at the end of each course description.

L41 (Bio) 501 Human Anatomy and Development
For full description, see Department of Anatomy and Neurobiology’s M05 501A Human Anatomy and Development.

L41 (Bio) 5011 Ethics and Research Science
Instructors: Staff, Division of Biology and Biomedical Sciences, 362-3365
Exploration of ethical issues that research scientists encounter in their professional activities. Topics will include, but are not limited to: student-mentor relationships, allegations of fraud, collaborators’ rights and responsibilities, conflicts of interest, confidentiality and publications. Case study and scenario presentations will provide focus for discussions. Prerequisite: open to graduate students engaged in research. Six 90-minute sessions. Credit: 1 unit.

L41 (Bio) 5014 Biotech Industry Innovators
Instructor: Erwin H. Peters, PhD, 862-4867
The Basics of Bio-Entrepreneurship investigates issues and decisions that inventor/scientists encounter when they are considering the application and commercialization of early stage scientific discoveries. This course is intended for anyone interested in working in the life sciences industry as a chief scientist, entrepreneur, manager, consultant or investor. It focuses on the issues and decisions that researchers typically face when considering how a discovery might be moved from a university laboratory to actual use. Credit: 3 units. Same as B63 MGT 500U.

L41 (Bio) 502 General Physiology
Instructor: Robert S. Wilkinson, PhD, 362-2300
This course applies the fundamental physiological mechanisms of cell biology to the functions of the major organ systems of the body, namely, the cardiovascular, renal, respiratory, gastrointestinal and endocrine systems. The course is intended primarily for first-year medical students. The Physiology and Microscopic Anatomy courses are closely coordinated within the same schedule. Course continues into the spring semester with a different schedule. Prerequisites: Bio 5061 or the equivalent and permission of course director. Credit: 6 units.

L41 (Bio) 5051 Foundations in Immunology
Instructor: Kenneth M. Murphy, MD, PhD, 362-2009
Designed for graduate students and medical students as an in-depth introduction to immunology. Topics: antibody structure and genetics, B and T cell receptor structure and recognition, major histocompatibility complex and antigen processing, cytokine signalling and regulation of the immune response, innate immunity, humoral and cellular effector mechanisms. Discussion group will meet once a week on Thursdays from 10 a.m. to noon. Prerequisite: Introductory Biochemistry and/or Genetics helpful. Permission of instructor. This course is referenced in the Department of Pathology and Immunology. Credit: 4 units.

L41 (Bio) 5066 Biostatistics for Research Workers
For full description, see Division of Biostatistics, M21 505.

L41 (Bio) 5068 Fundamentals of Molecular Cell Biology
Instructor: John A. Cooper, MD, PhD, 362-3964
This is a core course for incoming graduate students in Cell and Molecular Biology programs to learn
about research and experimental strategies used to dissect molecular mechanisms that underlie cell structure and function, including techniques of protein biochemistry. Enrolling students should have backgrounds in cell biology and biochemistry, such as courses comparable to L41 Biol 334 and L41 Biol 4501. The format is two lectures and one small group discussion section per week. Discussion section focuses on original research articles. Same as M15 5068 and M04 5068. Credit 4 units. Same as E62 BME 5068.

L41 (Bio) 5123 Experimental Hematopoiesis Journal Club
Instructor: Daniel C. Link, MD, 362-8771
Journal club in which papers that describe significant advances in the field of experimental hematopoiesis are discussed. Students are expected to present one paper per semester and attend the weekly (1 hour) session. No prerequisites. Credit: 1 unit.

L41 (Bio) 5125 Student-Run Cell Biology Journal Club
Instructor: Robert W. Mercer, PhD, 362-6924
Participants (students) present summaries of current research published in various journals in the field of cell biology. A large component of this journal club includes coaching in oral presentation. Students receive one credit for regular participation and for making one presentation. Credit: 1 unit.

L41 (Bio) 5128 Cell Biology of Extracellular Matrix Journal Club
Instructor: Zsolt Urban, PhD, 286-2973
This journal club covers a broad range of topics related to extracellular matrix, including the fields of biochemistry, molecular biology, cell biology and developmental biology. Speakers give a brief background to introduce the topic and then focus on one or two papers from the current literature. Presentations are given by students, faculty and postdoctorates. Students receive one credit for regular participation and for making one presentation. Credit: 1 unit.

L41 (Bio) 5132 Cytoskeleton Discussion Group
Instructor: David D. Sept, PhD, 935-8837
Weekly presentations of recent literature and research, with each participant presenting once per semester. Opportunity for students to discuss the context, implications and future directions for research. Prerequisite: L41 (Bio) 5068 or undergraduate course in cell biology. This is referenced in the Department of Cell Biology and Physiology. Credit: 1 unit.

L41 (Bio) 5134 Cell Biology of the Molecular Mechanism of Aging
Instructor: Shin-ichiro Imai, MD, PhD, 362-7228
Why do we age? What causes aging? How is our life span determined? This journal club will address such fundamental but challenging questions of aging and longevity. Recent studies on aging and longevity are now unveiling regulatory mechanisms of the complex biological phenomenon. We'll cover the latest progress in this exciting field and stimulate discussions on a variety of topics including aging-related diseases. One hour of paper presentation or research talk and discussion per every two weeks. Prerequisite: Basic knowledge of molecular biology and genetics of model organisms, such as yeast, C. elegans, Drosophila and mouse. Registered students are expected to have at least one presentation for 1 unit credit. Credit: 1 unit.

L41 (Bio) 5135 Ion Channels Journal Club
Instructor: Colin G. Nichols, PhD, 362-6630
Student will attend journal club every week and participate in group discussion of recent paper. Once per semester student will choose a paper and present it to the group. Credit: 1 unit.

L41 (Bio) 5137 Seminar in Imaging Science & Engineering
Instructor: Joseph O’Sullivan, PhD, 935-4173
This seminar course consists of a series of tutorial lectures on Imaging Science and Engineering with emphasis on applications of imaging technology. Students are exposed to a variety of imaging applications that vary depending on the semester, but may include multispectral remote sensing, astronomical imaging, microscopic imaging, ultrasound imaging, and tomographic imaging. Guest lecturers come from several parts of the University. This course is required of all students in the Imaging Science and Engineering program; the only requirement is attendance. This course is graded Pass/Fail. Prerequisite: Admission to Imaging Science and Engineering Program.
L41 (Bio) 5145 Nanomedicine Applications  
Instructor: Samuel Wickline, MD, 454-8635  
Biomedical applications of nanotechnology. This course is intended to survey the field of nanobiomedicine in a lecture format given by invited experts. Topics will range from multimodality imaging to targeted therapeutics to molecular diagnostics. Benefits and toxicities will be presented and the translational aspects of commercialization of nanosystems for medical use will be covered.

L41 (Bio) 5146 Principles and Applications of Biological Imaging  
Instructors: Carolyn J. Anderson, PhD, 362-8427, Joseph P. Culver, PhD, 747-1341  
Principles and Applications of Biological Imaging will introduce the interdisciplinary nature of the imaging sciences and conduct a comprehensive survey of the array of interrelated topics that define biological imaging. The course will cover the basics of the optical, magnetic resonance, CT, SPECT and PET imaging modalities, and microscopy, while focusing on applications of imaging to different disease states, such as oncology, neurology, cardiology and pulmonary diseases. Prerequisite: One year each of Biology, Chemistry, Physics and Calculus. Credit: 3 units.

L41 (Bio) 5147 Contrast Agents for Biological Imaging  
Instructor: Carolyn J. Anderson, PhD, 362-8427  
Contrast Agents in Biological Imaging will build the chemistry foundations for the design and use of contrast agents in imaging applications such as nuclear medicine, magnetic resonance imaging (MRI) and optical imaging. The course will include lectures on the design of radiopharmaceuticals for gamma scintigraphy and positron emission tomography, MRI contrast agents and agents for optical imaging, including bioluminescence and fluorescence microscopy. Prerequisite: one year of general chemistry, one semester of organic chemistry. Credit 3 units. Same as L07 Chem 5147.

L41 (Bio) 5161 Lymphoid Organogenesis  
Instructors: Kenneth Murphy, MD, PhD, 362-2009, Kyunghee Choi, PhD, 362-8716, Thaddeus Stappenbeck, MD, PhD, 362-4214  
This course will cover the topic of the role of cytokines and innate immune cells in orchestrating the development of important lymphoid structures that form the physical scaffold for the unfolding immune response. The roles of TNF family member, molecular addressins and integrins will be covered in the development of lymph node structures. The regulation of cellular trafficking and the basis of chemokine actions will be covered. The development of tertiary lymphoid organs and associated vascular structures will be covered in terms of their ontogeny and their role in infections and in tumor metastasis.

L41 (Bio) 5171 Medical Immunology  
Instructor: Andrey S. Shaw, MD, 362-4614  
An introduction to basic concepts in immunology and immunopathology. Lectures focus on antigen-antibody interactions, immunoglobulin structure and genetics, the cellular basis of the immune response and immune regulation, T cell effector mechanisms, the inflammatory response, complement, the positive and negative roles of hypersensitivity, and immune deficiency. Prerequisite: some background in biochemistry and genetics helpful. Restricted to medical students only except in unusual circumstances, with permission of coursemaster. Offered during the first half of the second medical semester. Three-four lecture hours a week, two 2-hour lab periods, four 1-hour clinical discussion groups. Credit: variable, maximum 3 units.

L41 (Bio) 5191 Pathobiology of Human Disease States  
Instructors: Matthew Walter, MD, 362-9409, Hector D. Molina, MD, 747-0339  
Three human disease states will be discussed in detail. Topics will include background clinical and epidemiological information, followed by a detailed examination of the molecular and cellular events that underlie the disease state. Examples of pertinent topics include Alzheimer's disease, AIDS, leukemia, cystic fibrosis, sickle cell anemia, diabetes, etc. Prerequisite: Must be a Markey Pathway student and have HIPAA training. Credit: 2 units.

L41 (Bio) 5192 Cancer Biology Journal Club  
Instructor: Jason D. Weber, PhD, 747-3896  
This journal club covers current papers in molecular oncology, cancer genetics and contemporary
molecular biology. Presentations will be given by students, post-docs and faculty, then discussed. Credit: 1 unit.

**L41 (Bio) 5217 Special Topics in Microbial Pathogenesis**
Instructor: David A. Leib, PhD, 362-2689
Primarily for graduate and MSTP students, this course involves oral presentation and discussion of current research articles on pathogenic microorganisms (bacteria, viruses, parasites and fungi) and the cellular and molecular basis of host-pathogen interactions. Emphasis will be placed on understanding experimental techniques and design of future experiments in the areas covered. Students are expected to prepare all articles covered and to participate actively in each discussion. Prerequisite: advanced elective course Molecular Microbiology and Pathogenesis or permission of instructors. Class meets twice per week for 1.5 hours each. Credit 2 units.

**L41 (Bio) 5224 Molecular, Cell and Organ Systems**
Instructor: Kendall Blumer, PhD, 362-1668
This course will introduce PhD and MSTP students to fundamental problems in cell and molecular biology at the systems level. The course is divided into five themes: 1) microbial systems; 2) organ development and repair; 3) cardiovascular system and disease; 4) tumor & host systems; and 5) metabolic systems and disease. Topics within each theme highlight current research concepts, questions, approaches and findings at the molecular, cellular and physiological levels. Students will write an original research grant proposal on a topic of their choosing in one of the five themes. Students will critique proposals anonymously in an NIH-like study section. Prerequisites: Fundamentals of Molecular Cell Biology and Nucleic Acids and Protein Synthesis.

**L41 (Bio) 5235 Genetics Journal Club**
Instructor: Stephen L. Johnson, PhD, 362-0362
This journal club will be focused on the Genetics Department seminar series. Students will present one or a few recent papers by the seminar speaker scheduled for that week. Students will provide a brief written evaluation (on a form that will be provided) of their peers’ presentations and the faculty advisors will meet with each student after the presentation to provide feedback. Credit: 1 unit.

**L41 (Bio) 5255 Experimental Skeletal Biology Journal Club**
Instructor: Steven Teitelbaum, MD, 454-8463
The journal club, which meets weekly, focuses on cellular and molecular biology of the skeleton. Emphasis is placed on gaining insights into normal skeletal homeostasis as well as systemic disorders of bone. Papers presented for review are selected from the most competitive journals. Participants are encouraged to “think outside of the box” and discuss novel molecular discoveries that may impact bone cell function. Credit: 1 unit.

**L41 (Bio) 5261 Molecular Mechanisms of Immunological Diseases**
Instructor: Wayne Yokoyama, MD, 362-9075
Advanced immunology students will be exposed to human diseases that appear to have an immunological basis. In addition to lectures and evaluation of recent clinical and relevant basic immunology literature, an emphasis will be placed on direct encounters with patients and pathologic material when feasible, providing students with a human aspect to discussions of immune pathogenesis. Diseases covered will include those with known causes such as AIDS and autoimmune disorders such as systemic lupus erythematosus and rheumatoid arthritis for which a molecular basis is not fully understood. Other areas may include asthma and tissue transplantation where effector mechanisms are better characterized. Since most of these disorders have no cure or are imperfect clinical entities, the class will discuss research areas that may be fruitful and lead to improved diagnosis and treatment. Prerequisite: Foundations of Immunology or permission of instructor.

**L41 (Bio) 5264 Pillars of Immunology**
Instructors: Paul M. Allen, PhD, 362-8758, Kenneth M. Murphy, MD, PhD, 362-2009, Robert D. Schreiber, PhD, 362-8747
Selected topics in immunology will be covered in depth from the primary literature. These topics will cover all of the seminal studies upon which modern immunology is based. One topic will be discussed per week, which will be introduced by the instructor, followed by the students presenting the papers. There will be a mid-term and final exam. Prerequisite: Bio 5051 Foundations in Immunology. Credit 2
L41 (Bio) 5272 Advanced Topics in Immunology
Instructors: Barry P. Sleckman, MD, PhD, 747-8235, Wojciech A. Swat, PhD, 747-8889
This course uses a journal club format to discuss contemporary issues in the cell and molecular biology of the immune system. Discussions focus on the use of current approaches to analyze the cellular and molecular basis of immunity. Topics include mechanisms of antigenic specificity, diversity, cell communication, differentiation, activation and effector activity. Prerequisite: L41 (Bio) 5051 and permission of instructor. Credit: 2 units. This is referenced in the Department of Pathology and Immunology.

L41 (Bio) 5284 Current Research in Chromatin, Epigenetics and Nuclear Organization
Instructors: Craig Pikaard, PhD, 935-7569, Douglas L. Chalker, PhD, 935-8838
This journal club considers papers from the current literature on chromatin structure and function, with an emphasis on regulation of transcription, epigenetics and genomics. Presentations are given by students, postdocs and faculty, with discussion by all. Students enrolled for credit are expected to attend regularly, and to present a minimum of one paper during the term, with consultation and critique from the faculty. Credit 1 unit.

L41 (Bio) 5285 Fundamentals of Mammalian Genetics
Instructor: Michael Lovett, PhD, 747-3265
This course aims to provide both biologists and those with mathematical backgrounds with a basis in mammalian genetics. The course will include the following modules: Nucleic acid biochemistry; Gene and chromosome organization; Intro to human genetics; Mutations and DNA repair; Cancer genetics; Genomic methodologies; Biochemical genetics; Murine genetics; Epigenetics; Neurodegenerative diseases; Mitochondrial disorders; Pharmacogenetics; Intro to human population genetics; Applications of modern human genetics; Intro to web-based informatics tools for molecular genetics. One of the required courses in the Human Statistical Genetics graduate program. Credit: 3 units.

L41 (Bio) 5288 Special Topics in Molecular Genetics: Molecular Basis of Cancer
Instructor: Lee Ratner, MD, PhD, 362-8836
A special topics course with lectures and discussion on the molecular basis of cancer including cell cycle regulation, tumor suppressor genes, tumor invasion, angiogenesis, immune evasion, resistance to apoptosis, signaling, imaging, gene expression, chromosomal translocations and viral oncology.

L41 (Bio) 5312 Macromolecular Interactions
Instructor: Timothy M. Lohman, PhD, 362-4393
This course will cover equilibria, kinetics and mechanisms of macromolecular interactions from a quantitative perspective. Thermodynamics, multiple binding equilibria (binding polynomials), linkage phenomena, cooperativity, allostery, macromolecular assembly, enzyme catalysis and mechanism, steady-state and pre-steady state kinetics, and isotope effects. Modern methods of computer analysis using non-linear least squares fitting and simulation to analyze binding isotherms and full kinetic time courses is emphasized. Prerequisite: Physical Chemistry, Biochemistry, Calculus and Organic Chemistry. Three class hours per week. Credit: 3 units.

L41 (Bio) 5314 Molecular Biophysics Graduate Seminar
Instructor: Kathleen B. Hall, PhD, 362-4196
Student presentation of molecular biophysics topic. Second-year students present from literature; senior students give formal research seminar. Attendance required for all molecular biophysics students. Credit: 1 unit.

L41 (Bio) 5316 Intro to Biomolecular Statistical Thermodynamics
Instructor: Rohit V. Pappu, PhD, 362-2057
This course is designed to provide a conceptual foundation in statistical thermodynamics for upperclassmen graduate students with interests in Biophysics, Biochemistry, Biomedical Engineering, Chemical Engineering, Chemistry and Computational Biology. A reasonable foundation in calculus as well as statistics is necessary. Statistical thermodynamics provides the only framework for studying the folding, self-assembly, and functions (binding) of proteins, nucleic acids, lipids and surfactants. These topics will be covered via a thorough discussion of: Intermolecular forces; Ensemble theories in
Statistical physics; Theories of liquids, solutions, solubility, mixtures, and electrolytes; Thermodynamics of flexible polymer solutions; Macromolecular phase transitions; Applications to problems in protein folding and aggregation; And the use of statistical thermodynamics for interpreting ensemble and single molecule experiments. This course also serves as useful complement to Biol 5312 (Macromolecular Interactions). Credit 3 units. Same as home course E72 BME 531.

L41 (Bio) 5318 DNA Repair
Instructor: Peter Burgers, PhD, 362-3872
This course is an advanced graduate course that explores all aspects of DNA damage and the cellular responses to DNA damage. It is designed for graduate students who have a working knowledge of Chemistry, Molecular Biology and Cellular Biology, and for interested postdocs and researchers. Specific topics that will be covered are: The chemical basis of DNA damage, specific DNA repair mechanisms, cell cycle responses to damage, translesion DNA replication and mutagenesis, and human diseases related to defects in DNA damage response. The course consists of a lecture module, open to all, and a discussion module for registered students. In addition, several invited speakers in the field of DNA repair will give seminars and meet with registered students for discussion. Students will present and discuss research papers. Grades will be given based on student presentation and participation. Prerequisite: Permission of instructor.

L41 (Bio) 5319 Molecular Foundations of Medicine
Instructor: Linda J. Pike, PhD, 362-9502
This course is designed primarily for medical students and will cover fundamental aspects of biochemistry and cell biology. The course begins with a treatment of protein structure and the function of proteins in the cytoskeleton and cell motility. The principles of enzyme kinetics and regulation are then discussed and basic pathways for the synthesis and metabolism of carbohydrates and lipids are introduced. This leads into a discussion of membrane structure and the function of cellular organelles in biological processes including energy production, protein degradation and protein trafficking. Prerequisite: Coursemaster approval is required. This course is cross-listed in the Department of Biochemistry and Molecular Biophysics as M15 502 (Molecular Foundations of Medicine). Credit: 3 units.

L41 (Bio) 5326 Molecular Medicine
Instructor: Enrico Di Cera, MD, 362-4185
This course offers a broad overview of molecular mechanisms of disease. Areas of focus include blood coagulation, inflammation, immune response, diabetes and Alzheimer's disease. Basic aspects of ligand binding, enzyme kinetics, and molecular recognition are reviewed to introduce essential knowledge for the analysis of protein-protein interactions relevant to biological systems. State-of-the-art lectures on specific examples of molecular mechanisms of disease are delivered by world experts in each field. The course is targeted to students interested in connecting quantitative biochemistry to medically relevant systems. Prerequisite: General Biochemistry. Credit 2 units.

L41 (Bio) 5329 Mathematical Methods for Biophysics and Biochemistry
Instructor: Nathan A. Baker, PhD, 362-2040
The purpose of this course is to introduce the basic concepts of mathematical physics to students in the context of problems they are likely to encounter in their coursework and research. Specifically, the course will introduce analytical and numerical mathematical methods relevant to the fields of biophysics and biochemistry. By the end of the course, the students should have a good grasp of these basic techniques, their application to biological problems, and related software and computational resources. Credit 3 units. Same as E62 BME 5329.

L41 (Bio) 5352 Developmental Biology
Instructor: Kerry Kornfeld, MD, PhD, 747-1480
Analysis of a selected set of key processes in development, such as pattern formation, cell-cell signaling and morphogenesis. The focus is on molecular approaches applied to important model systems, but framed in classical concepts. Prerequisite: L41 (Bio) 5068 Fundamentals of Molecular Cell Biology and L41 (Bio) 548 Nucleic Acids and Protein Biosynthesis. Credit: 3 units.

L41 (Bio) 5357 Chemistry and Physics of Biomolecules
Instructor: Jay Ponder, PhD, 362-4195
This course covers three major types of biomolecular structure: proteins, nucleic acids and membranes. Basic structural chemistry is presented, as well as biophysical techniques used to probe each type of structure. Selected topics include: protein folding, protein design, X-ray crystallography, NMR spectroscopy, nucleic acid bending and supercoiling, nucleic acid:protein interactions, RNA folding, membrane organization, fluidity, permeability and transport, and membrane channels. Weekly discussion section will cover problem sets and present current research papers. One of the required courses for the Biochemistry and for the Molecular Biophysics graduate programs. Prerequisites: prior coursework in Biochemistry and in Physical Chemistry is recommended, but not required.

**L41 (Bio) 5392 Molecular Microbiology and Pathogenesis**
Instructors: Michael Caparon, PhD, 362-1485, Joseph Vogel, PhD, 747-1029
First half focuses on prokaryotic physiology and genetics, with special attention to recent discoveries in gene regulation and protein processing. Second half devoted to microorganisms that cause disease, with emphasis on the molecular interactions between pathogen and host. Prerequisite: first-semester core curriculum for programs in Cell and Molecular Biology. Credit: 3 units. This is referenced in the Department of Molecular Microbiology.

**L41 (Bio) 5394 Metagenomics of Microbial Ecosystems**
Instructor: Jeremy Buhler, PhD, 935-6180
This course introduces students to key questions, approaches, and computational tools used to study the properties of microbial communities in their various habitats. Complex microbial ecosystems are found in a variety of terrestrial and oceanic environments as well as in the various body habitats of metazoan species including humans. These ecosystems, which are composed largely of microbial species that have never been cultured in a lab, are laboratories for the study of genome evolution (eco-genomics), ecological principles and myriad biotransformations. In particular, many animals, including ourselves, have evolved to live with and benefit from the commensal microbial communities in their GI tracts. The study of microbial ecosystems gives rise to the field of metagenomics — the acquisition, identification and functional and evolutionary analysis of the combined genomic sequences of a diverse population of organisms. Metagenomic analyses must contend with many challenges, including a high volume of genomic sequence data, fragmentary and incomplete sequences, and genomic heterogeneity of sampled organisms. To tackle these challenges, we must bring to bear computational tools that apply models of sequence evolution to interpret metagenomic sequence data. These interpretations form a basis for further investigation and hypothesis testing. Course content will include an overview of questions and major results in metagenomic research, along with an introduction to the experimental protocols and computational tools, models and algorithms of metagenomic analysis. The class will have two 1.5-hour meetings per week for 14 weeks. Enrollment is limited to 25 students. Prerequisites: Graduate standing or permission of instructor. Some basic knowledge of biology is recommended. Students should know or be prepared to learn basic Python scripting to carry out some course assignments. Credit: 3 units.

**L41 (Bio) 5412 Tropical and Molecular Parasitology**
Instructor: L. David Sibley, PhD, 362-8873
Graduate-level seminar course focusing on current scientific literature in molecular parasitology. The journal club will meet biweekly during the Fall and Spring semesters. Students will attend both semesters in order to receive one credit. The seminar series will run jointly with a research conference in Tropical and Molecular Parasitology. Outside speakers will be invited for the seminar series to emphasize important developments in tropical medicine and molecular parasitology. In advance of the invited speakers, topics will focus on their previous research publications. Prerequisite: L41 (Bio) 5392 Molecular Microbiology & Pathogenesis. Credit 0.5 unit.

**L41 (Bio) 5416 Molecular Microbiology and Pathogenesis Journal Club**
Instructor: Keril Blight, PhD, 286-0065
Presentations by students and postdoctoral fellows on a broad range of topics of current interest in microbiology and pathogenesis including areas of research in bacteriology, mycology, parasitology, virology and immunology. The course will emphasize techniques used to give good presentations. Speakers usually provide a brief background to introduce the topic and then focus on one or two papers from the current literature. Credit requires attendance at all sessions and one presentation. Credit: 1 unit.
L41 (Bio) 5417 Hematology/Oncology Journal Club
Instructors: Stuart A. Kornfeld, MD, 362-8803; Philip W. Majerus, MD, 362-8801
This journal club covers a broad range of topics of current interest, including the fields of biochemistry, molecular biology, cell biology, developmental biology and immunology. Speakers usually give a brief background to introduce the topic and then focus on one or two papers from the current literature. Presentations are given by graduate students, postdoctorates and faculty. Each attendee presents two to three times per year. Participants are expected to attend all the sessions. This journal club was formed in 1966. Credit: 1 unit.

L41 (Bio) 5424 Cellular and Molecular Mechanisms of Infectious Disease
Instructors: David Wang, PhD, 286-1123, Jeffrey S. McKinney, PhD, 286-2912
This course provides an opportunity for students, postdoctoral fellows, infectious disease fellows and faculty to explore issues at the interface between patient care, public health and basic research in the area of microbial pathogenesis. Required for participants in the Infectious Diseases Scholars program at Washington University. Prerequisite: Bio 5392 or permission of instructor. Credit: 1 unit.

L41 (Bio) 5445 DNA Metabolism Journal Club
Instructor: Peter Burgers, PhD, 362-3872
Presentation of current research papers in DNA replication, DNA repair and DNA recombination, with an emphasis on basic biochemical and biophysical approaches.

L41 (Bio) 5466 Current Topics in Biochemistry
Instructor: Kathleen B. Hall, PhD, 362-4196
Student presentations of thesis research. Formal presentations require PowerPoint. Required of all Biochemistry graduate students; first- and second-year students get credit. Credit: 1 unit.

L41 (Bio) 5467 Light Microscopy and Optical Imaging
Instructor: Dennis L. Barbour, MD, PhD, 935-7548
Recent advances in optics, microscopy and probe design have led to a dramatic expansion of options for measuring structural and functional features of biological tissue with light. Course topics include the basic physics underlying vital light microscopy, use of voltage-sensitive and calcium-sensitive fluorescent probes, multiphoton and confocal imaging and image acquisition/processing. Special emphasis is placed on imaging neural tissue and live preparations. Students will read current literature and devise a research project based upon an imaging technology. Prerequisite: Math 233, Phys 118A, Bio 3050 or permission of instructor. Credit: 3 units. Same as home course E72 BME 504.

L41 (Bio) 5468 Cardiovascular Biophysics Journal Club
Instructor: Sándor J. Kovács, PhD, MD, 454-7660
This journal club is intended for beginning graduate students, advanced undergraduates and MSTP students with a background in the quantitative sciences (engineering, physics, math, chemistry, etc.). The subjects covered are inherently multidisciplinary. We will review landmark and recent publications in quantitative cardiovascular physiology, mathematical modeling of physiologic systems and related topics such as chaos theory and nonlinear dynamics of biological systems. Familiarity with calculus, differential equations and basic engineering/thermodynamic principles is assumed. Knowledge of anatomy/physiology is optional. Same as E72 BME 5911. Credit: 1 unit.

L41 (Bio) 5472 Cardiovascular MRI — From Physics to Clinical Application
Instructor: Samuel A. Wickline, MD, 454-5539
This graduate course (seniors welcome) will cover the basic physics involved in creating an image by magnetic resonance technology. The use of this technology, specifically as it applies to the unique challenges of cardiovascular applications, will be examined. This will include topics such as motion compensation techniques, real-time imaging, exogenous contrast enhancement, and quantitative flow measurements, for example. As much as one-third of the class will involve actual case studies and the discussion of clinical use for cardiovascular MRI. Students will demonstrate competence in the subject through a combination of homework, a final examination and a small semester project. Prerequisite: Calculus, introductory human physiology/anatomy/biology course. Same as E62 BME 502. Credit: 3 units.

L41 (Bio) 5474 Algorithms for Computational Biology
Instructor: Michael R. Brent, PhD, 935-6621
This course will focus on how to sequence and analyze a genome, emphasizing computational and algorithmic issues. After taking this course, you should be able to parachute into a genome informatics group, understand what’s going on and do something useful on your first day. Topics covered include: the essential biology, the essential probability theory, base calling and quality clipping, genome assembly (including aspects of sequence alignment), repeat masking, predicting protein-coding genes (including Hidden Markov Models and comparative genomics approaches), predicting gene function by comparing to proteins of known function, basic RNA gene finding, and advanced topics in sequence alignment. This course will include a combination of paper-and-pencil homework assignments and programming labs. Prerequisite: CS 241 or CS 514N or L41 (Bio) 5495. Same as E81 CSE 587A. Credit: 3 units.

L41 (Bio) 5476 Modeling Biomolecular Systems I
Instructor: Jay W. Ponder, PhD, 362-4195
This course covers the applications of computer modeling and simulation to problems involving biological macromolecules. Lectures will discuss the theory and algorithms underlying a variety of simulation techniques. Laboratory exercises and a student project will provide experience with software currently used in the field. Topics examined in detail include: computational tools, molecular visualization, simulation methodology, force field methods, optimization, experimental design, Q SAR, scoring and screening of ligands, docking, structure databases, and refinement and prediction of structures. Prerequisite: basic background in biochemistry and physical chemistry; ability to write simple computer programs in any language. Credit: 3 units. Same as E62 BME 530.

L41 (Bio) 5477 Modeling Biomolecular Systems II
Instructor: David Sept, PhD, 935-8837
This course is a continuation of BME 530/Bio 5476 covering additional topics in computer modeling and simulation. The lectures will cover the theory and underlying algorithms, while the laboratories and term project will provide the students with hands-on experience in using various software packages. Topics will include: statistical mechanics concepts in molecular simulations; algorithms for molecular dynamics, stochastic dynamics and Monte Carlo simulations; free energy calculations; electrostatics and continuum solvation methods; hybrid QM/MM calculations; multi-scale modeling. Prerequisite: A background in biochemistry and physical chemistry. Credit: 3 units. Same as home course E62 BME 540.

L41 (Bio) 548 Nucleic Acids and Protein Biosynthesis
Instructor: Peter Burgers, PhD, 362-3872
Fundamental aspects of structure, biosynthesis and function of nucleic acids and the biosynthesis of proteins. Emphasis on mechanisms involved in the biosynthetic processes and the regulation thereof. Prerequisite: L41 (Bio) 337, 449, or equivalent or permission of instructor. This is referenced in the Department of Biochemistry and Molecular Biophysics. Credit: 3 units.

L41 (Bio) 5483 Human Linkage and Association Analysis
Instructor: John P. Rice, PhD, 286-2572
Basic Genetic concepts: Meiosis, inheritance, Hardy Weinberg Equilibrium, Linkage, segregation analysis, linkage analysis: definition, crossing over, map functions, phase, LOD scores, penetrance, phenocopies, liability classes, multi-point analysis, non-parametric analysis (sibpairs and pedigrees), quantitative trait analysis, determination of power for Mendelian and complex trait analysis, linka lot disequilibrium analyses, allelic association (case control designs and family bases studies) whole genome association analysis, quantitative trait analysis, measured genotypes and variance components. Prerequisites: M21 515 Fundamentals of Genetic Epidemiology. Credit: 2 units. Same as M21 GEMS 5483.

L41 (Bio) 5484 Genetics and Development of C. Elegans Journal Club
Instructor: Tim Schedl, PhD, 362-6162
Students will present a research paper (or present their current thesis research) and the appropriate background material. Credit: 1 unit.

L41 (Bio) 5485 Human Linkage and Association Analysis Computer Lab
Instructor: John P. Rice, PhD, 286-2572
Hands-on experience doing parametric linkage analysis with the program LINKAGE, model free linkage analyses with Genehunter and Merlin, power computations with SLINK, quantitative trait analyses with SOLAR, LD computations with Haploview, and family-based and case-control association analyses with UNPHASED and SAS. The methods and exercises are coordinated with the lectures of M21 5483, and students are expected to understand underlying assumptions and limitations and the basic calculations performed by these computer programs. The registration/grade option of "Audit" is not available. Available only with concurrent registration in M21 5483. Required of all GEMS Computational Track MS candidates. GEMS Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. Credit: 1 unit. Same as M21 GEMS 5485.

L41 (Bio) 5488 Genomics
Instructors: Barak A. Cohen, PhD, 362-3674, Robi D. Mitra, PhD, 362-2751
This course is designed for beginning students who want to become familiar with the basic concepts and applications of genomics. The course covers a wide range of topics including how genomes are mapped and sequenced as well as the latest computational and experimental techniques for predicting genes, splice sites and promoter elements. High throughput techniques for ascribing function to DNA, RNA and protein sequences including microarrays, mass spectrometry, interspecies genome comparisons and genome-wide knockout collections will also be discussed. Finally, the use of genomic techniques and resources for studies of human disease will be discussed. A heavy emphasis will be put on students acquiring the basic skills needed to navigate databases that archive sequence data, expression data and other types of genome-wide data. Through problem sets the students will learn to manipulate and analyze the large data sets that accompany genomic analyses by writing simple computer scripts. While students will become sophisticated users of computational tools and databases, programming and the theory behind it are covered elsewhere, in Michael Brent's class, Bio 5495 Computational Molecular Biology. Because of limited space in our teaching lab, enrollment for lab credit will be limited to 24 students. Priority will be given to students in the DBBS program. Others interested in the course may enroll for the lectures only. If you have previous experience in computer programming, we ask that you do not enroll for the laboratory credit. Prerequisites: Molecular Cell Biology (Bio 5068), Nucleic Acids (Bio 548) or by permission of instructor. Lecture 3 units of credit; lab 1 additional unit, space limited. Credit: 3 or 4 units.

L41 (Bio) 5489 Human Genetics Journal Club
Instructor: Michael Lovett, PhD, 747-3265
In this biweekly journal club on Human Genetics we will present and discuss current cutting-edge papers in human and mammalian molecular genetics. Students learn presentation skills, how to critique a paper and how to interact with a very active and critical audience. Prerequisites: Any person interested in the current state of the art in Human Genetics may attend this course. It is a requirement that all students wishing to earn credit in this course must present a 1.5 hour journal club talk and must regularly attend and participate in the journal club throughout the year.

L41 (Bio) 5491 Advanced Genetics
Instructor: Tim Schedl, PhD, 362-6162
Fundamental aspects of organismal genetics with emphasis on experimental studies that have contributed to the molecular analysis of complex biological problems. Examples drawn from bacteria, yeast, nematodes, fruit flies and mammalian systems. Prerequisite: graduate standing or permission of instructor. This is cross-listed in the Department of Genetics. Credit: 3 units.

L41 (Bio) 5495 Computational Molecular Biology
Instructor: Michael R. Brent, PhD, 935-6621
This course focuses on genome sequence analysis, emphasizing computational and algorithmic issues. Topics covered include: the essential biology, the essential probability theory, base calling and quality clipping, predicting protein-coding genes (including Hidden Markov Models and comparative genomics approaches), sequence aligning, RNA folding, protein domain analysis, and an introduction to population biology. This includes both paper and pencil homework assignments and programming labs in "C." Prerequisite: CSE 241 or CSE 502N. Credit: 3 units. Same as E62 BME 537.

L41 (Bio) 5496 Seminar in Computational Molecular Biology
Instructor: Jeremy Buhler, PhD, 935-6180, Gary D. Stormo, PhD, 747-5534
Students present current research papers and the appropriate background material in the field of
L41 (Bio) 550 Medical Genetics
Instructor: Alison J. Whelan, MD, 362-8050
Topics covered include population and quantitative genetics, clinical cytogenetics, biochemical genetics and metabolic defects. Lectures, clinics and small group discussions. Prerequisite: an introductory genetics course and permission of the instructor. This is cross-listed in the Department of Genetics as M30 511 Medical Genetics. Credit: 2 units.

L41 (Bio) 5501 Biology and Pathology of the Visual System
Instructor: Peter Lukasiewicz, PhD, 362-4284
The purpose of the course is to provide a fascinating view of vertebrate eye development, anatomy, physiology and pathology. Topics to be covered include the molecules that control eye formation, ocular stem cells, the physiology of transparency, hereditary ocular diseases, phototransduction, the neurobiology of the retina and central visual pathways, age-related eye diseases, and many others. The course is open to all second-year graduate students and above. Ophthalmology residents and postdocs with an interest in vision are strongly encouraged to attend.

L41 (Bio) 554 Neural Sciences
For full description, see the Department of Anatomy and Neurobiology, M35 554 Neural Sciences.

L41 (Bio) 5565 Oral Presentation of Scientific Data
Instructor: Staff, Anatomy and Neurobiology, 362-3363
Practical course on how to prepare and present scientific data to an audience. Prerequisite: first-year neuroscience program courses. Meets once a week for 90 minutes. Credit: 1 unit.

L41 (Bio) 5571 Cellular Neurobiology
Instructor: Jim Huettner, PhD, 362-6624
This course will present a fully integrated overview of nerve cell structure, function and development at the molecular and cellular level. Broad topics to be covered include gene structure and regulation in the nervous system, quantitative analysis of voltage- and chemically-gated ion channels, presynaptic and postsynaptic mechanisms of chemical neurotransmission, sensory transduction, neurogenesis and migration, axon guidance and synapse formation. Ten lectures plus four hours of discussion per week for six weeks. There will be two exams and a written research proposal, as well as homework problems and summaries of discussion papers. Prerequisite: graduate standing or permission of the instructor. Credit: 6 units.

L41 (Bio) 5577 Synapses Journal Club
Instructor: Steven Mennerick, PhD, 747-2988
The synapse is fundamental to our understanding of information transfer in the nervous system. Malleability of the synapse is considered key to our understanding of organisms' ability to learn and remember and key to understanding nervous system dysfunction in many disease states. This is an advanced seminar in the development, structure and function of the synapse in health and disease. It is a natural extension of topics covered in Bio 5571 and may be primarily of interest to students in the Neurosciences Program. It may also be of interest to students in MCB, Development, Biochemistry, Computational Biology and Molecular Biophysics. Generally a topic for the semester helps focus the group; past topics have included Synapses and Disease, Neurotransmitter Transporters, Glutamate Receptors, Dendrites, GABA receptors. Participants (students, postdocs and faculty) alternate responsibility for choosing a paper from the primary literature to present for the Club. Critical discussion of the paper ensues. Active participation offers the opportunity for students to hone their critical thinking and presentation skills. Students enrolling for credit will be expected to attend each week and will be expected to lead discussion once per semester. Prerequisites: Graduate standing in DBBS; Bio 5571 preferred.

L41 (Bio) 5619 Advanced Cognitive, Computational and Systems Neuroscience
Instructor: Todd Braver, PhD, 935-5143
This course will develop critical thinking and analysis skills with regard to topics in Cognitive, Computational and Systems Neuroscience. Course format will be a series of modules composed of intensive, faculty-led case studies on interdisciplinary topics at the intersection of psychology,
computation and neuroscience. The goal will be to highlight the benefits of integrative, interdisciplinary approaches, by delving into a small set of topics from a variety of perspectives, rather than providing a survey-level introduction to a broader set of topic areas. Modules will involve a combination of lectures and student-led discussion groups, with students further expected to complete a multidisciplinary integrative final review paper. Case-study topics will vary somewhat from year to year, but are likely to include some of the following: temporal coding as a mechanism for information processing, coordinate transformations in sensory-motor integration, mechanisms of cognitive control, motor control strategies including application to neural prosthetics, and memory systems in health and disease. Credit: 3 units. Same as L33 Psych 519.

**L41 (Bio) 5622 Cognitive, Computational, and Systems Neuroscience Project Building**  
Instructor: Deanne M. Barch, PhD, 935-8729  
The goal of this course is to help students in the CCSN Pathway develop the critical thinking skills necessary to develop and implement high-quality, interdisciplinary research projects. Throughout the course of the semester, students will develop a research plan in their chosen area of interest. The plan will be developed in consultation with at least two faculty members (from at least two different subdisciplines within the pathway) as well as the other students and faculty participating in the course. The culmination of this course will be for each student to produce an NIH-style grant proposal on the research project of their choosing. For most students, this will serve either as their thesis proposal or a solid precursor to the thesis proposal. The course will be designed to help facilitate the development of such a research plan through didactic work, class presentations, class discussion, and constructive feedback on written work. The course will begin with a review of written examples of outstanding research proposals, primarily in the form of grant submissions similar to those that the students are expected to develop (i.e., NRSA style proposals, R03 proposals). Review of these proposals will serve as a stimulus to promote discussion about the critical elements of good research proposals and designs in different areas. Each student will be expected to give three presentations throughout the semester that will provide opportunities to receive constructive feedback on the development and implementation of research aims. The first presentation (toward the beginning of the semester) will involve presentation of the student's general topic of interest and preliminary formulation of research questions. Feedback will emphasize ways to focus and develop the research hypotheses into well-formulated questions and experiments. The second presentation will involve a more detailed presentation of specific research questions (along the lines of NIH-style Specific Aims) and an initial outline of research methods. The final presentation will involve a fuller presentation of research questions and proposed methods. Feedback, didactic work and group discussion throughout the semester will include guidance on critical components of the development of a research plan, including how to perform literature searches, formulate testable hypotheses, write critical literature summaries and design experiments and analyses. The course will meet once a week, with faculty members from different tracks within the Pathway present at each meeting. This will allow students to receive feedback from several perspectives. Prerequisite: Member of CCSN Pathway, permission of instructor. Credit: 3 units. Same as L33 Psych 519. 

**L41 (Bio) 5651 Neural Systems**  
Instructor: David Dickman, PhD, 747-7221  
The course will consist of lectures and discussions of the sensory, motor and integrative systems of the brain and spinal cord, together with a weekly lab. The lectures will present aspects of most neural systems and will be given by faculty members who have specific expertise on each topic. The discussions will include faculty-led group discussions and papers presented and discussed by students. The labs will include human brain dissections, examination of histological slides, physiological recordings, behavioral methods, computational modeling and functional neural imaging. Credit: 6 units.

**L41 (Bio) 5657 Biological Neural Computation**  
Instructor: Kurt A. Thoroughman, PhD, 935-9094  
This course will consider the computations performed by biological nervous systems. Readings and discussions will investigate the biophysical and physiological bases of computations made by ion channels, synapses, dendrites, neurons and neuronal networks. Computer laboratories and a semester-long independent project will determine how simple mathematical models succeed or fail to represent observed biological function and organismal behavior. Readings will include classic and current primary research papers. (Note: Graduate students in psychology or neuroscience who are in
the Cognitive, Computational and Systems Neuroscience curriculum pathway may register for one credit. These students will attend all course meetings and complete the homework assignments, but will not participate in the semester-long independent project. Registration may be Pass/Fail. All BME students should register for three credits). Prerequisites for 3-credit option: calculus, some experience with differential equations and cell or systems biology. Junior and senior undergraduates need permission of instructor. Prerequisites for 1-credit option: permission of instructor, calculus II and introductory biology. Credit: 3 units. Same as E62 BME 572.

L41 (Bio) 5663 Neurobiology of Disease
Instructors: Bradley Schlaggar, MD, PhD, 362-8871, Mark Goldberg, MD, 362-9460
This is an advanced graduate seminar on the neuroscience of nervous system disorders. This course is intended to acquaint basic scientists with a spectrum of clinical diseases, and to consider how advanced neuroscience approaches may be applied to promoting recovery in the brain. The class will meet for 2-1/2 hours each week. Each session will be led by a faculty guest with expertise in a specific neurological or psychiatric disease. In the first hour, the speaker will discuss clinical manifestations and pathophysiology. Where possible, the clinical presentation will be supplemented with a patient demonstration or videotape. The second hour will follow a journal club format. Two or three students will review current papers assigned by the speaker or course director. This course is offered in alternate years.

L41 (Bio) 5691 Mathematics and Statistics of Experimental Neuroscience
Instructor: Kurt A. Thoroughman, PhD, 935-9094
This course will be open to the WU brain science community; first- and second-year graduate students are especially welcome. Each session will include a math or stat primer; a discussion led by a guest scientist who will detail how the daily technique is used in experimental work; and a laboratory where students will work together to implement the technique on real data. Topics will include hypothesis testing and experimental design; resampling and bootstrapping; multivariate analysis; and applications appropriate for cellular and molecular, systems, imaging, and behavioral neuroscience. Prerequisites: Some calculus; some laboratory experience in neuroscience. Credit: 2 units.

L41 (Bio) 572 Seminar in Plant Biology
Instructor: Elizabeth Haswell, PhD, 935-9223
A weekly discussion of modern research in plant biology including topics in molecular genetics, development, biochemistry, physiology, population dynamics and plant-pathogen interactions. Research seminars by local and outside speakers will be intermixed with journal club presentations in alternating weeks. Credit will be contingent on one journal club presentation per semester, regular attendance and active participation in group discussions. Credit: 1 unit.

L41 (Bio) 580 Seminar in Population Biology
Instructor: Allan Larson, PhD, 935- 4656, Garland Allen, PhD, 935-6808
This weekly seminar, covering different topics each semester, should be taken by graduate students in the program. Prerequisite: graduate standing or permission of the instructors. Credit: variable; 2 or 3 units.

L41 (Bio) 582 Ethnobiology Journal Club
Instructor: Jan Salick, PhD, 577-5165
Students in this journal club will meet weekly with ethnobotanists, ethnozoologists and ecologists from various St. Louis institutions (including Washington University, UM-St. Louis, Saint Louis University and the Missouri Botanical Garden) to discuss recent publications and ongoing research. Enrolled students will attend the journal club every week, and once per semester, will choose a paper and lead the discussion. Credit: 1 unit. Same as home course L48 Anthro 560.

L41 (Bio) 585 Seminar in Floristic Taxonomy
Instructor: P. Mick Richardson, PhD, 577-5176
A survey of angiosperm families, their morphology, cytology, anatomy, palynology, chemistry and evolution. Prerequisite: L41 (Bio) 4132 or equivalent. Credit: 1 unit.

L41 (Bio) 590 Research
Instructors: Staff, Division of Biology and Biomedical Sciences, 362-3365
Credit to be arranged. Research is listed as 900-level course in each department.

**L41 (Bio) 5911 Seminar in Biology and Biomedical Sciences**
Instructors: Staff, Division of Biology and Biomedical Sciences, 362-3365
These seminars cover the recent literature in various areas not included in other courses, or in more depth than other courses. Credit to be arranged.

**L41 (Bio) 5915 Teaching Practice in Biology and Biomedical Sciences**
Instructor: John H. Russell, PhD, 362-2558
Students serve as teaching assistants for undergraduate and graduate-level courses. Faculty-supervised activities include lecture preparation and presentation, leading discussion and problem-solving sessions and laboratory instruction. Prerequisite: restricted to graduate students in the Division of Biology and Biomedical Sciences. Credit: 1 unit.

**L41 (Bio) 5922 Entering Mentoring**
Instructors: David Harris, MD, PhD, 362-4690, David Beebe, PhD, 362-1621
This course is a series of facilitated discussions aimed at developing and improving mentoring skills for those involved in supervising undergraduate research experiences. It is designed for post-docs and graduate students who are or will be "bench mentors" for undergraduates doing Bio 500 and/or Summer Research. Participants will receive "Entering Mentoring" materials, including articles and worksheets to facilitate mentoring interactions with their mentee, plus several resource books relevant to mentoring. They will develop a mentoring philosophy statement, work on specific assignments designed to improve their relationship with their mentee and share their present and past experiences as mentors and mentees. Bench mentors will be eligible for a travel award to help defray expenses for attending a meeting with their mentee, if that student wins one of the HHMI SURF travel awards (4-5 awarded annually) or is otherwise being supported to present at a scientific meeting. Grad students and postdocs do NOT need to be mentoring a student at the time of the course; it is open to all with an interest in mentoring now or in the future. Note: interested postdocs can register through University College. Credit: 1 unit. Same as U29 Bio 492.

**L41 (Bio) 5999 Independent Work**
Instructors: Staff, Division of Biology and Biomedical Sciences, 362-3365
This course is designed for individual students wishing to explore in-depth specialized areas of literature or technology with one or more faculty members. Credit will vary with the amount of work and discussion, but cannot be more than 3 units. Credit: Variable, maximum 3 units.

*Note — The number preceding the course title indicates that the course carries credit in the Graduate School of Arts & Sciences.*

**Link to Web Site**
http://dbbs.wustl.edu

**Biomedical Engineering**
Biomedical engineering is the integration of engineering methods with biological science and medical practice. It strives to provide increased quantitative and analytical understanding of complex living organisms. Through this increased understanding, biomedical engineers can contribute to advances in biomedical research and to improvements in health care.

In many areas of medicine and biology, advances are being driven by technology. For example, modern computer technology is fundamental to the new fields of computational molecular biology, genome analysis and computational neuroanatomy. Systems approaches are increasingly important to advancing knowledge of many biological processes. Other facets of biomedical engineering will lead to improved diagnostic and therapeutic agents, improved prostheses, and new approaches to tissue and organ repair including the use of bio-resorbable materials, reconstituted tissue and regenerated cells. With the increased understanding that comes from scientific research and the tools of biomedical engineering, a bountiful era of increased understanding of disease, health care informatics, new
Biomedical engineering has been a focus of activity for almost 40 years in both the School of Engineering & Applied Science and the School of Medicine at Washington University in St. Louis. Contributions of the University include advances in imaging technologies for biology and medicine; positron emission tomography, confocal optical microscopy, advanced ultrasound imaging, magnetic resonance imaging and X-ray tomography. The University has played a leading role in applying high-speed communications systems to transmit scientific and medical information. Furthermore, the University is recognized worldwide for its work in mapping and sequencing the human genome, in computational molecular biology, in mapping of the human brain, and in cardiovascular engineering.

Biomedical engineering is an extremely diverse field encompassing the activities of faculty at Washington University in departments at the medical school as well as the engineering school. Recognizing the strength and diversity of existing programs, the Department of Biomedical Engineering was established on July 1, 1997. Together with the newly established Institute of Biomedical and Medical Engineering, involving faculty from the School of Engineering & Applied Science, the School of Medicine and also from the College of Arts & Sciences, this network facilitates and promotes the graduate educational training of biomedical engineers at Washington University. The Executive Council of the Institute, with broad representation from both the School of Engineering & Applied Science and the School of Medicine, has the responsibility to facilitate and coordinate student access to these various research opportunities. A graduate committee composed of members of the full-time faculty and the Institute determines the guidelines for graduate students in biomedical engineering.

The goals of graduate education in Biomedical Engineering at Washington University are to continue the University’s innovative and nationally recognized research programs and to train a new generation of leaders who apply engineering science throughout biology and medicine in government, industry and academia. This is a broad vision of biomedical engineering as a field and defines a role for which Washington University is ideally suited.

Courses

BME 471 Bioelectrical Phenomena
BME 501 Graduate Seminar
BME 502 Cardiovascular MRI — From Physics to Clinical Application
BME 503A Cell and Organ Systems Biology
BME 504 Optical Bioelectric Imaging
BME 505 Advanced MRI and Molecular Imaging Techniques Journal Club
BME 506 Seminar in Imaging Science and Engineering
BME 5068 Fundamentals of Molecular Cell Biology
BME 507 Practicum in Imaging Science and Engineering
BME 511 Biotechnology Techniques for Engineers
BME 521 Kinetics of Receptor-mediated Processes
BME 523 Biomaterials Science
BME 524 Tissue Engineering
BME 527 Design of Artificial Organs
BME 525 Engineering Aspects of Biotechnology
BME 530 Molecular Cell Biology for Engineers
BME 5301 Modeling Biomolecular Systems I
BME 5329 Mathematical Methods for Biophysics and Biochemistry
BME 531 Introduction to Biomolecular Statistical Thermodynamics
BME 533 Biomedical Signal Processing
BME 537 Computational Molecular Biology
BME 540 Modeling Biomolecular Systems II
BME 556 Experimental Methods in Biomechanics
BME 557 Cellular and Subcellular Biomechanics
BME 558 Biological Transport  
BME 559 Intermediate Biomechanics  
BME 5610 Principles of Protein Structure  
BME 562 Mechanics of Growth and Development  
BME 5620 Protein Function and Interactions  
BME 563 Orthopedic Biomechanics – Bones and Joints  
BME 564 Orthopedic Biomechanics – Cartilage/tendon  
BME 5641 Computational Neuroscience  
BME 566 Cardiac Electrophysiology  
BME 567 Cardiac Mechanics  
BME 568 Cardiovascular Dynamics  
BME 572 Biological Neural Computation  
BME 573 Applied Bioelectricity  
BME 575 Molecular Basis of Bioelectrical Excitation  
BME 586 Advanced Cognitive, Computational and Systems Neuroscience  
BME 5911 Cardiovascular Biophysics Journal Club

For additional related courses, see the Bulletin of the School of Engineering and Applied Science.

Faculty

**Professor and Chairman of Department**

Frank Chi-Pong Yin, PhD/MD  
University of California, San Diego, 1970; MD, 1973

**Professors Emeriti**

Salvatore P. Sutera, PhD  
California Institute of Technology, 1960

**Full-time Professors**

Igor R. Efimov, PhD  
Moscow Institute of Science and Technology, 1992

Yoram Rudy, PhD  
Case Western Reserve University, 1978

Larry A. Taber, PhD  
Stanford University, 1979

Lihong Wang, PhD  
Rice University, 1992

Younan Xia, PhD  
Harvard University, 1996

**Affiliate Full Professors**

Dora Angelaki, PhD  
University of Minnesota, 1991

R. Martin Arthur, PhD  
University of Pennsylvania, 1968
Philip V. Bayly, PhD  
Duke University, 1993

John P. Boineau, MD  
Duke University, 1959

Michael R. Brent, PhD  
Massachusetts Institute of Technology, 1991

Paul C. Bridgman, PhD  
Purdue University, 1980

Andreas H. Burkhalter, PhD  
University of Zurich, 1977

Harold Burton, PhD  
University of Wisconsin, 1968

Elliot L. Elson, PhD  
Stanford University, 1966

William A. Frazier III, PhD  
Washington University, 1973

Mark P. Goldberg, MD  
Columbia University, 1984

Robert J. Gropler, MD  
University of Cincinnati, 1981

Stephen M. Highstein, MD  
University of Maryland, 1965; PhD, University of Tokyo, 1976

Sándor J. Kovács, PhD, MD  
California Institute of Technology, 1977; MD, University of Miami, 1979

Gregory M. Lanza, PhD  
University of Georgia, 1981

Daniel A. Low, PhD  
Indiana University, 1988

Garland R. Marshall, PhD  
Rockefeller University, 1966

Robert P. Mecham, PhD  
Boston University, 1976

James G. Miller, PhD  
Washington University, 1969

Thomas R. Miller, MD  
University of Missouri, 1976

Mark A. Mintun, MD  
Washington University, 1981

Michael J. Mueller, PhD
Washington University, 1992
Jeanne Nerbonne, PhD
Georgetown University, 1978

Colin G. Nichols, PhD
Leeds University, 1985

Joseph A. O’Sullivan, PhD
University of Notre Dame, 1986

Michael K. Pasque, MD
University of Oklahoma, 1978

Steven E. Petersen, PhD
California Institute of Technology, 1982

Marcus E. Raichle, MD
University of Washington, 1964

Joseph H. Steinbach, PhD
University of California, San Diego, 1973

Gary D. Stormo, PhD
University of Colorado, 1981

Alan R. Templeton, PhD
University of Michigan, 1972

W. Thomas Thach Jr., MD
Harvard University, 1964

David C. Van Essen, PhD
Harvard University, 1971

Michael J. Welch, PhD
University of London, 1965

M. Victor Wickerhauser, PhD
Yale University, 1985

Samuel A. Wickline, MD
University of Hawaii, 1980

Robert S. Wilkinson, PhD
University of Texas, Austin

Thomas A. Woolsey, MD
The Johns Hopkins University, 1969

**Full-time Associate Professors**

Jianmin Cui, PhD
State University of New York Stony Brook, 1992

Donald L. Elbert, PhD
University of Texas, Austin, 1997
Daniel W. Moran, PhD
Arizona State University, 1994

Rohit V. Pappu, PhD
Tufts University, 1996

Shelly E. Sakiyama-Elbert, PhD
California Institute of Technology, 2000

Jin-Yu Shao, PhD
Duke University, 1997

Kurt A. Thoroughman, PhD
The Johns Hopkins University, 1999

Affiliate Associate Professors

Kyongtae T. Bae, PhD
University of Pennsylvania, 1988; MD, University of Chicago, 1992

Nathan A. Baker, PhD
University of California, San Diego, 2001

Thomas E. Conturo, MD, PhD
Vanderbilt University, 1989

Robert H. Deusinger, PhD
University of Iowa, 1981

James E. Huettner, PhD
Harvard University, 1987

Stanley Misler, PhD, MD
New York University, 1976; MD, 1978

Jay W. Ponder, PhD
Harvard University, 1984

William D. Richard, PhD
University of Missouri, Rolla, 1988

Matthew J. Silva, PhD
Massachusetts Institute of Technology, 1996

Lawrence H. Snyder, MD/PhD
University of Rochester, 1992

Jerold W. Wallis, MD
Stanford University, 1981

Research Associate Professors

Jack R. Engsberg, PhD
University of Iowa, 1985

Joseph W. Klaesner, PhD
Vanderbilt University, 1995
Konstantin Maslov, PhD
Richard B. Schuessler, PhD
Clemson University, 1977

Full-time Assistant Professors
Dennis L. Barbour, MD, PhD
The Johns Hopkins University, 2003
Vitaly Klyachko, PhD
University of Wisconsin, 2002

Affiliate Assistant Professors
Anthony French, MD/PhD
University of Illinois, Urbana-Champaign, 1995; MD, 1996
Eric Leuthardt, MD
University of Pennsylvania, 1999
Robi Mitra, PhD
Massachusetts Institute of Technology, 2000
Parag J. Parikh, MD
Washington University, 2001
Stavros Thomopoulos, PhD
University of Michigan, 2001

Research Assistant Professors
Jingyi Chen, PhD
University of Washington, 2006
Vadim Fedorov, PhD
Judy Fee
Leonid Livshitz, PhD
Technion, 2002
Ali Nekouzadeh, PhD
Washington University, 2005
Jingyi Shi, PhD
DeQuan Zou, DSc
Washington University, 1993

Adjunct Faculty
The Genetic Epidemiology Masters of Science (GEMS) training program provides a multidisciplinary educational opportunity for people who want to work at the dynamic nexus of genetics and medicine. There are growing needs for scientists with this training both in academia and industry. With the wealth of data from the Human Genome Project and the availability of powerful new computational approaches, abundant opportunities are now available to explore and characterize the interplay between genes and the environment that affect the biological processes that underlie disease.

Master of Science Degree (Computational and Clinical Tracks)
The core faculty for this multidisciplinary MS program comes from 15 departments/divisions in the School of Medicine. The GEMS degree program is sponsored by the Division of Biostatistics and cosponsored by the departments of Genetics and Psychiatry, and includes world-renowned scientific leaders in their respective areas. D.C. Rao, PhD, director of the Division of Biostatistics and the GEMS program director, is one of the founding fathers of the field. The four-semester, summer-to-summer (13-14 months), 35-credit-hour GEMS program is designed to prepare students to work at the interface of genetics, biostatistics, epidemiology and computing. The program has two distinct tracks that encompass training for both graduate student and clinical investigators. See www.biostat.wustl.edu/gems/ for details.

Certificate in Genetic Epidemiology
We offer a Certificate in Genetic Epidemiology, which is earned after successful completion (with a minimum of a "B" average) of four core courses plus labs (11 credit hours) that are normally offered to master’s candidates in Genetic Epidemiology. To earn the Certificate these courses may be taken over one or two summers:

- M21 503 Statistical Computing with SAS
- M21 505 Biostatistics for Research Workers (prerequisite M21 503)
- M21 505A Biostatistics for Research Workers Computer Lab
- M21 515 Fundamentals of Genetic Epidemiology
- M21 515A Fundamentals of Genetic Epidemiology Computer Lab
- M21 550 Introduction to Bioinformatics (prerequisite M21 505)
- M21 550A Introduction to Bioinformatics Computer Lab

Prospective Students
Since Genetic Epidemiology is a multidisciplinary field, we expect applicants to come from a variety of backgrounds, but primarily from the quantitative or the biological sciences, and possibly at different points in their careers: undergraduates with quantitative sciences (e.g., mathematics through calculus plus one semester of statistics) and/or biological sciences (at least through Principles of Biology II: Genetics or equivalent) background; people with terminal degrees in other (related) disciplines who seek to gain expertise in genetic epidemiology; current employees of pharmaceutical and biotechnology companies seeking additional training and formal credentials in the field. All prospective students must provide evidence of basic skills in computer programming through coursework, documented experience or by passing a proficiency exam. Promising candidates who do not meet all the prerequisites will work with the program director to take the appropriate courses or training to
rectify weaknesses.

**Location**
The GEMS Program is located in the Division of Biostatistics, on the third floor of Shriners Building (706 S. Euclid Ave.), Rooms 3301-3312.

**Further Information**
See our web site, [www.biostat.wustl.edu/gems](http://www.biostat.wustl.edu/gems), contact the program manager at (314) 362-1052 or pa@wubios.wustl.edu, or write to:
The GEMS Program
Division of Biostatistics
Campus Box 8067
660 S. Euclid Ave.
St. Louis, MO 63110-1093
Telephone: (314) 362-1052
Fax: (314) 362-2693

**Registration Instructions**
Students will register with the program manager in Genetic Epidemiology. Before registering, current Washington University students must obtain appropriate consent from their division or department. Students outside the GEMS program enrolling in individual courses must have permission of the coursemaster.

**Academic Calendar**
The GEMS program begins approximately July 1 each year with preparatory workshops, followed by four intensive summer semester courses. For the fall and spring semesters, the GEMS program follows the calendar of the College of Arts & Sciences. See the current GEMS calendar at [www.biostat.wustl.edu/gems/calendars/calendars.shtml](http://www.biostat.wustl.edu/gems/calendars/calendars.shtml).

**Courses**

**M21 503 STATISTICAL COMPUTING WITH SAS®**
Department: Division of Biostatistics
Coursemasters: Jingqin Luo, Derek Morgan and colleagues
Credit Hours: 2 units
Frequency: Every summer

Intensive hands-on summer training in SAS® during six full weekdays. Students will learn how to use the SAS® System for handling, managing and analyzing data. Instruction is provided in the use of the SAS® programming language, procedures, macros and SAS® SQL. The course will include exercises using existing programs written by SAS® experts. Computer lab will be provided. This course meets the prerequisite for M21-505 Biostatistics for Research Workers. The registration/grade option of "Audit" is not available.

Participants are strongly encouraged to participate in the Computing/Unix workshop offered free of charge prior to this course. Contact the GEMS program manager for details and for the required permission of the coursemaster: pa@wubios.wustl.edu or (314) 362-1052.

**M21 505 BIOSTATISTICS FOR RESEARCH WORKERS**
Department: Division of Biostatistics
Coursemasters: Kenneth B. Schechtman, Chengjie Xiong and colleagues
Credit Hours: 2 units
Frequency: Every summer

Intensive two-week summer course designed for those researchers who want to expand their
knowledge of practical methods in statistics. Oriented toward statistical and epidemiological concepts, applications, practical hints and hands-on approach to data, rather than theory or derivation of formulas. Heavy use is made of SAS® for in-class examples and homework problems. We will cover classical methods (e.g., t-test, chi-square, correlation), multivariate methods (regression, logistic models, ANOVA, survival analysis), study design, probability and maximum likelihood. Some selected topics are then covered in greater detail. Prerequisite: M21 503 Statistical Computing with SAS®, or student must have practical experience with SAS®.

Participants are strongly encouraged to participate in the Computing/Unix and Statistics workshops offered free of charge prior to this course and to take the companion SAS® course, M21 503. For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 505A BIOSTATISTICS FOR RESEARCH WORKERS — COMPUTER LAB
Department: Division of Biostatistics
Coursemasters: Kenneth B. Schechtman, Chengjie Xiong and colleagues
Credit Hours: 1 unit
Frequency: Every summer

Intensive two-week computer laboratory work in SAS® designed for significant hands-on practice of concepts and methods discussed as part of M21 505. Available only with concurrent registration in M21 505. Required of all Computational Track MS students. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. The registration/grade option of "Audit" is not available.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 515 FUNDAMENTALS OF GENETIC EPIDEMIOLOGY
Department: Division of Biostatistics
Coursemasters: Treva Rice and YunJu Sung
Credit Hours: 2 units
Frequency: Every summer

This intensive two-week summer course covers causes of phenotypic variation, familial resemblance and heritability (correlation, path analysis and variance components models), Hardy-Weinberg equilibrium, major genes, ascertainment, study designs and basic concepts in linkage and association analysis. Lab practice with various genetics programs (SEGPATH, PAP, SOLAR, MERLIN, QTDT) requires enrollment in M21 515A.

Participants are strongly encouraged to participate in the Computing/Unix and Statistics workshops offered free of charge prior to this course and to take the companion SAS® course M21 503. For details, to register and to obtain the required permission of the coursemaster, contact the GEMS program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 515A FUNDAMENTALS OF GENETIC EPIDEMIOLOGY — COMPUTER LAB
Department: Division of Biostatistics
Coursemasters: Treva Rice and Yun Ju Sung
Credit Hours: 1 unit
Frequency: Every summer

Intensive two-week summer computer laboratory designed as hands-on practice of fundamental concepts. This Computer Lab is an optional elective for those registered in the Clinical Track of the MS program. Students will gain practical experience with various genetics computer programs such as SEGPATH, PAP, SOLAR, MERLIN and QTDT. Available only with concurrent registration in M21 515. Required of all Computational Track MS candidates. Clinical Track MS students are strongly
M21 550 INTRODUCTION TO BIOINFORMATICS
Department: Division of Biostatistics
Coursemasters: C. Charles Gu, Gary Stormo and colleagues
Credit Hours: 2 units
Frequency: Every summer

Intensive two-week summer course designed to provide broad exposure to the basic concepts, methodology and application of bioinformatics to solve biomedical problems. Specifically, the students will learn the basics of online genomic databases and database mining tools, and acquire understanding of mathematical algorithms in genome sequence analysis (alignment analysis, gene finding/predicting), gene expression microarray (genechip) analysis, and of the impact of recent developments such as protein microarrays or whole-genome DNA chips for genome-wide association studies. Prerequisite: M21 505 Biostatistics for Research Workers.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 550A INTRODUCTION TO BIOINFORMATICS — COMPUTER LAB
Department: Division of Biostatistics
Coursemasters: C. Charles Gu, Gary Stormo and colleagues
Credit Hours: 1 unit
Frequency: Every summer

Intensive two-week summer computer laboratory work designed for significant hands-on practice of bioinformatics concepts. Students will learn and practice basics of the R/Bioconductor for statistical analysis and graphics, and apply specialized R packages to solve statistical and bioinformatics problems discussed in lectures of M21 550. They will also learn basics of bioinformatics tools and databases (BLAST/WUBLAST, Prospector, etc.) and practice applying the new knowledge in real medical research of human diseases. Available only with concurrent registration in M21 550. Required of all Computational Track MS candidates. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree. The registration/grade option of “Audit” is not available.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 5483 HUMAN LINKAGE AND ASSOCIATION ANALYSIS
Department: Department of Genetics
Coursemasters: John Rice and colleagues
Credit Hours: 2 units
Frequency: Every fall

Basic genetic concepts: meiosis, inheritance, Hardy-Weinberg Equilibrium, Linkage, segregation analysis; Linkage analysis: definition, crossing over, map functions, phase, LOD scores, penetrance, phenocopies, liability classes, multipoint analysis, non-parametric analysis (sibpairs and pedigrees), quantitative trait analysis, determination of power for Mendelian and complex trait analysis; Linkage disequilibrium analyses: allelic association (case control designs and family bases studies), whole genome association analysis; quantitative trait analysis: measured genotypes and variance components. Prerequisite: M21 515 Fundamentals of Genetic Epidemiology.
M21 5485 HUMAN LINKAGE AND ASSOCIATION ANALYSIS — COMPUTER LAB
Department: Department of Genetics
Coursemasters: John Rice and colleagues
Credit Hours: 1 unit
Frequency: Every fall

Hands-on experience doing parametric linkage analysis with the program LINKAGE, model free linkage analyses with Genehunter and Merlin, power computations with SLINK, quantitative trait analyses with SOLAR, LD computations with Haploview, and family-based and case-control association analyses with UNPHASED and SAS. The methods and exercises are coordinated with the lectures of M21 5483, and students are expected to understand underlying assumptions and limitations and the basic calculations performed by these computer programs. The registration/grade option of "Audit" is not available. Available only with concurrent registration in M21 5483. Required of all Computational Track MS candidates. Clinical Track MS students are strongly encouraged to take this lab as an elective for credit toward the degree.

For details, to register and to obtain the required permission of the coursemaster, contact the program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 615 STUDY DESIGN AND MANAGEMENT
Department: Division of Biostatistics
Coursemasters: J. Philip Miller and colleagues
Credit Hours: 3 units
Frequency: Every fall

Learn critical study design issues, optimal study designs, cost-benefit analysis, power analysis, study management issues (protocols, data entry, data flow, database management, QC), special considerations for multicenter studies, human studies, principles and issues in designing linkage and association studies, and ethical, legal, and social issues concerning human studies. Permission of the coursemaster required: (314) 362-1052.

U88 588 EPIDEMIOLOGY FOR CLINICAL RESEARCH
Department: Clinical Investigation Program
Coursemaster: Mario Schootman
Credit Hours: 3 units
Frequency: Every spring

The purpose of this course is to provide individuals an understanding of the use of epidemiological concepts and methods both in clinical research, in clinical issues and in understanding medical literature concerning these issues. The course includes 1) discussion of theoretical concepts related to the application of epidemiology in clinical research and 2) practical applications of the concepts covered.

For details, to register and to obtain the required permission of the coursemaster, contact the GEMS program manager: pa@wubios.wustl.edu or (314) 362-1052.

M21 621 COMPUTATIONAL STATISTICAL GENETICS
Department: Division of Biostatistics
Coursemasters: Michael Province, Aldi Kraja and colleagues
Credit Hours: 3 units
Frequency: Every spring
This course is designed to give the students computational experience with the latest statistical genetics methods and concepts, so that they will be able to computationally implement the method(s)/model(s) developed as part of their thesis. Concentrating on the applications of genomics and SAS computing, it deals with creating efficient new bioinformatic tools to interface with some of the latest, most important genetic epidemiological analysis software, as well as how to derive, design and implement new statistical genetics models. The course also includes didactic instruction on haplotype estimation and modeling of relationship to phenotype, LD mapping, DNA pooling analysis methods, analysis approaches in pharmacogenomics (with an emphasis on possible genomic role in drug response heterogeneity), and epistasis (GxG) and GxE interactions; data mining methods, including clustering, recursive partitioning, boosting and random forests; and fundamentals of meta-analysis, importance sampling, permutation tests and empirical p-values, as well as the design of monte-carlo simulation experiments. Prerequisite: M21 505 Biostatistics for Research Workers. Permission of the coursemaster required: (314) 362-1052.

M21 599 DIRECTED INDEPENDENT STUDY
Department: Division of Biostatistics
Coursemaster: D.C. Rao
Credit Hours: maximum 6 units
Frequency: Every semester

A faculty member will work with the student in specific areas related to the student’s primary needs. Permission of the coursemaster required. Credit: variable; maximum 6 units.

M21 610 INDEPENDENT RESEARCH
Department: Division of Biostatistics
Coursemaster: D.C. Rao
Credit Hours: maximum 12 units
Frequency: Every semester

Student selects a faculty mentor in consultation with the instructors to undertake a supervised research project in the mentor’s lab. The goal is to acquire independent research skills and to develop excellent writing and presentation abilities. A report based on the research must be written in the format of an actual scientific publication and presented to a select audience. Permission of the coursemaster required. Credit: maximum 12 units.

Faculty

Link to Web Site
http://www.biostat.wustl.edu/gems/

Health Care Services

The Health Care Services Program at Washington University responds to the growing need for interdisciplinary professionals with expertise in the planning, implementation and evaluation of health service programs. Sponsored jointly by Washington University’s School of Medicine, Department of Psychology and University College, this 30-unit graduate degree program draws on the broad expertise of university faculty and research personnel. The curriculum examines organizational influences important to the development of innovative programs for individuals and families, stressing health education and the application of current research findings.

Admission to the Health Care Services Program is open on a selective basis to qualified applicants with a bachelor’s degree in a science or health-related field from an accredited institution. Applicants should have completed training in one of the several professions involved in the health care
environment. Others may be admitted whose training and goals are congruent with the purposes of the program and acceptable to the admissions committee. The Master of Health Science degree can be pursued on a part-time basis with most courses held during the late afternoon or evening hours to accommodate the working professional. Students may select electives from various departments and divisions of the university (health administration, social work, psychology, human resources management).

Faculty

Director

Mario Schootman, PhD
University of Iowa, 1993 (Chief and Associate Professor of Epidemiology and Medicine, Division of Health Behavior Research, Departments of Internal Medicine and Pediatrics)

Associate Director

Irene Fischer, MPH
Saint Louis University, 1998 (Research Patient Coordinator, Division of Health Behavior Research, Departments of Internal Medicine and Pediatrics)

Instructors

Sarah Boslaugh, PhD, MPH
City University of New York, 1996; Saint Louis University, 2004 (Performance Research Analyst, BJC HealthCare)

Patricia Cavazos-Rehg, PhD
State University of New York, Buffalo, 2004 (Research Instructor, Department of Psychiatry)

Teresa Deshields, PhD
University of Georgia, 1985 (Manager of Psycho-Oncology Services, Siteman Cancer Center)

Joan Heins, MA
Washington University, 1990 (Research Patient Coordinator, Division of Health Behavior Research, Departments of Internal Medicine and Pediatrics)

Cheryl A. Houston, PhD
Saint Louis University, 2000 (Director of Dietetics, Program in Dietetics, Department of Environmental Sciences, Fontbonne University)

Donna B. Jeffe, PhD
Washington University, 1993 (Research Assistant Professor, Division of Health Behavior Research, Departments of Internal Medicine and Pediatrics)

Cheryl Kelly, PhD, MPH
Saint Louis University, 2006 (Assistant Professor, St. Louis University)

Donald Rickert, PhD
Saint Louis University, 1984 (Professor, St. Louis College of Pharmacy)

Leigh Tenkku, PhD, MPH
Saint Louis University, 2007 (Assistant Professor and Director for Research, Department of Community and Family Medicine, Saint Louis University School of Medicine)

Link to Web Site
Occupational Therapy

The Program in Occupational Therapy prepares students for professional practice and through its research generates knowledge to address the issues facing individuals with disabilities, chronic diseases and developmental disabilities. Students are prepared as generalists but, in addition, can concentrate their studies for work in pediatrics, aging, rehabilitation, work and industry or social participation. The curriculum focuses on the dynamic interaction of the biological and psychological, environmental and occupational factors that enable persons to fulfill roles, and lead meaningful and productive lives. Students interact with leading physicians and scientists whose practice and science is contributing to better methods of treatment of persons with disabilities. In addition, students are linked with community agencies and leaders that are providing services to individuals with disabling conditions. Undergraduate students in pre-medical, psychology, biology or anthropology will find that the program offers a means of applying their knowledge in a professional field. Applicants must hold a bachelor’s degree or be a participant in an approved three-two program and have completed prerequisite courses from an accredited college or university. The Program in Occupational Therapy is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association. Graduates of the program will be eligible to sit for the national certification examination administered by the NBCOT. (Note: A felony conviction may affect a graduate's ability to sit for NBCOT certification examination or attain state licensure.)

Master of Science in Occupational Therapy Degree Program

The professional Master of Science in Occupational Therapy degree requires courses that develop the knowledge and skills necessary to practice occupational therapy. Each candidate for a Master of Science in Occupational Therapy degree must complete a minimum of 70 hours of coursework, usually accomplished in five semesters of study (two academic years and the intervening summer.) Six months of supervised clinical fieldwork (12 credits) is required to be completed within 12 months of completion of coursework.

Doctor of Occupational Therapy Degree Program

The Doctor of Occupational Therapy (OTD) is a degree providing students the opportunity to focus their occupational therapy studies in one of five areas of concentration: Productive Aging, Social Participation and the Environment, Rehabilitation, Work and Industry, and Pediatrics. The OTD requires seven semesters of study and three clinical placements for students entering professional practice. Post-professional students enrolled in the OTD have varying program lengths based on prior degree and experience.

A full description of degrees in Occupational Therapy is available from the office of the Program in Occupational Therapy, or at the web site www.ot.wustl.edu.

Tuition and fieldwork fees (MSOT, full time) per semester: $12,192 for six semesters

Tuition and fieldwork fees (OTD, full-time): $12,192 per semester first four semesters, $14,032 per semester last four semesters

Part-time tuition: $965 per credit

Faculty

M. CAROLYN BAUM, PHD Professor of Occupational Therapy, Elias Michael Executive Director of the Program in Occupational Therapy
C. ROBERT ALMLI, PHD  Associate Professor of Occupational Therapy
JANET MARIE BALOTA, PHD  Associate Professor of Occupational Therapy
PEGGY BARCO  Instructor in Occupational Therapy
CHRISTINE R. BERG, PHD  Instructor in Occupational Therapy
ELLEN F BINDER, MD  Associate Professor of Occupational Therapy
REBECCA L BIRKENMEIER  Instructor in Occupational Therapy
LISA TABOR CONNOR, PHD  Assistant Professor of Occupational Therapy
JEANENNE M DALLAS  Instructor in Occupational Therapy
MICHAEL N DIRINGER, MD  Professor of Occupational Therapy
ALEXANDER W DROMERICK, MD  Adjunct Associate Professor of Occupational Therapy
JACK R. ENGSBERG, PHD, MS  Associate Professor of Occupational Therapy
BRADLEY A EVANOFF, MD  Professor of Occupational Therapy
ERIN F FOSTER  Instructor in Occupational Therapy
DAVID B GRAY, PHD  Associate Professor of Occupational Therapy
MARY W HILDEBRAND  Instructor in Occupational Therapy
HOLLY H HOLLINGSWORTH, PHD  Research Associate Professor of Occupational Therapy
VICTORIA KASKUTAS  Instructor in Occupational Therapy
ALLISON A KING, MD  Assistant Professor of Occupational Therapy
KATHLEEN MARIE KNIEPMANN, DED, BS  Instructor in Occupational Therapy
CATHERINE ECKEL LANG, PHD  Assistant Professor of Occupational Therapy
SUSAN E MACKINNON, MD  Professor of Occupational Therapy
MARIAN A MINOR, PHD  Research Associate Professor of Occupational Therapy
KERRI A MORGAN  Instructor in Occupational Therapy
JOHN CARL MORRIS, MD  Professor of Occupational Therapy
JOHN GAIL NEELY, MD  Professor of Occupational Therapy
JOEL S PERLMUTTER, MD  Professor of Occupational Therapy
MONICA S PERLMUTTER  Instructor in Occupational Therapy
JAY FRANCIS PICCIRILLO, MD  Professor of Occupational Therapy
MARY SEATON  Instructor in Occupational Therapy
TIMOTHY L SHURTLEFF  Instructor in Occupational Therapy
SUSAN L STARK, PHD  Assistant Professor of Occupational Therapy
SUSAN KAY STRECKER, DPT  Instructor in Occupational Therapy (Pending Dean's Approval)
GARTH D TUBBS  Assistant Professor Emeritus of Occupational Therapy
ELLEN TWNING TYSON  Assistant Professor Emerita of Occupational Therapy
TIMOTHY J WOLF  Instructor in Occupational Therapy

Link to Web Site

http://ot.wustl.edu
Physical Therapy

Physical Therapy is the science of human movement applied to rehabilitation, injury, fitness, injury prevention and overall health. Practicing in a variety of settings, physical therapists diagnose and treat movement dysfunction in patients with skill, competence and compassion. The Program in Physical Therapy is committed to providing students with excellent scientific and clinical education, in an environment that strives to continually lead the industry in practice, research, innovation and advocacy of movement health.

The Program in Physical Therapy at the School of Medicine offers three formal curricula that collectively foster opportunities for lifelong learning and comprehensive career development.

The Professional Doctor of Physical Therapy

The professional curriculum is an intensive three-year experience leading to the degree Doctor of Physical Therapy. The principle focus of this professional training is to develop scientific and clinical expertise in the diagnosis and treatment of movement-related conditions. By integrating biomedical and physical sciences and clinical education with behavioral and social sciences, this curriculum provides students with the scientific expertise, critical thinking skills and interpersonal communication necessary for effective clinical practice, comprehensive treatment design, patient advocacy, patient education and health promotion. Applicants for admission must have completed 1) a bachelor’s degree at an accredited institution, and 2) prerequisite courses in biology, chemistry, physics, mathematics, anatomy, physiology, English, psychology, social sciences and humanities, and 3) the Graduate Record Examination.

The Postprofessional Doctor of Physical Therapy

The postprofessional clinical doctorate curriculum offers practicing physical therapists an opportunity to enhance their roles as diagnosticians, evidence-based practitioners and educators for an advanced model of practice. Designed to refine the practicing physical therapist’s scientific and clinical expertise, the postprofessional program also leads to a Doctor of Physical Therapy. Applicants for admission must have 1) graduated from an accredited professional physical therapy program, 2) acquired acceptable grade point averages in previous academic endeavors, 3) achieved acceptable scores on the Graduate Record Examination, and 4) must be licensed to practice in the United States.

Doctor of Philosophy in Movement Science

The focus of the interdisciplinary doctoral program in Movement Science is to prepare future researchers and faculty members who can enhance the profession of physical therapy. Admission to this curriculum requires acceptable scores on the Graduate Record Examination, excellence in previous academic work and demonstrated beginning abilities in posing questions of importance to the study of movement.

The faculty members of the Program in Physical Therapy are committed to being leaders in discovering and transmitting new knowledge related to movement dysfunction, preparing clinicians to assume multiple roles in a complex health care environment and fulfilling the service mission to society through active participation in humanistic, scientifically-based patient care. Students in all curricula are expected to participate actively in an environment that values integrity, initiative, creativity and the strong belief that physical therapy intervention promotes health. In these ways, all individuals associated with the Program in Physical Therapy may achieve their highest professional and personal potential.

Tuition:
Professional curriculum: $14,863 per semester
Post-professional curriculum: $480 per credit
Doctoral curriculum: $18,900 per semester
Further information may be obtained by direct correspondence with the Program in Physical Therapy, Campus Box 8502, 4444 Forest Park Blvd., St. Louis, MO 63108-2212.

Phone: (314) 286-1400
Fax: (314) 286-1410
e-mail: ptprog@wustl.edu
Web site: pt.wustl.edu

Faculty

SUSAN S. DEUSINGER, PHD Executive Director of the Program in Physical Therapy, Professor of Physical Therapy
AMY J BASTIAN, PHD Adjunct Assistant Professor of Physical Therapy
MARYBETH BROWN, PHD Adjunct Associate Professor of Physical Therapy
TAMARA LAVON BURLIS, DPT, BS Associate Director for Clinical Education in Physical Therapy, Assistant Professor of Physical Therapy
WILLIAM TODD CADE, PHD Assistant Professor of Physical Therapy
CHERYL ANN CALDWELL, DPT Assistant Professor of Physical Therapy
BILLIE RUTH CLARK, PHD Assistant Professor of Physical Therapy
SUZANNE MARIE CORNBLEET, DPT Assistant Professor of Physical Therapy
BETH ELAINE CROWNER, DPT, MS Assistant Professor of Physical Therapy, Division Director of Clinical Practice in Physical Therapy
SYLVIA LIN CZUPPON Instructor in Physical Therapy
ROBERT H DEUSINGER, PHD Associate Professor of Physical Therapy
KRIKOR T DIKRANIAN, MD, PHD Assistant Professor of Physical Therapy
KATHLEEN KOLLER DIXON Instructor Emeritia in Physical Therapy
GAMMON MARIE EARHART, PHD Assistant Professor of Physical Therapy
JULAINE MARIE FLORENCE, DPT Research Associate Professor of Physical Therapy
JUDITH REBECCA GELBER, DPT Instructor in Physical Therapy
MARY KENT HASTINGS, DPT Assistant Professor of Physical Therapy
MARCIE HARRIS HAYES, DPT Assistant Professor of Physical Therapy
ROBERT JEROME HICKOK Assistant Professor Emeritus of Physical Therapy
GREGORY WILLIAM HOLTZMAN, DPT Assistant Professor of Physical Therapy
HELEN HORNFECK HOST Research Instructor in Physical Therapy (Pending Dean Approval)
RENEE A. IVENS, DPT Assistant Professor of Physical Therapy
LYNNETTE C KHOO-SUMMERS, DPT Assistant Professor of Physical Therapy
JOSEPH W. KLAESNER, PHD, BS Research Associate Professor of Physical Therapy
CATHERINE ECKEL LANG, PHD Assistant Professor of Physical Therapy
MATTHEW J MATAVA, MD Associate Professor of Physical Therapy
BESS D MAXWELL, PHD, MS Visiting Assistant Professor of Physical Therapy
DEBRA ANN MCDONNELL, DPT, AS Assistant Professor of Physical Therapy
MARY KATE MCDONNELL, DPT Associate Director of Residencies and Fellowships in Physical Therapy, Assistant Professor of Physical Therapy
Psychiatric Epidemiology

The MPE Program is a graduate program offered by the Epidemiology and Prevention Research Group in the Department of Psychiatry at Washington University School of Medicine. It was established in 1989 by Lee Robins, PhD, and is the first and only program of its kind in the world. This program teaches advanced basic epidemiological and advanced research skills, with an emphasis on interdisciplinary studies. The program, in a medical school environment, is noted for its community health focus, as it encompasses epidemiology, prevention and health services. It also strongly emphasizes training in the responsible conduct of research.

Candidates develop practical research skills and learn basic epidemiological methods through apprenticeship and didactic approaches. History and development of the major national and international psychiatric epidemiology studies are covered as well as diagnostic instruments commonly used in the field. Students learn how to organize and manage population surveys, including design, data collection and data analysis. Instructors in the program are experienced research investigators, with productive research teams.
Students come from varied backgrounds such as public health, economics, social work, education, psychiatry, engineering, infectious disease, policy, medicine, nursing, mathematics, psychology and anthropology. The overall objective of the MPE Program is to prepare pre-doctoral students and post-doctoral fellows for a productive research career in public health, with an emphasis on behavioral risk and protective factors. Graduate students in other University programs are also encouraged to enroll in courses. Undergraduate students are welcome, with the instructor’s approval.

**Degree in Psychiatric Epidemiology**

A Master of Psychiatric Epidemiology degree may be earned after successful completion of 30 credits made up of 14 core courses (26 credit hours) that are required in the MPE Program and 4 credits of elective courses. Elective credits may include additional hours of Independent Study (beyond the required 6 hours). Required courses are: M08 500 Introduction to General Epidemiology, M08 502 Instruments of Psychiatric Diagnoses and Assessment, M08 544 Applied Statistics for Behavioral Scientists, M08 507 Epidemiology Seminar I, M08 508 Landmarks in Psychiatric Epidemiology, M08 532 Psychiatry Grand Rounds I, M08 533 Psychiatry Research Seminar I (all offered in Fall), M08 507A Epidemiology Seminar II, M08 507B Epidemiology Seminar III, M08 532A Psychiatry Grand Rounds II, M08 533A Psychiatry Research Seminar II, M08 538 Research Methods, M08 676 Psychiatric Disorders of the Nervous System (all offered in Spring) and M08 506 Independent Study (offered Fall, Spring and Summer). In addition, a program-approved manuscript is required for graduation.

**Academic Calendar**

In general, the MPE Program follows the calendar of the School of Medicine for beginning and ending dates of semesters; students should consult [epi.wustl.edu/mpe/course.htm](http://epi.wustl.edu/mpe/course.htm) for specific courses offered each semester.

**Registration Information for Non-MPE Students**

Courses are open to all students, with the instructor’s approval.

**Registration Information for MPE Students**

Registration is done through the MPE Registrar’s office.

**Further Information**

For further information, view our web site at [epi.wustl.edu](http://epi.wustl.edu) (click on MPE or contact Erin Murdock, registrar (314) 286-2267 or by e-mail at murdockel@epi.wustl.edu).

**Location**

The MPE Program Administration is located at 40 N. Kingshighway Blvd., Parc Frontenac Building, Suite 4. Courses are held in this building and in other locations of the medical school.

**Director**

The Director of the MPE Program is Linda B. Cottler, PhD, MPH, professor of epidemiology in psychiatry.

**Associate Director**

The Associate Director of the MPE Program is Catherine Striley, PhD, MSW, ACSW, MPE, Research Assistant Professor of Psychiatry.
Courses

M08 500 INTRODUCTION TO GENERAL EPIDEMIOLOGY
Instructor: L. Cottler, PhD, MPH,
Epidemiology is the study of health and disease in the population. This course, while introducing epidemiologic methods and classic medical studies, emphasizes the clinical importance of psychiatric epidemiology. Credit: 3 units.

M08 502 INSTRUMENTS OF PSYCHIATRIC DIAGNOSES AND ASSESSMENT
(OFFERED FALL-EVEN YEARS)
Instructor: K. Bucholz, PhD, MPE
Introduction to commonly used interviews, both structured and semi-structured, and questionnaire development since 1940 for the diagnosis of specific psychiatric disorders in children and adults. Credit: 1 unit.

M08 506A INDEPENDENT STUDY 1
Instructor: Arranged mentor
Student arranges with a faculty member to:
1) participate in that person’s ongoing research
2) research literature on a specific topic
3) carry out secondary data analysis with an existing data set
4) design and/or carry out an original research project
5) prepare a grant proposal
The faculty member meets regularly with the student and guides the project. Credit: 1 unit.

M08 506B INDEPENDENT STUDY 2
Instructor: Arranged mentor
Student arranges with a faculty member to:
1) participate in that person’s ongoing research
2) research literature on a specific topic
3) carry out secondary data analysis with an existing data set
4) design and/or carry out an original research project
5) prepare a grant proposal
The faculty member meets regularly with the student and guides the project. Credit: 2 units.

M08 506C INDEPENDENT STUDY 3
Student arranges with a faculty member to:
1) participate in that person’s ongoing research;
2) research literature on a specific topic
3) carry out secondary data analysis with an existing data set
4) design and/or carry out an original research project
5) prepare a grant proposal
The faculty member meets regularly with the student and guides the project. Credit: 3 units.

M08 507 DRUG ABUSE EPIDEMIOLOGY SEMINAR I: Recent Trends in Drug Epidemiology
Instructor: C. Callahan O’Leary, PhD
Speaker series with topics determined each year to cover important emerging and ongoing research in addiction epidemiology. Credit: 1 unit

M08 507A EPIDEMIOLOGY SEMINAR II: Recent Trends and Progress in Substance Use and Psychiatric Epidemiology
Instructor: R. Gruca, PhD, MPE
This course prepares students for independent research presentations through presenting and critiquing each other's work with faculty guidance. Credit: 1 unit

**M08 507B PSYCHIATRIC AND DRUG ABUSE EPIDEMIOLOGY SEMINAR III: Post Doc Presentations**  
Instructor: A. Agrawal, PhD  
Presentations by postdocs and MPE Students. Credit: 1 unit

**M08 508 LANDMARKS IN PSYCHIATRIC AND DRUG ABUSE EPIDEMIOLOGY (OFFERED FALL- ODD YEARS)**  
Instructor: C. Striley, PhD, MSW, ACSW, MPE  
A review of the major studies in psychiatric and drug addiction epidemiology, from the 1920s to the present. Students present information on the methods and findings of these studies each week; faculty supplement the presentations with didactic material. Credit: 1 unit

**M08 523 MINI-COURSE PSYCHOLOGICAL TESTING**  
Instructor: G. Heydebrand, PhD  
Seminar format. Credit: 1 unit

**M08 531 MINI-COURSE PERSONALITY DISORDERS**  
Instructor: R. Cloninger, MD  
Seminar format. Credit: 1 unit

**M08 532 PSYCHIATRY GRAND ROUNDS I**  
Instructor: B. Hong, PhD  
Clinical psychiatric issues are discussed and illustrated with presentations of patients. Enrollment is limited to MPE students. Instructor approval required. Credit: 1 unit

**M08 532A PSYCHIATRY GRAND ROUNDS II**  
Instructor: B. Hong, PhD  
Clinical psychiatric issues are discussed and illustrated with presentations of patients. Enrollment is limited to MPE students. Instructor approval required. Credit: 1 unit

**M08 533 PSYCHIATRY RESEARCH SEMINAR I**  
Instructor: A. Reiersen, MD, MPE  
Research studies in psychiatry covering a broad range of topics. Students meet to discuss the seminar after each lecture. Credit: 1 unit

**M08 533A PSYCHIATRY RESEARCH SEMINAR II**  
Instructor: A. Reiersen, MD, MPE  
Research studies in psychiatry covering a broad range of topics. Students meet to discuss the seminar after each lecture. Credit: 1 unit

**M08 537 INTRODUCTION TO CHILD PSYCHIATRY**  
Instructor: A. Glowinski, MD, MPE  
Research studies in psychiatry covering a broad range of topics. Students meet to discuss the seminar after each lecture. Credit: 3 units

**M08 537B INTRODUCTION TO CHILD PSYCHIATRY II**  
Instructor: A. Glowinski, MD, MPE  
This course addresses normative development and developmental psychopathology as it relates to mental disorders occurring in children and adolescents. Credit: 3 units

**M08 538 BEHAVIORAL RESEARCH METHODS**  
Instructor: L. Cottler, PhD, MPH  
A hands-on approach to psychiatric and substance abuse research. Students attend confidential project meetings and are exposed to the in’s and out’s of a project’s daily operations. Students complete a methods project for a study they are involved with, such as IRB submission, a study codebook or other method. Credit: 3 units
M08 543 MINI COURSE — ANXIETY DISORDERS
Instructor: N. Farber, MD
Seminar format. Credit: 1 unit

M08 547 MINI COURSE — MAJOR DEPRESSION
Instructor: N. Farber, MD
Seminar format. Credit: 1 unit

M08 544 APPLIED STATISTICS FOR BEHAVIORAL SCIENTISTS
Instructors: C. Striley, PhD, MSW, ACSW, MPE
Instruction designed for those behavioral researchers who want to expand their knowledge of practical methods in statistics, with an emphasis on statistical and epidemiological concepts, applications, practical hints and a hands-on approach to data, and using SAS/PC for in-class examples and homework problems. Credit: 3 units

M08 676 PSYCHIATRIC DISORDERS OF THE NERVOUS SYSTEM
Instructor: M. Swallow, MD
Emphasizes the diagnosis of major psychiatric illness. Psychiatric disease will be described in terms of epidemiology, clinical presentation, natural history, genetics, differential diagnosis and clinical management. Biological and psychological influences on these diseases will be presented. Interviewing techniques and performance of the mental status exam will be demonstrated by patient interviews. Credit: 2 units

M08 899 THESIS WORKSHOP
Instructor: Arranged mentor
As the final requirement to be degreeed, and under the guidance of a mentor, the student, as first author, develops a publishable manuscript that meets journal requirements and results in submission for peer review. Enrollment is limited to the degree-seeking candidate registered for 0 to 8 hours of coursework whose thesis writing qualifies him/her for full-time status. Credit: 0 units

Faculty

Director
Linda B. Cottler, PhD, MPH
Professor of Epidemiology in Psychiatry

Co-Director
Catherine Striley, PhD, MSW, ACSW, MPE
Research Assistant Professor of Psychiatry

Arpana Agrawal, PhD
Research Assistant Professor of Psychiatry

Laura Bierut, MD
Professor of Psychiatry

Kelly Botteron, MD
Associate Professor of Psychiatry

Kathleen Bucholz, PhD, MPE
Professor of Psychiatry

Catina Callahan O’Leary, PhD
Research Instructor in Psychiatry

C. Robert Cloninger, MD
Wallace Renard Professor of Psychiatry
The primary goal of the Master of Science in Clinical Investigation (MSCI) Program is to provide high-quality, multidisciplinary training in clinical research to promote the successful career development of clinical investigators. The MSCI is available to postdoctoral scholars and junior faculty within the medicine and allied health professions who are enrolled in established clinical research training programs. Such programs include the Clinical Research Training Center (CRTC) — Postdoctoral Program and Career Development Awards.

Program Requirements
The MSCI requires the following Core Curriculum in Clinical Investigation:

- **Designing Outcomes and Clinical Research**
- **3 credits, course #513, Fall Semester, Wednesdays 3:30–5:45 p.m., course dates TBA, Brian Gage, MD, MSc, coursemaster**
This course includes lectures from faculty of Medicine, Surgery, Otolaryngology and Pediatrics. DOC Research covers how to select a clinical research question, write a research protocol and execute a clinical study. Topics include subject selection, observational and experimental study design, sample size estimation, clinical measurements, questionnaires and data management. The course is designed for clinicians and health care professionals who wish to conduct outcomes and patient-oriented clinical research. Students receive ongoing feedback as they incorporate research design concepts into their own research proposals. At the end of the course, students are required to submit a research protocol or a draft of a manuscript describing their research, and pass the final exam. The course consists of lectures. Each student gives an oral presentation and presents a written paper or grant protocol for discussion and critique by faculty and other students.

**Introduction to Statistics for the Health Sciences**

- 3 credits, course #523, Fall Semester, Thursdays 4:30–7 p.m., course dates TBA, Sarah Boslaugh, PhD, coursemaster
- This is a basic course in statistics with particular focus on the health sciences. It is taught in a user-friendly manner with emphasis on use of SPSS, statistical analysis software commonly used in clinical research. The course will teach basic statistical methods in which clinical researchers should have facility to execute their own analyses.

**Intermediate Statistics for the Health Sciences**

- 3 credits, course #524, Spring Semester, course dates TBA, Mario Schootman, PhD, coursemaster
- This 15-week course is designed to build on skills developed in Introduction to Statistics for the Health Sciences and foster basic expertise required to independently use common multivariate biostatistical methods to analyze clinical research data for peer-review presentation and publication.

**Ethical and Legal Issues in Clinical Research**

- 2 credits, course #510, Spring Semester, course dates TBA, Ana Iltis, PhD, coursemaster
- This course prepares clinical researchers to critically evaluate ethical and regulatory issues in clinical research. The principal goal of this course is to prepare clinical researchers to identify ethical issues in clinical research and the situational factors that give rise to them, to identify ethics and compliance resources and to foster ethical problem-solving skills.

**Epidemiology for Clinical Research**

- 3 credits, course #588, Spring Semester, course dates TBA, Mario Schootman, PhD, coursemaster
- This course introduces principles of epidemiology as they apply to clinical research. The course provides basic tools used in descriptive and analytical epidemiology, which are crucial for making informed decisions in the care of patients. Critical thinking and scientific/analytic competencies are emphasized throughout the course.

**Grantsmanship**

- 3 credits, course #528, Fall Semester, Tuesdays 4–6 p.m., course dates TBA, Jay Piccirillo, MD, Karen Dodson, BS, coursemasters
- Scholars create a focused research plan that incorporates well-formulated hypotheses, rationales, specific objectives and long-range research goals; organize and present a sound research plan that accurately reflects the ideas and directions of the proposed research activities; develop and justify a budget for the proposed research activities; avoid many common grant-writing mistakes; discuss the peer review process in grant evaluation and formulate a grant proposal that is maximally compatible with that process.

OR

**Scientific Writing and Publishing**

- 2 credits, course #529, Spring Semester, course dates TBA, Jay Piccirillo, MD, Karen Dodson, BS, coursemasters
- The objective of this course is to teach the proper techniques of writing and publishing a biomedical manuscript. Writing a working title and structured abstract as well as hand drawing of figures and tables is covered. Publishing strategies are also discussed.
Scholars also:
- Conduct independent research under the tutelage of a mentorship committee
- Participate in an ongoing seminar series to present and discuss research as a work-in-progress
- Take elective coursework related to their research interests
- Submit a final thesis — typically a submitted manuscript or grant application

Advanced placement credit can be earned for past equivalent coursework as determined on an individual basis. The MSCI is a 33-credit degree and typically takes two to three years to complete.

**Tuition**
Tuition cost is $1,000 per credit hour. However, in most cases there is a remission program for which Washington University employees and scholars affiliated with partnering institutions are eligible. Training grant or departmental funds are typically used to cover tuition costs. Trainees currently enrolled in other medicine and allied health programs should contact the program director or program coordinator to discuss entry into the MSCI program.

**Location**
Most courses and seminars are taught during late afternoon or early evening hours in the CRTC located on the second floor of the Wohl Hospital building.

**Further Information**
Please visit our web site at k30.im.wustl.edu; contact Dan Detlefsen, program coordinator, (314) 454-8540, ddetlefs@dom.wustl.edu; or write to:

Washington University in St. Louis  
School of Medicine  
Master of Science in Clinical Investigation Program  
Campus Box 8051  
660 S. Euclid Ave.  
St. Louis, MO 63110

**Faculty**

**Program Directors**
Bradley Evanoff, MD, MPH  
Sutter Associate Professor of Occupational, Industrial and Environmental Medicine, Department of Internal Medicine, Washington University School of Medicine

Jane Garbutt, MB ChB  
Research Associate Professor of Medicine, Department of Internal Medicine, Washington University School of Medicine

**Coursemasters**
Jay Piccirillo, MD *(Scientific Writing, Grantsmanship)*  
Professor, Department of Otolaryngology, Washington University School of Medicine

Brian Gage, MD, MSc *(Designing Outcomes and Clinical Research)*  
Associate Professor of Medicine, Department of Internal Medicine — General Medical Sciences, Washington University School of Medicine
Sarah Boslaugh, PhD, MPH (*Introduction to Statistics for the Health Sciences*)
Adjunct Instructor, Department of Medicine; Performance Research Analyst, BJC Healthcare

Karen L. Dodson, BS (*Scientific Writing, Grantsmanship*)
Adjunct Instructor, Department of Medicine; Director of Faculty Development and Academic Publishing Services, Office of Faculty Affairs, Washington University School of Medicine

Ana Iltis, PhD (*Ethical and Regulatory Issues in Clinical Research*)
Associate Professor, PhD Program Director, Department of Health Care Ethics, Saint Louis University

Mario Schootman, PhD (*Intermediate Statistics for the Health Sciences, Epidemiology for Clinical Research*)
Associate Professor of Medicine, Department of Internal Medicine – Health Behavior Research, Washington University School of Medicine

**Instructors and Guest Lecturers**

Bradley Evanoff, MD, MPH
Sutter Associate Professor of Occupational, Industrial and Environmental Medicine, Department of Internal Medicine, Washington University School of Medicine

Jane Garbutt, MB ChB
Research Associate Professor of Medicine, Department of Internal Medicine, Washington University School of Medicine

Jim Dubois, PhD, DSc
Mader Endowed Professor, Department Chair and Center Director, Department of Health Care Ethics, Saint Louis University

Brian Waterman, MPH
Adjunct Instructor, Department of Medicine; CEO, Director of Performance Analytics, BJC Healthcare

Robert Mecham, PhD
Alumni Endowed Professor of Cell Biology and Physiology, Department of Cell Biology and Physiology, Washington University School of Medicine

Dee Owyoung, AM
Manager of Administrative Services, Department of Cell Biology and Physiology, Washington University School of Medicine

Roger Yusen, MD, MPH
Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Division of General Medical Sciences, Washington University School of Medicine

Marin Kollef, MD
Golman Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine; Director, Medical Intensive Care Unit, Director, Respiratory Care Services, Barnes-Jewish Hospital

Craig Coopersmith, MD
Associate Professor of Surgery and Anesthesiology, Department of Surgery, Washington University School of Medicine

Anjali Deshpande, PhD, MPH
Research Assistant Professor PEFA, Department of Internal Medicine — Health Behavior Research, Washington University School of Medicine
Curtis A. Parvin, PhD
Clinical Research Associate Professor of Pathology and Immunology, Department of Laboratory and Genomic Medicine, Washington University School of Medicine

Natalie Goodwin-Frank
Funding Resources Coordinator, Office of the Vice Chancellor for Research, Washington University

John Michnowicz, BS
Director of Grants and Contracts, Office of the Vice Chancellor for Research, Washington University

Roberto Civitelli, MD
Professor of Medicine, Department of Internal Medicine — Bone and Mineral Diseases, Washington University School of Medicine

Usha Andley, PhD
Professor of Ophthalmology and Visual Sciences, Department of Ophthalmology and Visual Sciences, Washington University School of Medicine

J. Phillip Miller, AB
Professor of Biostatistics, Department of Biostatistics, Washington University School of Medicine

Dan Bustillos, JD, PhD
Assistant Professor, Department of Health Care Ethics, Saint Louis University

Rebecca Dresser, JD
Daniel Noyes Kirby Professor of Law, Washington University School of Law

Michael Debaun, MD
Professor of Pediatrics, Department of Pediatrics, Genetics, and Genomic Medicine, Washington University School of Medicine

William D. Shannon, PhD
Associate Professor of Biostatistics in Medicine, Department of Internal Medicine — General Medical Sciences, Washington University School of Medicine

Mae Gordon, PhD
Professor of Ophthalmology and Visual Sciences, Department of Ophthalmology and Visual Sciences, Washington University School of Medicine

Mark J. Manary, MD
Professor of Pediatrics, Department of Pediatrics Emergency Medicine, Washington University School of Medicine

Kelle H. Moley, MD
Professor of Obstetrics and Gynecology, Department of Obstetrics and Gynecology — Endocrine, Washington University School of Medicine

Catherine Striley, PhD, MSW, LCSW, ACSW, MPE
Research Instructor in Psychiatry, Department of Psychiatry, Washington University School of Medicine

Kim Lipsey
Librarian, Bernard Becker Medical Library, Washington University School of Medicine

Further Information
Please visit our web site at k30.im.wustl.edu; contact Dan Detlefsen, program coordinator, (314) 454-8540, ddetlefs@dom.wustl.edu; or write to:
Audiology and Communication Sciences

The Program in Audiology and Communication Sciences (PACS) provides advanced training and graduate programs in the fields of clinical audiology, deaf education, and speech and hearing sciences. Established at Central Institute for the Deaf (CID) in 1914, the training programs are now a member of a consortium of programs known as "CID at Washington University School of Medicine," which also includes clinical services and research programs operated by the Department of Otolaryngology.

Doctor of Audiology (AuD)

The four-year graduate program in audiology trains students to become independent clinicians and leads to the Doctor of Audiology (Au.D.) degree. The program is designed to provide students with the knowledge and skills that reflect the latest advances in evaluation and treatment of hearing conditions. Students gradually progress from classroom-based instruction to clinical practice in audiology. The first three years provide students with the foundation for practice, with students gaining knowledge and skills in the basic and applied sciences, evaluation and diagnosis practices across the lifespan, hearing and balance disorders, professional issues and ethics, statistics and research methods, and clinical observation and practice. The fourth year is spent in a full-time clinical externship.

The audiology program is accredited by the American Speech-Language-Hearing Association (ASHA) and the Accreditation Commission for Audiology Education (ACAE). Graduates are eligible for national certification by ASHA.

Master of Science in Deaf Education (MSDE)

The graduate program in deaf education offers one- and two-year programs that prepare students to become classroom teachers of hearing-impaired children and that lead to the Master of Science in Deaf Education (MSDE) degree. The programs promote the oral philosophy — that deaf and hearing-impaired children can learn to listen and talk — and prepare teachers to help children develop their spoken and written language skills. For very young children, language and speech concepts are conveyed in a variety of settings and generally involve working closely with parents, families, and other caregivers. For older children, language and speech are taught in a classroom setting in concert with conventional academic subjects normally taught in kindergarten through the elementary grades.

Students proceed from broadly-based classroom instruction and observation to progressively more specialized coursework and practice teaching experiences. Introductory coursework provides the foundation for practice. Students gain knowledge in the basic and applied sciences, curriculum and instructional methods. Advanced coursework provides training in evaluation techniques, manual communication, intervention strategies, counseling techniques, research methods and practice teaching experiences.

The deaf education program is accredited by the State of Missouri’s Department of Elementary and Secondary Education (DESE), the Council on Education of the Deaf (CED) and the Council for Exceptional Children (CEC). Graduates of the program are eligible for teacher certification in the State
of Missouri (Deaf/Hearing Impaired, B-12) and for national certification by CED in the areas of early
childhood and elementary education.

**Doctor of Philosophy (PhD) in Speech and Hearing Sciences**

The focus of the interdisciplinary program in Speech and Hearing Sciences (PhD) is to prepare future
researchers and academicians in the field of speech and hearing sciences. Students generally work
one-on-one with faculty researchers during their studies. Training builds upon the student’s basic
knowledge of aspects of the fields that pertain to speech, language and hearing and emphasizes
research and teaching experiences.

The Speech and Hearing Sciences Program is operated by the Program in Audiology and
Communication Sciences (PACS) and administered through the Graduate School of Arts & Sciences.

**Contact Information**

Further information may be obtained by contacting:

Washington University School of Medicine
Program in Audiology and Communication Sciences
Campus Box 8042
660 S. Euclid Ave.
St. Louis, MO 63110

Phone: (314) 747-0104
Fax: (314) 747-0105
E-mail: pacs@msnotes.wustl.edu
Web: pacs.wustl.edu

**Faculty**

**Professors (Joint)**

Barbara A. Bohne, PhD
Washington University, 1971

Richard A. Chole, MD, PhD
University of Minnesota, 1977

William W. Clark, PhD, Program Director
University of Michigan, 1975

Nancy Tye Murray, PhD
University of Iowa, 1984

Michael Valente, PhD
University of Illinois, 1975

Mark E. Warchol, PhD
Northwestern University, 1989

**Associate Professors (Joint)**

Jianxin Bao, PhD
University of Florida, 1992
J. David Dickman, PhD
University of Wyoming, 1985
Jill B. Firszt, PhD
University of Illinois, 1998
Johanna G. Nicholas, PhD
Washington University, 1990
Kevin K. Ohlemiller, PhD
Northwestern University, 1990

Assistant Professors (Joint)
Lisa S. Davidson, PhD
Washington University, 2003
Brian T. Faddis, PhD
University of California-Davis, 1994
Timothy E. Hullar, MD
Harvard University, 1996
Rosalie M. Uchanski, PhD
Massachusetts Institute of Technology, 1988
L. Maureen Valente, PhD, Director of Audiology Studies
Washington University, 2005

Instructors
Lynda C. Berkowitz, MS
Washington University 1983
Carl D. Bohl, DSc
University of Cincinnati, 1973
Donald G. Brennan, PhD
University of Oklahoma, 1974
Christine M. Clark, MA
Maryville University, 1999
J. Eric Driskill, MEd
University of Arkansas, 1994
Christine H. Gustus, MS
Washington University, 1975
Barbara A. Lanfer, MAEd
University of Missouri-St. Louis, 1998
E. Tracy Mishler, AuD
Arizona School of Health Sciences, 2007
T.K. Parthasarathy, PhD
University of Texas-Dallas, 1987

Lisa G. Potts, PhD
Washington University, 2006

Mary A. Shortal, MS
Washington University, 1976

Karen S. Stein, MS
Washington University, 1974

Julia L. West, MS
Washington University, 1995

**Lecturers**

A.U. Bankaitis, PhD
University of Cincinnati, 1995

Carol E. Bergmann, AuD
Arizona School of Health Sciences, 2003

Elizabeth A. Elliott, MAT
Webster University, 2004

Michelle A. Gremp, MSDE
Washington University, 2006

Dave A. Harris, PhD
University of Cincinnati, 2005

Roanne K. Karzon, PhD
Washington University, 1982

Christina M. Koehler, MSSH
Washington University, 2000

Karen R. Kupper, MSSH
Washington University, 1979

Robert J. Mareing, AuD
Pennsylvania College of Optometry, 2003

Jean S. Moog, MS
Washington University, 1964

Justine L. Preston, MA
Washington University, 2006

Catherine M. Schroy, MS
Washington University, 1998

Brent P. Spehar, PhD
Washington University, 2005
Professors Emeritus

Ira J. Hirsh, PhD
David P. Pascoe, PhD

Link to Web Site

http://pacs.wustl.edu

Pharmacy Student Research Training Program

A key academic institution in our biomedical and clinical health center environment is the St. Louis College of Pharmacy. It is one of the premier institutions in the country for the teaching and training of pharmacists. The College’s extensive pharmaceutical sciences curriculum has generated interest by a number of their students in laboratory biomedical research. Students beyond their fourth year at St. Louis College of Pharmacy who demonstrate interest in science and research, and are recommended by the College faculty, will have an opportunity to complete 10- to 14-week fellowships in any of the laboratories at the School of Medicine. Students can, with consent of their advisors at the College of Pharmacy and the laboratory principal investigator, extend their stay. This joint research collaboration should encourage those students in the program to pursue graduate degrees in the Division of Biomedical Sciences at the School of Medicine.
**Administration**

**Board of Trustees**

http://boardoftrustees.wustl.edu/current-trustees.html

**Emeritus Trustees**

http://boardoftrustees.wustl.edu/emeritus-trustees.html

**Officers of the University Administration**

Mark S. Wrighton, PhD  
*Hudson E. Bridge Chancellor*

Edward S. Macias, PhD  
*Provost and Executive Vice Chancellor for Academic Affairs*

David T. Blasingame  
*Executive Vice Chancellor for Alumni and Development Programs*

Michael R. Cannon, JD  
*Executive Vice Chancellor and General Counsel*

Larry J. Shapiro, MD  
*Executive Vice Chancellor for Medical Affairs and Dean of the School of Medicine*

Henry S. Webber  
*Executive Vice Chancellor for Administration*

Shirley K. Baker  
*Vice Chancellor for Scholarly Resources and Dean of University Libraries*

Barbara A. Feiner  
*Vice Chancellor for Finance*

Pamela S. Lokken  
*Vice Chancellor for Government and Community Relations*

James E. McLeod  
*Vice Chancellor for Students and Dean of the College of Arts & Sciences*

Ann B. Prenatt  
*Vice Chancellor for Human Resources*

M. Fredric Volkmann  
*Vice Chancellor for Public Affairs*

Amy B. Kweskin  
*Treasurer*

Ida H. Early
Secretary to the Board of Trustees

Officers of the School of Medicine

Mark S. Wrighton, PhD  
*Chancellor*

Larry J. Shapiro, MD  
*Executive Vice Chancellor for Medical Affairs and Dean*

Evan D. Kharasch, MD, PhD  
*Interim Vice Chancellor for Research*

Pamela Buell  
*Associate Vice Chancellor and Director of Medical Alumni and Development Programs*

Donald E. Clayton  
*Associate Vice Chancellor for Medical Public Affairs*

James P. Crane, MD  
*Associate Vice Chancellor for Clinical Affairs and Chief Executive Officer, Faculty Practice Plan*

W. Edwin Dodson, MD  
*Associate Vice Chancellor and Associate Dean for Admissions and Continuing Medical Education*

William F. Howard  
*Associate Vice Chancellor and Chief Counsel*

Richard J. Stanton  
*Associate Vice Chancellor for Administration and Finance*

George E. Andersson  
*Assistant Vice Chancellor and Assistant Dean for Finance*

Brian DeFilippis  
*Assistant Vice Chancellor for Medical and Alumni Development Programs*

Lisa M. Braun  
*Assistant Vice Chancellor and Chief Counsel*

Walter W. Davis, Jr.  
*Assistant Vice Chancellor, Assistant Dean for Facilities Operations*

Patricia J. Gregory, PhD  
*Assistant Vice Chancellor and Executive Director of Medical Corporate and Foundation Relations*

Steven L. Leary  
*Assistant Vice Chancellor for Veterinary Affairs and Director of the Division of Comparative Medicine*

Glenda K. Wiman  
*Assistant Vice Chancellor and Assistant Dean of Special Programs*

Alison J. Whelan, MD  
*Senior Associate Dean for Education*

Diana L. Gray, MD  
*Associate Dean for Faculty Affairs*
Leslie E. Kahl, MD  
*Associate Dean for Student Affairs*

Jennifer K. Lodge, PhD  
*Associate Dean for Research*

Philip A. Ludbrook, MD  
*Associate Dean for Human Studies*

Rebecca P. McAlister, MD  
*Associate Dean for Graduate Medical Education*

Will R. Ross, MD  
*Associate Dean and Director of Office of Diversity Programs*

Paul A. Schoening  
*Associate Dean and Director of the Bernard Becker Medical Library*

Michael P. Caputo  
*Assistant Dean and Chief Information Officer*

Koong-Nah Chung, PhD  
*Assistant Dean for Admissions and Student Affairs*

Kathryn M. Diemer, MD  
*Assistant Dean for Career Counseling*

Stephen S. Lefrak, MD  
*Assistant Dean and Director for the Program for the Humanities in Medicine*

Robert J. McCormack  
*Assistant Dean and Director of Financial Aid*

Deborah A. Monolo  
*Assistant Dean for Academic Affairs and Registrar*

Yi Zhang  
*Assistant Dean for Clinical Trials and Executive Director for the Center for Clinical Studies*

Lisa H. Stevenson  
*Director of Diversity Programs*

Karen Winters, MD  
*Director of the Student and Employee Health Services — Medical Campus*

Carol L. Kwasny  
*Assistant Registrar*

**Board of Directors, Washington University Medical Center**

**Board of Directors, Washington University Medical Center**

Steven H. Lipstein  
*Chairman of the Board*

Larry J. Shapiro, MD  
*President*
Michael A. DeHaven  
*Secretary and Treasurer*

George E. Andersson

Robert W. Cannon

**National Council, Washington University School of Medicine**

Floyd E. Bloom, MD  
*Chair*

Robert G. Clark

Peter B. Corr, PhD

George W. Couch III

Andrew B. Craig III

Joann L. Data, MD

Joseph M. Davie, MD, PhD

Robert C. Drews, MD

John P. Dubinsky

David C. Farrell

I. Jerome Flance, MD

Ira C. Gall, MD

Daniel P. Getman, PhD

Robert J. Glaser, MD

Frederick A. Hermann Jr.

Jay A. Kaiser, MD

Charles F. Knight

Donald E. Lasater

Lee M. Liberman, PhD

Steven H. Lipstein

Richard J. Mahoney

James S. McDonnell III

Walter L. Metcalfe Jr.

Marilyn Moffat, PhD
William Neaves, PhD
Philip Needleman, PhD
Andrew E. Newman
Roger M. Perlmutter, MD, PhD
Gordon W. Philpott, MD
Mary Dell Pritzlaff
Allan H. Rappaport, MD, JD
Barbara J. Reynolds, MD
The Honorable Paul Rogers
Harvey Saligman
William T. Shearer, MD, PhD
Kelvin R. Westbrook
William P. Wiesmann, MD
Raymond H. Wittcoff
Roma Broida Wittcoff
Joyce F. Wood
**Officers and Committees of the Faculty**

**Executive Faculty**

**Voting Members**

Larry J. Shapiro  
*Executive Vice Chancellor for Medical Affairs and Dean; Chairman, Executive Faculty*

Stephen M. Beverley  
William G. Bowen (Voluntary Faculty Rep.)  
Richard A. Chole  
F. Sessions Cole (Clinical Full-Time Rep.)  
Ralph G. Dacey, Jr.  
Susan K. Dutcher  
Timothy J. Eberlein  
Thomas E. Ellenberger  
Alex S. Evers  
Richard H. Gelberman  
Dennis E. Hallahan  
David M. Holtzman  
R. Gilbert Jost  
Michael A. Kass  
George A. Macones  
David M. Ornitz  
Kenneth S. Polonsky  
Alan L. Schwartz  
Philip D. Stahl  
David C. Van Essen  
Herbert W. Virgin  
Karen O’Malley (Preclinical Full-Time Rep.)
Faculty Council

The Faculty Council consists of all full-time members of the faculty with the rank of professor, associate professor, assistant professor and those instructors who have been on the faculty for at least three years. The officers and executive committee are listed below. Their service ends in June of the year in parenthesis after their name.

Susan Deusinger (2010)
Chair

Karen O’Malley (2010)
Vice Chair

Sherrie Hauft (2010)
Vice Chair-elect

Angela Brown (2011)
Secretary

Kim Carmichael (2010)
Clinical Representative to the Executive Committee of the Faculty Council

Beth Crowner (2010)
Clinical Representative to the Executive Committee of the Faculty Council

Shahsikant Kulkarni (2011)
Clinical Representative to the Executive Committee of the Faculty Council

Kevin Yarasheski (2011)
Clinical Representative to the Executive Committee of the Faculty Council

Sharlene Teefey (2012)
Clinical Representative to the Executive Committee of the Faculty Council

Dwight Towler (2012)
Clinical Representative to the Executive Committee of the Faculty Council

John Cooper (2010)
Preclinical Representative to the Executive Committee of the Faculty Council

Paul Taghert (2011)
Preclinical Representative to the Executive Committee of the Faculty Council

Raphael Kopan (2012)
Preclinical Representative to the Executive Committee of the Faculty Council

Donna Jeffe (2010)
Research Track Representative to the Executive Committee of the Faculty Council
Bettina Mittendorfer (2012)
Research Track Representative to the Executive Committee of the Faculty Council
Christopher Sampson (2012)
Program or Division Representative to the Executive Committee of the Faculty Council
Greg Polites (2011)
Divisional Representative to Faculty Senate Council
Michael Chicoine (2010)
Elected Member of Practice Plan Board of Directors
Bob McKinstry (2008)
Elected Member of Practice Plan Board of Directors

Animal Studies Committee
Dana Abendschein
Chair
Steven L. Leary

Committee on the Academic and Professional Evaluation of Students
William E. Clutter, MD
Chair
Laura J. Bierut, MD
Erika C. Crouch, PhD, MD
Henry Huang, PhD
Nigar Kirmani, MD
Stephen S. Lefrak, MD
Robert W. Mercer, PhD
Jane Phillips-Conroy, PhD
Linda J. Pike, PhD
Deborah Rubin, MD
Andrea L.P. Stephens, MD
Robert S. Wilkinson, MD
W. Edwin Dodson, MD
Ex officio
Leslie E. Kahl, MD
Ex officio
Deborah A. Monolo
*Ex officio*

Will R. Ross, MD
*Ex officio*

Alison J. Whelan, MD
*Ex officio*

Karen Winters, MD
*Ex officio*

**Committee on Admissions (2009-10)**

W. Edwin Dodson
*Chair*

Natalia Akopyants

Raykee Bhayani

Joseph J. Billadello

Gary Boxer

Richard W. Brand

Angela L. Brown

Arnold Bullock

Jinny Chang

Lewis Chase

Koong-Nah Chung

Simone Cummings

John S. Daniels

Carlos Daughaday

Matthew Dobbs

Thomas B. Ferguson, Sr.

James Fleshman

Andrew Galakatos

Alan Glass

Joel Goebel

Christina Gurnett

Anjum Hassan
Steve Plax
Greg Polites
Juanita Polito-Colvin
Lee Ratner
Valerie Ratts
Marvin Rennard
Cynthia Rogers
Will Ross
Gustav Schonfeld
Barbara B. Sterkel
Lisa Stevenson
Amber Traugott
Linda Tsai
Nancy Tye-Murray
Stanley Wald
Colleen Wallace
Alvin Wenneker
Cynthia Wichelman
Consuelo Wilkins
Karen Winters
Franz Wippold
Gerald Wool
Israel Zighelboim

Committee on Fellowships and Awards

Kelle H. Moley  
Chair

Susan K. Dutcher
Robert O. Heuckeroth
Jean Schaffer
Robert W. Thompson
Committee on Student Financial Aid

W. Edwin Dodson
Chair

Leslie E. Kahl

Robert J. McCormack

Disclosure Review Committee

William F. Stenson, MD
Chair

Leonard Bacharier, MD

Irving Boime, PhD

Jeffrey D. Bradley, MD

Bradley J. Castanho, PhD
Ex officio

Craig Coopersmith, MD

Enrico Di Cera, MD

Wayne M. Flye, MD, PhD

Leesa Galatz, MD

Sherrie M. Hauft, MD

R. Edward Hogan, MD

Henry V. Huang, PhD

Steven Johnson, PhD

Jack H. Ladenson, PhD

Philip A. Ludbrook, MD

John E. Majors, PhD

Denise A. McCartney
Ex officio

Stephen M. Moerlein, PhD

Michael L. Nonet, PhD

Brian Nussenbaum, MD

Nancy M. Pliske, JD
Ex officio
Human Research Protection Office (HRPO)

Executive Chair and Associate Dean

List of current IRB Committee Members

Jennifer E. Allsworth
Aviva A. Aloush
Christopher D. Anderson
Christy Auston
Leonard Bacharier
Maria Q. Baggstrom
Linda D. Bannister
Randall J. Bateman
Bryan Bear
Courtney E. Beers
Patricia O. Blank
Paula Bliss
Diane G. Bohner
Kathryn L. Bohnert
David L. Brody
Tyson Brooks
Douglas Brown
Kathleen K. Bucholz
Elizabeth A. Buck
Virginia D. Buckles
Sara Butler
Patrice Carroll
Ed Casabar
Amanda F. Cashen
Carrie L. Catanzaro
Douglas M. Char
Li-Shiun Chen
Mary (Mickey) T. Clarke
Donald E. Clayton
Diane K. Clemens
Susan H. Cook
Carol Conway-Long
Ben Cooper
Craig M. Coopersmith
Linda B. Cottler
Matthew R. Cottler
Rebecca J. Craig-Schapiro
William T. Cramer
Robert Crecelius
Michael D. Darcy
Sherri R. Davies
Karen P. Davis
Lisa de la Fuentes
Carl J. DeSelm
Kathy Dodds
Sandra L. Dolan
Jamie K. Donnelly
Ann M. Doyle
George J. Dowling
Rebecca Susan Dresser
Rosalind E. Ebinger
Jacqueline Epps-Wilbanks
Debi Feit
Geralyn Fisher
Jennifer L. Fisher Eastep
Patricia M. Flynn
Kirk A. Foster
Sarah B. Fowler-Dixon
Feng Gao
Jennifer M. Gartland
Edward M. Geltman
Beverly L. Gibson
David I. Kuperman
Steven M. Kymes
Bruce M. Lane
Susan E. Lanzendorf
Joanne Lauber
Travis Linneman
Glenn Lopate
Larry Losson
Valerie Lunsford
Cynthia X. Ma
Pamela Ann Madden
Mark J. Manary
Ahmad Manasra
Julie A. Margenthaler
Denean Marie
Jose Mathews
Amit Mathur
Brent D. Matthews
James H. McNulty
Dana C. McWay
Kathleen Mead
Gerald Medoff
Claire Meyners
Pamela F. Millsap
Neville Mistry
Michael E. Mullins
Ronald Munson
Theresa Murphy
Peter Nagele
J. Gail Neely
Elliot C. Nelson
John Newcomer
Johanna G. Nicholas
Cheryl Y. Nies
Julie Nobbe
Catina C. O’Leary
Meg O’Neill
Dawn D. Pesti
Tammy S. Sonn
Kimberly Spence
Susan Lynn Stark
Phyllis K. Stein
Gary Steps
Lisa M. Steurer
Catherine L. Striley
Robert C. Strunk
Patty Suntrup
Nona Swank
Donna Taliaferro
Nadine D. Tanenbaum
Cindy Mae Terrill
Daniel Theodoro
Paul A. Thompson
Suzanne Thompson
Jeffrey B. Titus
Michael H. Tomasson
Amber L. Traugott
Denise R. Turnbow
Amber N. Tyler
Mary O’Briean Uhlmansiek
Khleber M. Van Zandt V
Linda M. Van Zandt
Elizabeth B. Vargus
Lloyd J. Vasquez Jr.
Kathryn L. Vehe
Jeanne Velders
Alphonso H. Voorhees
Thomas William Walsh
Peggy Watts
H. James Wedner
Marcia R. Weis
Richard D. Wetzel
Michael P. Whyte
Laurel A. Wiersema-Bryant
James D. Wilson
Erin Wingbermühle
Chengjie Xiong
Yan Yan
Stuart D. Yoak
Imran Zoberi
Darryl A. Zuckerman

**Human Subject Research Quality Assurance/Quality Improvement Committee**

Edward M. Geltman  
*Chair*

John A. Curci

Brett Drake

Mae Gordon

Aaron Hamvas

Philip A. Ludbrook

John W. Newcomer

Anthony O. Odibo

Nancy Pliske  
*Ex officio*

**Institutional Biological and Chemical Safety Committee (IBC)**

Michael Caparon, PhD  
*Co-Chair*

Henry Huang, PhD  
*Co-Chair*

Max Arens, PhD

Michael Diamond, MD, PhD

Jennie Mayfield, BSN, MPH, CIC

Daniel Ory, MD

Mark Sands, PhD

Barbara Joy Snider

Bruce Backus, MS, PE  
*Ex officio*

Kenneth Boschert, DVM  
*Ex officio*

Susan Cook, PhD, CBSP
Ex officio

Robert F. Koehler
*Public member*

Paul Mercurio
*Public member*

**MA/MD Program Committee**

Deborah C. Rubin
*Chair*

F. Sessions Cole

Michael R. DeBaun

Ellen Li

Daniel C. Link

Jeffrey Peipert

Jay F. Piccirillo

Lawrence H. Snyder

Phillip I. Tarr

**Medical School Faculty Rights Committee**

Susan Deusinger
*Chairman*

*Regular members*
Jacques Baenziger
Linda Cottler
Linda Peterson

*Alternate members*
Susan Dutcher
Mae Gordon
Kelle Moley

**Medical Scientist Training Program Committee**

Wayne M. Yokoyama
*Program Director*

Jean E. Schaffer
*Program Co-Director*

Monica Bessler

Kendall J. Blumer

Jianmin Cui
Michael DeBaun
Michael S. Diamond
Daved H. Fremont
Phyllis Hanson
Robert Heuckeroth
David R. Piwnica-Worms
Gary D. Stormo

Radiation Safety Committee

Barry A. Siegel
Chair

Joseph L. Roti Roti
Vice Chair

Susan M. Langhorst
Executive Secretary

Bruce D. Backus

Robert E. Drzymala

Keith C. Fischer

Jerry M. Glotzer

Perry W. Grigsby

Sudhir Jain

Stephen M. Moerlein

Henry D. Royal

Lee G. Sobotka

Patsy L. Stapleton

Michael J. Welch

Walt C. Davis Jr.
Alternate

Sasa Mutic
Alternate

Cindy M. Kiel
Alternate

Don A. Lichti
Alternate
John M. Michnowicz  
*Alternate*

Sally Schwarz  
*Alternate*

W. John Smith II  
*Alternate*

**Radioactive Drug Research Committee**

Barry A. Siegel, MD  
*Chair*

Delphine L. Chen, MD  
*Vice-Chair*

Keith C. Fischer, MD

Edward M. Geltman, MD

Susan M. Langhorst, PhD  
*Ex-Officio*

James L. Littlefield, MD

Karen McElvany, PhD

Marcus E. Raichle, MD  
*Ex-Officio*

Sally Wagner Schwarz, RPh, MS

Yuan-Chuan Tai, PhD

Michael J. Welch, PhD

**Alvin J. Siteman Cancer Center Protocol Review and Monitoring Committee**

Joel Picus  
*Co-Chair*

Steven Strasberg  
*Co-Chair*

Camille Abboud

Kristan Augustin

Jeff Bradley

Kathryn Britton

Jennifer Frye

Robert J. Hayashi
Lisa Kehlenbrink
Adam Kibel
Lynne Lippmann
Julie Margenthaler
Robert J. Myerson
John D. Pfeifer
Timothy Pluard
Janet S. Rader
Kenneth B. Schechtman
Keith Stockerl-Goldstein
Benjamin Tan
Tom Walsh
Andrea Wang Gillam
Chrisann Winslow
Lorri DeWitt
Ad hoc
Farrokh Dehdashti
Ad hoc
Lindsay Hladnik
Ad hoc
David B. Mansur
Ad hoc
Leah Menshouse
Ad hoc
Byron Peters
Ad hoc
Matthew Powell
Ad hoc
Dana Viviano
Ad hoc
Nancy L. Bartlett
Ex officio
Jeff M. Michalski
Ex officio
J. Philip Miller
Ex officio

Jeffrey F. Moley
Ex officio

Stephen Ristvedt
Ex officio

Barry Siegel
Ex officio

Alvin J. Siteman Cancer Center Quality Assurance and Safety Monitoring Committee

Nancy L. Bartlett
Chair

Maria Q. Baggstrom

Dana Kelley

J. Philip Miller

Matthew G. Mutch

Michael J. Naughton

Wade L. Thorstad
Register of Students

Alphabetical List of Students

Note: This may not be a complete listing. Some students may have elected to withhold directory information.

Musa Raed Abdelaziz  Sunrise, FL, Program: MSTP, First Year Medical Student

Amelia Ann Adams  Bloomington, IL, BA, St John's College-Annapol '02, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Barnes-Jewish Hospital, St. Louis, MO

Temidayo Modupe Adebiyi  Dolton, IL, Program: MSTP, First Year Medical Student

Adewale Oluwaseun Adeniran  Jacksonville, FL, BS, Jacksonville University '05, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Dartmouth-Hitchcock Medical Center, Lebanon, NH

Christopher James Adkins  Melbourne, FL, Program: Doctor of Medicine, First Year Medical Student

Rashmi Agarwal  Mclean, VA, Program: Doctor of Medicine, First Year Medical Student

Kwesi Frempong Agyem  London, Ontario, BS, Univ of Western Ontario '07, Program: Doctor of Medicine, Clinical Clerkship Year

Christina Kim Ahn  Kinston, NC, BS, Stanford University '03, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Pediatrics, St. Louis Childrens Hospital, St. Louis, MO

Syed Hassan Akbari  Eureka, MO, BA, Washington University '08, Program: Doctor of Medicine, Second Year Medical Student

Shreeram Akilesh  Bangor, ME, BA, Dartmouth College '00, Program: MSTP, 2009 Graduate, Pathology/Laboratory Medicine, Barnes-Jewish Hospital, St. Louis, MO

Hanny Toban Al-Samkari  Oakwood, OH, BS, University of Dayton '07, Program: Doctor of Medicine, Clinical Clerkship Year

Alexander William Aleem  Atlanta, GA, BS, Johns Hopkins University '06, Program: Doctor of Medicine, Elective Year

Danielle Nicole Alfano  Sussex, WI, BA, University of Minnesota '07, Program: Doctor of Medicine, Clinical Clerkship Year

Benedict Joseph Alter  Dayton, OH, BS, Washington University '03, Program: MSTP, Fifth Year Research

Adam Benjamin Althouse  Sioux City, IA, BS, University of Iowa '08, Program: Doctor of Medicine, Second Year Medical Student

Rachel Elizabeth Amthor  Hoover, AL, Program: Doctor of Medicine, First Year Medical Student

Jacqueline Leigh Anderson  Carthage, MO, BS, Duke University '06, Program: Doctor of Medicine, Elective Year

Lauren Anderson  Bolingbrook, IL, BS, Northwestern University '04, Program: Doctor of Medicine, Clinical Clerkship Year

Ryan Everett Anderson  Arlington, VA, BA, University Of Virginia '08, Program: Doctor of Medicine, Second Year Medical Student

Samuel Michael Anderson  Phoenix, AZ, Program: Doctor of Medicine, First Year Medical Student

Anthony John Apicelli III  Titusville, NJ, BA, Princeton University '99, Program: MSTP, 2009 Graduate, Internal Medicine-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Radiation Oncology, Barnes-Jewish Hospital, St. Louis, MO

Amrita Aranake  Monmouth Junction, NJ, BA, Rutgers University '08, Program: Doctor of Medicine, Second Year Medical Student

Bhooma Aravamuthan  Kalamazoo, MI, BS, Michigan State University '05, Program: MSTP, Second Year Medical Student

Guillermo Javier Ares  Carolina, PR, Program: Doctor of Medicine, First Year Medical Student

Cassandra Armstead-Williams  Moorestown, NJ, BS, Stanford University '05, NM, Rutgers University ', Program: Doctor of Medicine, Elective Year

Theodore Nader Armstrong  Minot, ND, BS, Montana State University '04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Transitional Year, Scripps Mercy Hospital, San Diego, Ca, Emergency Medicine, Univ of California, San Diego Medical
Mackenzie Capshaw Asel Columbia, MO, Program: Doctor of Medicine, First Year Medical Student

Soon Ha Au Hong Kong, BS, Cornell University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Tanya Denise Auzenne Opelousas, LA, BS, Louisiana State University-Baton Rouge ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Marina Avetisyan Staten Island, NY, Program: MSTP, First Year Medical Student

Oluwafunmi Onoife Awonuga Evans, GA, BS, Tufts University ’06, Program: Doctor of Medicine, Elective Year

Roua Azmeh Beavercreek, OH, BS, University of Dayton ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Ellen Hunter Bailey Cincinnati, OH, BS, Washington University ’05, Program: Doctor of Medicine, 2009 Graduate, General Surgery, Vanderbilt University Medical Center, Nashville, TN

Marrissa Leigh Baker Valley Center, CA, BS, University of California-LA ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Sharmini AsalaBalakrishnan Virginia Beach, VA, BA, Harvard University ’05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Ophthalmology, University of Michigan, Ann Arbor, MI

Brundha Balaraman New York, NY, BA, Cornell University ’06, Program: Doctor of Medicine, Elective Year

Jason Michael Baron Sarasota, FL, BS, Massachusetts Institute of Technology ’04, Program: Master of Arts/Doctor of Medicine, 2009 Graduate, Pathology/Laboratory Medicine, Massachusetts General Hospital, Boston, MA

Christopher David Barrett Forest Lake, MN, BS, University Of Minnesota-D ’09, Program: Doctor of Medicine, Second Year Medical Student

Laurel Beth Barrett Keokuk, IA, BS, Brigham Young University ’03, Program: Doctor of Medicine, 2008 Graduate, Emergency Medicine, Brigham & Women's Hospital, Boston, MA

Seth-Emil T Bartel Hoffman Estates, IL, BS, Iowa State University ’03, Program: Doctor of Medicine, Elective Year

Jacob Martin Basak Hoffman Estates, IL, BS, University of Chicago ’05, Program: MSTP, Third Year Research

Laura Alycia Battle Los Altos, CA, Program: Doctor of Medicine, First Year Medical Student

Natalie Christine Battle Los Altos Hills, CA, BS, University of California Berkeley ’04, Program: Doctor of Medicine, Elective Year

Gregory Bean Hollywood, FL, BS, Duke University ’03, Program: MSTP, Second Year Research

Ignacio Becerra-Licha Tucker, GA, Program: Doctor of Medicine, First Year Medical Student

Emily Michelle Beck Chesterfield, MO, Program: Doctor of Medicine, First Year Medical Student

Bahaa Ahmad Bedair Dallas, TX, Program: Doctor of Medicine, First Year Medical Student

Kathleen Elizabeth Beddow Westlake, OH, BS, Miami University-Oxford ’06, Program: Master of Arts/Doctor of Medicine, Master of Arts

Roger V Belizaire Midland, TX, MS, University of Texas Health Science Center ’03, BA, Princeton University ’00, Program: MSTP, Fifth Year Research

Katharine Anne Belmont Winnetka, IL, BA, Williams College ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Julio Benitez Miramar, FL, BS, University of Miami ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Aaron Moens Bertoit Spokane, WA, BA, Carroll College ’08, Program: Doctor of Medicine, Second Year Medical Student

Pavan Bhat Brentwood, TN, BA, Washington University ’08, Program: Doctor of Medicine, Second Year Medical Student

Kristin Page Bibee Lynchburg, VA, BA, Washington University ’06, Program: MSTP, Second Year Research

Agata Agnieszka Bielska Coopersburg, PA, BS, Univ of Delaware ’06, Program: MSTP, Second Year Research

Lauren Kali Biesbroeck Mesa, AZ, BA, University of California - Berkeley ’05, Program: Doctor of Medicine, Elective Year
Laura Nicole Billadello  Saint Louis, MO, BA, Stanford University '06, Program: Doctor of Medicine, Elective Year

Michael Edward Billington  Harrisonburg, VA, BA, Georgetown University '08, Program: Doctor of Medicine, Second Year Medical Student

Ryan Eric Blalock  Calhoun, GA, BS, University of Georgia '08, Program: Doctor of Medicine, Second Year Medical Student

Seth Michael Bloom  Corvalis, MT, BA, Washington University '03, Program: MSTP, Fourth Year Research

Nicholas Michael Bontumasi  Clarkston, MI, Program: Doctor of Medicine, First Year Medical Student

James Andrew Botros  Solon, OH, BA, Boston University '06, Program: Doctor of Medicine, Elective Year

Eric Neil-Jensen Boyum  Hibbing, MN, BA, Gustavus Adolphus College '06, Program: Doctor of Medicine, Elective Year

Jason Alexander Brant  Boulder, CO, BS, Washington University '04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Otolaryngology, Hospital of the University of Pennsylvania, Philadelphia, PA

Hilary Ann Brazeal  Omaha, NE, BA, Washington University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Daniel Saul Brenner  Ann Arbor, MI, BS, University of Michigan -Ann Arbor '06, Program: MSTP, Second Year Medical Student

Jonathan D Breshears  Fulton, MO, BS, Washington University '07, Program: Master of Arts/ Doctor of Medicine, Master of Arts

David Micah Brogan  San Antonio, TX, BH, Vanderbilt University '03, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Mayo School of Graduate Medical Education, Rochester, MN

Justin Ryan Brooks  Chesapeake, VA, BA, University of Maryland, Baltimore '04, Program: MSTP, Fourth Year Research

Kristin Rebecca Brown  Denver, CO, BA, Northwestern University '04, Program: Doctor of Medicine, Elective Year

Monique Wietske Bruinsma  Morenci, MI, BS, Duke University '04, Program: MSTP, Second Year Research

Gregory Randal Bryant  Scotch Plains, NJ, Program: Doctor of Medicine, First Year Medical Student

Joshua Hernandez Buck  Houston, TX, BS, Yale University '04, Program: Doctor of Medicine, Elective Year

Robert Thomas Buckley  Edgewood, NM, BS, University of New Mexico '07, Program: Doctor of Medicine, Second Year Medical Student

Fang Bu  Marietta, GA, BS, Furman University '05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, St. Louis Childrens Hospital, St. Louis, MO

Rebecca Anna Busch  Winnetka, IL, BA, Johns Hopkins University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Catherine Rose Butler  St. Paul, MN, BA, Tufts University '08, Program: Doctor of Medicine, Second Year Medical Student

Jonathan Byrd  Baton Rouge, LA, BS, Tulane University of Louisiana '07, Program: Doctor of Medicine, Clinical Clerkship Year

Lawrence Disini Cabusora  Bay Shore, NY, BA, Harvard University '04, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, St. Vincents Hospital, New York, NY, Diagnostic Radiology, Einstein-Montefiore Medical Center, New York, NY

Sheng Feng Cai  Cincinnati, OH, BS, Duke University '02, Program: MSTP, Sixth Year Research

Colin Douglas Canham  Bismarck, ND, BS, University of North Dakota '07, Program: Doctor of Medicine, Clinical Clerkship Year

Robert Bruce Canham  Bismarck, ND, BA, University of North Dakota '06, Program: Doctor of Medicine, Clinical Clerkship Year

Susan Priscilla Canny  Hamden, CT, BS, Stanford University '03, Program: MSTP, Second Year Research

Dena Grace Caralis  Troy, MI, BA, Northwestern University '05, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, St. Johns Mercy Medical Center, St. Louis, MO

Tracy Michelle Carlson  Albuquerque, NM, BA, University of Tulsa '03, Program: MSTP, Fifth Year Research

Bradley John Carr  Oakton, VA, BA, College of William and Mary '06, Program: Doctor of Medicine, Elective Year

Timothy James Casper  Columbus, OH, BS, University of Dayton '05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Northwestern McGaw Medical Center, Chicago, IL

Karen Ama-Serwa Chachu  New York City, NY, BA, Williams College '01, Program: MSTP, 2009 Graduate, Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA

Sara Marie Champlin  Prescott, WI, BA, Saint Olaf College '05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, University of Minnesota Medical School, Minneapolis, MN

Lauren Qing Chang Sen  Shanghai, BS, Shanghai University '97, BA, University of Hawaii '05, Program: Doctor of Medicine,
2009 Graduate, Internal Medicine-Preliminary, St Marys Health Center, St. Louis, MO, Diagnostic Radiology, University of Pittsburgh Medical Center, Pittsburgh, PA

Ellen Yulin Chang San Jose, CA, Program: Doctor of Medicine, First Year Medical Student

Julietta Hona Chang Seattle, WA, BA, Univ of Pennsylvania ’08, Program: Doctor of Medicine, Second Year Medical Student

Ronald Chang Houston, TX, Program: Doctor of Medicine, First Year Medical Student

Jake Michael Chanin Los Angeles, CA, BA, University of Pennsylvania ’06, MS, University of Pennsylvania ’06, Program: Doctor of Medicine, Elective Year

Anita Nandkumar Chary Savoy, IL, Program: MSTP, First Year Medical Student

Melani Shaun Cheers New Bethlehem, PA, BA, Mount Holyoke College ’02, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA

Carol Weichi Chen Florence, SC, BS, Duke University ’08, Program: Doctor of Medicine, Second Year Medical Student

David Yuan-Sou Chen Troy, MI, BS, University of Michigan, Ann Arbor ’03, Program: MSTP, Fifth Year Research

Edwin Chen Troy, MI, BS, Michigan State University ’08, Program: MSTP, Second Year Medical Student

Wayland Cheng Vancouver, Canada, BS, Wheaton College ’05, Program: MSTP, Third Year Research

Xingxing Shelley Cheng Vancouver, BC, Canada, BS, University of British Columbia ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Sue Si Chen Cordova, TN, BA, Harvard University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Tina H. Chen Reston, VA, Program: Doctor of Medicine, First Year Medical Student

Yee-Shiuan Chen Toronto, Ontario, BS, University of Toronto ’04, Program: MSTP, Third Year Research

Peter Carl Chimenti Ames, IA, BS, University of Iowa ’05, Program: Doctor of Medicine, Elective Year

Phillip Ruben Glover Chisholm Columbia, SC, BS, College of Charleston ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Younggee Choi Columbus, OH, BA, Washington University ’06, Program: Doctor of Medicine (5 Year), Research (Away)

Kevin Chialing Choong Los Altos Hills, CA, BS, University Of California - Berkeley ’08, Program: Doctor of Medicine, Second Year Medical Student

John Spellman Chrisinger Ames, IA, BA, Washington University ’08, Program: Doctor of Medicine, Second Year Medical Student

Matthew John Christopher St. Louis, MO, BA, St. Louis University ’93, Program: MSTP, Clinical Clerkship Year

Fred Bernabe Chu St Louis, MO, BA, Princeton University ’06, Program: Doctor of Medicine, Elective Year

Isabelle Tchougen Chumfong Miami, FL, MS, Yale University ’04, BS, Yale University ’03, AA, Bard College at Simons Rock ’01, Program: Doctor of Medicine, Clinical Clerkship Year

Nicole K Cibulka Madison, WI, Program: Doctor of Medicine, First Year Medical Student

Sarah Nicole Cilvik Sweet Valley, PA, BS, Davidson College ’05, Program: MSTP, Third Year Research

Kal Lowrey Clark Pewee Valley, KY, BS, Arizona State University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Alexander Li Cohen Augusta, GA, BA, Washington University ’03, Program: MSTP, Fifth Year Research

Christopher Browning Cole Duluth, MN, BS, Indiana University-Bloomington ’08, Program: MSTP, Second Year Medical Student

Amy Frances Collins Asheville, NC, BS, Tulane University ’05, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, University Hospital, Cincinnati, OH

Randy Colvin II Snellville, GA, BS, Xavier University of Louisiana ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Mary Katherine Conlon Montgomery Village, MD, BS, Georgetown University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Deporres Cormier II Decatur, GA, BS, Emory University ’07, Program: Doctor of Medicine, Second Year Medical Student

David Graham Cotter Las Vegas, NV, Program: MSTP, First Year Medical Student
Colleen Helen Cotton  Vienna, VA, Program: Doctor of Medicine, First Year Medical Student  
Carrie Christine Coughlin  Chesterfield, MO, BA, Yale University '05, Program: Doctor of Medicine, Elective Year  
Daniel Robert Cox  Morgan, UT, BS, Weber State University '08, Program: Doctor of Medicine, Second Year Medical Student  
Rebecca Craig-Schapiro  Edmond, OK, BS, Univ of Oklahoma - Norman '05, Program: MSTP, Third Year Research  
Nicole Marie Cresalia  West Linn, OR, BS, University of Southern California '05, Program: Doctor of Medicine, Elective Year  
Matthew James Crisp  Pasadena, MD, BS, Washington College '06, Program: MSTP, Second Year Medical Student  
Lara Wiley Crock  Evanston, IL, BA, Barnard College '01, Program: MSTP, Sixth Year Research  
Stephen Arthur Currie  Glenview, IL, BS, University of Notre Dame '08, Program: Doctor of Medicine, Second Year Medical Student  
Jason W Curtis  Richfield, UT, Program: Doctor of Medicine, First Year Medical Student  
Iunia Alexandra Dadarlat  West Lafayette, IN, BS, Purdue University '08, Program: Doctor of Medicine, Second Year Medical Student  
Stacy Zhao Dai  Gurnee, IL, Program: Doctor of Medicine, First Year Medical Student  
Kristen Marie Danley  Germantown, MD, Program: Doctor of Medicine, First Year Medical Student  
Sunil Kumar Das  Rock Hill, SC, BA, Vanderbilt University '06, Program: Doctor of Medicine, Clinical Clerkship Year  
Bethany Amber Davis  Prescott, AZ, Program: Doctor of Medicine, First Year Medical Student  
Ryan Brent Day  Springfield, LA, BS, Millsaps College '05, Program: MSTP, First Year Research  
Douglas James Dearth, Jr  Lancaster, OH, Program: Doctor of Medicine, First Year Medical Student  
Shadmehr Demehri  Vancouver, WA, BS, Washington State University '04, Program: MSTP, Clinical Clerkship Year  
Salil Hemant Desai  Tampa, FL, BA, Rice University '08, Program: Doctor of Medicine, Second Year Medical Student  
Sanyukta Desai  Sugar Land, TX, BS, Rice University '08, Program: Doctor of Medicine, Second Year Medical Student  
Carl J. DeSeilm  Telluride, CO, BA, Dartmouth College '04, Program: MSTP, Third Year Research  
Vinay Neil Dewan  Omaha, NE, BS, Saint Louis University '07, Program: Doctor of Medicine, Clinical Clerkship Year  
Mark Stephen Diamond  Washington, DC, BA, Princeton University '00, Program: MSTP, Clinical Clerkship Year  
Jacob Theodore Didesch  Spokane, WA, BS, Linfield College '08, Program: Doctor of Medicine, Second Year Medical Student  
Jeffrey Nelson Dines  Seattle, WA, Program: Doctor of Medicine, First Year Medical Student  
David Y Ding  Highland Heights, OH, Washington University '06, Program: Doctor of Medicine, Elective Year  
Manuel Doblado  Houston, TX, BA, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year  
Michael Andrew Dobson  Allen, TX, BA, Brigham Young University '05, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, Loyola University Medical Center, Chicago, IL, Loyola University Medical Center, Chicago, IL  
Yanqun Dong  Stratford, CT, Program: Doctor of Medicine, First Year Medical Student  
Colleen Elspeth Donovan  Wayne, PA, BA, Washington University '06, Program: Doctor of Medicine, Second Year Medical Student  
Maia Dorsett  Hastings-on-Hudson, NY, BA, University of Chicago '01, Program: MSTP, Second Year Medical Student  
Scott M Douglas  Nicholasville, KY, Program: Doctor of Medicine, First Year Medical Student  
Erin Elizabeth Dowd  Holliston, MA, BA, Cornell University '03, Program: MSTP, Third Year Research  
Amelia Gialtha Drace  Portola Valley, CA, BS, Stanford University '07, MS, Stanford University '07, Program: Doctor of Medicine, Second Year Medical Student  
Julie Kosto Drobish  Carrolltown, PA, BS, Pennsylvania State University '03, Program: Doctor of Medicine, 2009 Graduate, Anesthesiology, Hospital of the University of Pennsylvania, Philadelphia, PA  
Cassandra Rae Duffy  Holliston, MA, BA, Johns Hopkins University '04, Program: Doctor of Medicine, Clinical Clerkship Year  
Syki Quang Duong  Sarasota, FL, BS, University of Florida '05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, University of Colorado School of Medicine, Denver, CO
Kyle Jennings Eash  Bloomington, IL, BA, Illinois Wesleyan University '02, Program: MSTP, Fourth Year Research

William Alexander Edwards  Philadelphia, PA, BA, Washington University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Adnan Mousa Elhammali  Atlanta, GA, BS, Georgia Institute of Technology '07, Program: MSTP, Second Year Medical Student

Leisha Carol Elmore  Newport News, VA, BS, Duke University '08, Program: Doctor of Medicine, Second Year Medical Student

Roy L. Emanuel  Houston, TX, Program: MSTP, First Year Medical Student

Jennifer Marie Enright  Toledo, OH, BS, University of Notre Dame '08, Program: MSTP, Second Year Medical Student

James Matthew Essenberg  Grand Rapids, MI, BA, Washington University '08, Program: Doctor of Medicine, Second Year Medical Student

Oloruntoyin Omoyeni Falola  Round Rock, TX, BS, University of Texas at Austin '07, Program: Doctor of Medicine, Clinical Clerkship Year

Monique Renee Farrow  Los Angeles, CA, BA, New York University '04, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, New York University School of Medicine, New York, NY

Michelle Toni Feltes  Urbana, IL, BS, Washington University '05, Program: MSTP, Third Year Research

Kathryn Meredith Ferguson  Dwight, IL, Program: Doctor of Medicine, First Year Medical Student

Sarah Alison Finger  Louisville, KY, BA, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year

Daniel Arthur Fisher  Foster City, CA, BS, University of Washington '91, Program: MSTP, Second Year Medical Student

Eric M Flagg  Pocahontas, AR, BS, University Of Arkansas At '08, Program: Doctor of Medicine, Second Year Medical Student

Brian Francis Flaherty  Granite Bay, CA, BS, University of Denver '06, Program: Doctor of Medicine, Elective Year

Saroj Andreena Fleming  Jamaica, NY, BA, Wellesley College '05, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, University of Maryland, Baltimore, MD

Nicholas Christian Foeger  Portola Valley, CA, BA, Brown University '03, Program: MSTP, Fifth Year Research

Leslie Abigail Fosdick  Overland Park, KS, BS, Rice University '07, Program: MSTP, First Year Research

Anthony Todd Fojo  Rockville, MD, BS, Stanford University '05, Program: Doctor of Medicine, Elective Year

Cara Marie Fosdick  Saline, MI, BA, Northwestern University - Evanston '04, Program: Doctor of Medicine (5 Year), Research (Here)

George Mark Freeman  Hickory, NC, BS, Duke University '03, Program: MSTP, Third Year Research

Antonina I. Frolova  Galveston, TX, BS, University of Illinois at Urbana '05, Program: MSTP, Third Year Research

Ryan Kevin Funk  Idaho Falls, ID, BS, Brigham Young University '05, Program: MSTP, Second Year Research

Gregory Mark Gale  Providence, RI, BS, Tufts University '04, Program: Doctor of Medicine, Elective Year

John Michael Gansner  Campbell River, British Columbia, Canada, BA, Harvard University '02, Program: MSTP, Clinical Clerkship Year

Arun Ganti  East Brunswick, NJ, Program: Doctor of Medicine, First Year Medical Student

Eric Jonas Gapud  Atlanta, GA, BS, University Georgia '02, Program: MSTP, Clinical Clerkship Year

Megan Stadum Gauthier  Buffalo, MN, BA, Concordia College at Moorhead '06, Program: Doctor of Medicine, Second Year Medical Student

Bob Geng  Burlington, NJ, BA, Georgetown University '04, MA, Georgetown University '05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Barnes-Jewish Hospital, St. Louis, MO

Ioanna Georgopoulos  Northbrook, IL, BA, Northwestern University - Evanston '06, Program: Doctor of Medicine, Clinical Clerkship Year

Josiah Kenneth Gerds  Sun Prairie, WI, BS, University of Wisconsin-Madison '06, Program: MSTP, First Year Research

David Aaron Germain  Potomac, MD, Program: MSTP, First Year Medical Student

Jessica Christine Germino  Portland, OR, BA, University of Chicago '03, Program: Doctor of Medicine, Clinical Clerkship Year

Michael John Geske  Okemos, MI, BS, University of Michigan, Ann Arbor '04, Program: Master of Arts/ Doctor of Medicine,
Nsangou Tambangre Ghogomu  Friendswood, TX, BS, University of Illinois, Urbana-Champaign ‘04, Program: Master of Arts/Doctor of Medicine, 2009 Graduate, Otolaryngology, Barnes-Jewish Hospital, St. Louis, MO

Marios Giannakis  Athens, Greece, BS, University of Toronto ‘01, Program: MSTP, 2009 Graduate, Internal Medicine, Brigham & Women’s Hospital, Boston, MA

Nadia Vicki Giannakopoulos  University City, MO, BMS, University of Alberta ‘01, Program: MSTP, 2009 Graduate, Pathology/Laboratory Medicine, Univ of Washington Affiliated Hospitals, Seattle, WA

Andrea Marie Giedinghagen  Kansas City, MO, BA, Cornell University ’07, Program: Doctor of Medicine, Second Year Medical Student

Jennifer Gibson Gill  Knoxville, TN, BS, University Georgia ’03, Program: MSTP, Fifth Year Research

Suzanne Michelle Gilman  Highland Park, IL, BS, Brown University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Nathaniel Daum Ginder  Ames, IA, BS, Iowa State University ’03, PH, Iowa State University ’08, Program: Doctor of Medicine, Second Year Medical Student

Charles Ginsberg  Monsey, NY, BA, Yeshiva University ’08, Program: Doctor of Medicine, Second Year Medical Student

Yevgeniy Gitelman  Brooklyn, NY, BA, University of Pennsylvania ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Matthew Frederick Glasser  Atlanta, GA, BS, Emory University ’06, Program: MSTP, Second Year Medical Student

Hilary Paulen Glazer  Spring Valley, NY, BA, Tufts University ’06, Program: Doctor of Medicine (5 Year), Clinical Clerkship Year

Ian Clark Glenn  Dallas, TX, BS, University of Texas - Austin ’08, Program: Doctor of Medicine, Second Year Medical Student

Colin Douglas Godwin  Mercer Island, WA, BA, Amherst College ’07, Program: Doctor of Medicine, Second Year Medical Student

Jakub Godzik  del mar, CA, Program: Doctor of Medicine, First Year Medical Student

Reece Joseph Goiffon  Shoreview, MN, BS, University of Wisconsin-Madison ’07, Program: MSTP, First Year Research

Patricia Ellen Goldhoff  Springfield, MO, AB, Harvard University ’04, Program: Master of Arts/Doctor of Medicine, Elective Year

Guillermo Gonzalez-Araiza  Tucson, AZ, BA, Washington University ‘05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, St. Vincents Hospital, New York, NY, Diagnostic Radiology, Barnes-Jewish Hospital, St. Louis, MO

Elizabeth Leigh Goodman  Santa Monica, CA, BA, Pomona College ’00, Program: Doctor of Medicine, 2008 Graduate, Internal Medicine, Univ. of Washington Affiliated Hospitals, Seattle, WA

Dana Michelle Goverman  Mercer Island, WA, BA, Stanford University ’07, Program: Doctor of Medicine, Second Year Medical Student

Evan Michael Graboyes  Thiensville, WI, BA, Princeton University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Stephen Charles Gradwohl II  Lenexa, KS, Program: Doctor of Medicine, First Year Medical Student

Kristen Suzanne Grant  St. Louis, MO, Program: Doctor of Medicine, First Year Medical Student

Sheena Mary Grant  Creve Coeur, MO, BS, St. Louis University ’02, Program: Doctor of Medicine, Elective Year

Anna Sorensen Graseck  Southington, CT, BA, Smith College ’05, Program: Master of Arts/Doctor of Medicine, Elective Year

Adam M Greenbaum  Houston, TX, BS, Washington University ’05, Program: MSTP, Third Year Research

Sarah Elizabeth Greene  Bronx, NY, BA, Barnard College ’05, Program: MSTP, First Year Research

Jaclyn Mikela Grentzer  Camarillo, CA, BA, Case Western Reserve Univ ’05, Program: Doctor of Medicine (5 Year), Elective Year

Nicole Renee Grieselhuber  Hamilton, OH, BS, Case Western Reserve University ’03, Program: MSTP, Fifth Year Research

Jennifer Lynn Griffith  Indianapolis, IN, BS, Indiana University, Bloomington ’04, BA, Indiana University, Bloomington ’04, Program: MSTP, Fourth Year Research

Kara Jill Gulewicz  Manalapan, NJ, BA, Cornell University ’08, Program: Doctor of Medicine, Second Year Medical Student

Preethi Rao Guniganti  Nacogdoches, TX, BA, Brown University ’05, Program: Doctor of Medicine, Elective Year

Monique Gupta  Macon, GA, BS, Georgia Institute of Technology ’04, Program: Doctor of Medicine, 2009 Graduate, Pediatrics-Preliminary, St. Louis Childrens Hospital, St. Louis, MO, Dermatology, Barnes-Jewish Hospital, St. Louis, MO
Kristin Elizabeth Habel  Roswell, GA, BS, University of Georgia '07, Program: Doctor of Medicine, Clinical Clerkship Year

Carl D Hacker  Leawood, KS, BS, Case Western Reserve University '08, Program: MSTP, Second Year Medical Student

Scott Evan Hadland  White Rock, BC, Canada, BS, McGill University '03, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Children's Hospital, Boston, MA

Tarik Hadzic  Storrs, CT, BS, University of Connecticut '05, BA, University of Connecticut '05, Program: MSTP, Third Year Research

Lee Russell Hafen  Boulder City, NV, BS, University of Nevada-Reno '07, Program: Doctor of Medicine, Clinical Clerkship Year

Suzanna Su-Hiong Hahn  Honolulu, HI, BS, University of North Carolina-Chapel '05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Legacy Emanuel Hospital and Health Center, Portland, OR

David Caleb Ham  Jacksonville, TX, BA, Washington University '05, Program: Doctor of Medicine, Elective Year

Gary Francis Hammen  Fonda, IA, BS, University of Iowa '06, Program: MSTP, First Year Research

Elizabeth Erica Hansen  Asheville, NC, BA, Washington University '02, Program: MSTP, Fifth Year Research

Andrew Thomas Harger  Portland, OR, BA, Portland State University '05, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, Univ of Texas Southwestern Medical School, Dallas, TX

Christin Anne Harless  Chandler, AZ, BS, Arizona State University '07, Program: Doctor of Medicine, Clinical Clerkship Year

James Michael Harper  Baltimore, MD, BM, Rice University '00, Program: Doctor of Medicine, Elective Year

Scott David Harring  Oregon, WI, BA, Grinnell College '07, Program: Doctor of Medicine, Clinical Clerkship Year

Mohammed Haseebuddin  Frederick, MD, BS, University of Maryland '05, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Urology, Washington University School of Medicine, St. Louis, MO

Babak Hassanzadeh  Los Angeles, CA, BS, University of California-LA '07, Program: MSTP, First Year Research

Zena Hassan  Port Washington, NY, BA, New York University '06, Program: Doctor of Medicine, Elective Year

Edward Scott Hawkins  Medina, OH, BA, Case Western Reserve University '06, Program: Doctor of Medicine, Elective Year

Tassy Nicole Hayden  Maryville, MO, BA, Washington University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Wesley Haynes  Chula Vista, CA, BS, University of California - San Diego '06, Program: Doctor of Medicine, Second Year Medical Student

Jennifer Michelle Heeley  Fenton, MO, BA, Washington University '03, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, St. Louis Children's Hospital, St. Louis, MO

Beth Ann Helmink  Teutopolis, IL, BS, Illinois State University '04, Program: MSTP, Fourth Year Research

Miquia Sherree Henderson  Sierra Vista, AZ, BS, University of Arizona '05, Program: MSTP, Second Year Medical Student

Rebecca Cappell Hendrickson  Seattle, WA, BS, University of Washington '01, Program: MSTP, Elective Year

James Charles Higham-Kessler  Norfolk, VA, BA, Brown University '05, Program: Doctor of Medicine, Elective Year

Jason Eric Hill  Ijamsville, MD, BA, Cornell University '02, Program: MSTP, Fifth Year Research

Angela Christine Hirbe  Saint Louis, MO, BA, Washington University '01, Program: MSTP, 2009 Graduate, Internal Medicine, Barnes-Jewish Hospital, St. Louis, MO

Kurt Joseph Hoffmeister  St. Louis, MO, Program: Doctor of Medicine, First Year Medical Student

Carolyn Ann Hogan  Colden, NY, BS, Cornell University '07, Program: MSTP, First Year Research

Brandon Blake Holmes  League City, TX, BA, Oberlin College '07, Program: MSTP, Second Year Medical Student

Katherine Marie Holzem  Wisconsin Dells, WI, BA, University of Pennsylvania '05, Program: MSTP, Second Year Medical Student

Rebecca Suzanne Hoodecheck  Winona, MN, BA, Boston College '03, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Loyola University Medical Center, Chicago, IL, Dermatology, Barnes-Jewish Hospital, St. Louis, MO

Jeffery C Hoover  South Bend, IN, BS, University of Southern California '08, Program: Doctor of Medicine, Second Year Medical Student

David James Hormozdi  Ft. Myers, FL, BS, University of Florida '04, Program: Doctor of Medicine (5 Year), 2009 Graduate, Internal Medicine, New York University School of Medicine, New York, NY
Clifford Chenghwa Hou Chesterfield, MO, BH, Duke University ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Joshua Honghan Hou Virginia Beach, VA, BS, Duke University ’05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, Georgetown University, Washington, DC, Ophthalmology, University of Illinois, Chicago, IL
Kirk Kohwa Hou Chesterfield, MO, BSE, Princeton University ’06, Program: MSTP, First Year Research
Daniel Robert Howard Richmond, VA, BA, University of Pennsylvania ’08, Program: Doctor of Medicine, Second Year Medical Student
Jennifer Hranilovich Lansing, MI, Program: Doctor of Medicine, First Year Medical Student
Esther Yin Hsing Hsiao Singapore, BA, University of Pennsylvania ’04, Program: Doctor of Medicine, Elective Year
Kimberly Meng Hsu Tulsa, TX, BS, Rice University ’05, Program: Master of Arts/ Doctor of Medicine, Elective Year
Shen Te Steven Hsu Vancouver, British Columbia, Canada, BS, Johns Hopkins University ’06, Program: Doctor of Medicine, Elective Year
Wenjing Huang Los Angeles, CA, Program: Doctor of Medicine, First Year Medical Student
William John Hucker St. Louis, MO, BS, Washington University ’01, Program: MSTP, 2009 Graduate, Internal Medicine, Massachusetts General Hospital, Boston, MA
Rachel Marilyn Huckfeldt Bloomington, IN, BA, Washington University ’01, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, Newton-Wellesley Hospital, Newton, MA, Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA
Jena Beth Hudson Valparaiso, IN, BA, Illinois Wesleyan University ’05, Program: Doctor of Medicine, 2009 Graduate, Pathology/Laboratory Medicine, Barnes-Jewish Hospital, St. Louis, MO
Andrew Everett Oliver Hughes Fairfax, VA, Program: MSTP, First Year Medical Student
June Yueheng Hu Houston, TX, Program: Doctor of Medicine, First Year Medical Student
Katie Yi Hu Louisville, KY, BA, Miami University-Oxford ’08, Program: Doctor of Medicine, Second Year Medical Student
Samuel Aaron Hundert Leonardtown, MD, BS, University of Maryland ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Lisa Brooks Hutchison Wilmington, DE, BS, Duke University ’05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics/Psychiatry, Rhode Island Hospital - Brown University, Providence, RI
Yinin Hu Naperville, IL, BA, Northwestern University ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Sarah Katherine Zeller Ihnen Cincinnati, OH, BA, Indiana University ’03, Program: MSTP, Second Year Research
Santoshi Shalini Indrakanti Santa Rosa, CA, Program: Doctor of Medicine, First Year Medical Student
Tara Christine Jackson Lavallette, NJ, BS, Fairfield University ’08, Program: Doctor of Medicine, Second Year Medical Student
Benjamin Clark Jacobs Payson, UT, BA, Utah State University ’04, Program: Doctor of Medicine (5 Year), 2009 Graduate, Transitional Year, University of Pittsburgh Medical Center, Pittsburgh, PA, Diagnostic Radiology, University of Pittsburgh Medical Center, Pittsburgh, PA
Tammy Ting-Yu Shen Jacobs Surrey BC, Canada, BS, Duke University ’03, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Pediatrics, University of Pittsburgh Medical Center, Pittsburgh, PA
Radhika Jagannathan Hopewell Junction, NY, BS, Massachusetts Institute of Technology ’05, Program: MSTP, Third Year Research
Laleh Jalillian San Jose, CA, BS, University of California - Berkeley ’05, Program: Doctor of Medicine, 2009 Graduate
Raymond Alexander Jean Manhasset, NY, Program: Doctor of Medicine, First Year Medical Student
Sofia Kaipaeaea Jensen Kamuela, HI, BA, Yale University ’04, Program: Doctor of Medicine, 2009 Graduate, Psychiatry, Hospital of the University of Pennsylvania, Philadelphia, PA
Thomas Tao Jiang Troy, MI, BS, University of Michigan -Ann Arbor ’05, Program: Doctor of Medicine (5 Year), Research (Here)
Shijing Jia Houghton, MI, BS, University of Michigan-Ann Arbor ’07, Program: Doctor of Medicine, Clinical Clerkship Year
David Xu Jin Columbus, OH, BS, Washington University ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Ramon Jìn Cleveland, OH, BS, Case Western Reserve University ’06, Program: MSTP, Second Year Research
Vovanti Tivoli Jones Durham, NC, Program: MSTP, First Year Medical Student
Anna Helena Jonsson Kansas City, MO, BA, Harvard University ’03, Program: MSTP, Fifth Year Research
Catherine Teresa Jordan Cedar Falls, IA, BA, Agnes Scott College '05, Program: MSTP, Third Year Research

Michelle Amanda Jose-Kampfner Ann Arbor, MI, BS, Yale University '08, Program: Doctor of Medicine, Second Year Medical Student

Jemila Maxine Joseph Diego Martin, Trinidad and Tobago, BS, Howard University '06, Program: Doctor of Medicine (5 Year), Research (Here)

Kavita B. Joshi Cincinnati, OH, Program: Doctor of Medicine, First Year Medical Student

Ian Michael Julie Bethesda, MD, BA, University of Michigan, Ann Arbor '05, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, SUNY Health Science Center Brooklyn, Brooklyn, NY

Na Rae Ju Gladwyne, PA, BA, University of Pennsylvania '07, MS, University of Pennsylvania '07, Program: Doctor of Medicine, Clinical Clerkship Year

Ana Kadkhodayan Collinsville, IL, BS, University of Illinois - Chicago '06, Program: Doctor of Medicine, Elective Year

Gorav Lakhmichand Kalra Boynton Beach, FL, BA, University of Pennsylvania '07, Program: Doctor of Medicine, Clinical Clerkship Year

Ricky Raj Singh Kalra Plano, TX, BA, Rice University '02, Program: Doctor of Medicine, 2009 Graduate, Neurological Surgery, University of Utah Affiliated Hospitals, Salt Lake City, UT

Jason Tao Kan Paducah, KY, BA, Washington University '08, Program: Doctor of Medicine, Second Year Medical Student

Hamid Majid Kargbo Takoma Park, MD, BS, Univ. of Sierra Leone '95, MH, University of Cambridge '98, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Johns Hopkins/Bayview Medical Center, Baltimore, MD

Elliott Adam Karren Kaysville, UT, BS, University of Utah '08, Program: Doctor of Medicine, Second Year Medical Student

Rahul Kasukurthi Portland, OR, BA, University of Southern California '05, Program: Master of Arts/ Doctor of Medicine, Elective Year

Farhan Katchi Houston, TX, BS, Rice University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Bryson William Katona Silver Spring, MD, BA, University of Pennsylvania '02, MS, University of Pennsylvania '02, Program: MSTP, 2009 Graduate, Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA

Travis Nelsen Keeling Duluth, MN, BA, Colby College '00, Program: Doctor of Medicine, Clinical Clerkship Year

Seth Harold Kendler Richmond, VA, BA, Univ of Virginia '04, Program: Doctor of Medicine, Elective Year

Carlie Rebecca Kennedy Huntington, IN, BS, Indiana University '06, Program: Doctor of Medicine, Elective Year

Jessica Lee Kennedy Sharon, CT, BA, University of Virginia '04, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Northwestern McGaw Medical Center, Chicago, IL

Jimmy Kerrigan Gallatin, TN, BA, Vanderbilt University '06, Program: Doctor of Medicine, Elective Year

Jeffrey Scott Ketchersid South Boston, VA, Program: Doctor of Medicine, First Year Medical Student

Mansoor Khan Lindenhurst, NY, BA, SUNY at Stony Brook '05, Program: Doctor of Medicine, Elective Year

Elaine Ching-Feng Khoong Downers Grove, IL, Program: Doctor of Medicine, First Year Medical Student

David Ashkan Kiamanesh Dix Hills, NY, BA, SUNY at Binghamton '05, Program: Doctor of Medicine, 2009 Graduate, Anesthesiology, New York Presbyterian-Columbia Univ Med Ctr, New York, NY

Carolyn Marie Kienstra Saint Louis, MO, BS, Baylor University '06, Program: Doctor of Medicine, Elective Year

Eric Hwan Kim St. Louis, MO, BS, Rice University '08, Program: Doctor of Medicine, Second Year Medical Student

Han Kim Little Rock, AR, Program: Doctor of Medicine, First Year Medical Student

Jonathan Youngsuk Kim Germantown, MD, BS, University of Maryland-College Pk '07, Program: Doctor of Medicine, Clinical Clerkship Year

Young Min Kim Madison, OH, BS, Ohio State University '06, Program: Doctor of Medicine, Clinical Clerkship Year

Robin Patrice Kindred Dallas, TX, BS, Howard University '06, Program: Doctor of Medicine, Clinical Clerkship Year

Charles E Kircher Biddeford, ME, Program: Doctor of Medicine, First Year Medical Student

Jeffrey Alan Kittel Wilton, CT, BA, Amherst College '05, Program: Doctor of Medicine, Clinical Clerkship Year

Brianna Cristine Kolody Flagstaff, AZ, Program: Doctor of Medicine, First Year Medical Student
Heather Kong  San Francisco, CA, BA, University of California - Berkeley ’05, Program: Doctor of Medicine, Elective Year  
Kaveh Kousari  Wilmington, OH, BS, University of Rochester ’04, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Urology, Washington University School of Medicine, St. Louis, MO  
Marie Alana Kozel  Kennesaw, GA, BS, Emory University ’02, Program: MSTP, Fourth Year Research  
Courtney Lynn Kraus  Crystal Lake, IL, BS, Duke University ’05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, St. Johns Mercy Medical Center, St. Louis, MO, Ophthalmology, Washington University School of Medicine, St. Louis, MO  
Lisa Marie Kruse  Mounds View, MN, BS, Washington University ’04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Barnes-Jewish Hospital, St. Louis, MO  
Mukti Vinayak Kulkarni  Cincinnati, OH, BA, Washington University ’06, Program: Doctor of Medicine, Clinical Clerkship Year  
Sidak Michael Kumaratne  Huntington Beach, CA, BS, University of California - Los Angeles ’05, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, Abington Memorial Hospital, Abington, PA  
Nathan Hsiang-En Kung  Arlington, TX, BA, Rice University ’07, Program: Doctor of Medicine, Clinical Clerkship Year  
Sarah Nicole Kunz  St. Louis, MO, BA, Harvard University ’04, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Univ of Washington Affiliated Hospitals, Seattle, WA  
Sachiko Tze-Wei Kuo  Sherman Oaks, CA, BA, University of California Berkeley ’01, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Univ of Washington Affiliated Hospitals, Seattle, WA  
Katherine Cecilia Kurnit  Ann Arbor, MI, BS, University of Michigan-Ann Arbor ’07, Program: Doctor of Medicine, Clinical Clerkship Year  
Daniel Kai-Ming Kwan  Cupertino, CA, BS, University of California - Berkeley ’07, Program: Doctor of Medicine, Second Year Medical Student  
Christina Grace Kwong  Phoenix, AZ, BS, University of Arizona ’08, Program: Doctor of Medicine, Second Year Medical Student  
Lacey Nicole Lagrone  Littleton, CO, BA, University of Colorado - Boulder ’06, Program: Doctor of Medicine, Elective Year  
Jonathan Lake  Parsippany, NJ, BS, Cornell University ’05, Program: MSTP, Second Year Research  
Serena Szu-Min Lam  Millpitas, CA, BS, Duke University ’07, Program: Doctor of Medicine, Second Year Medical Student  
Michael Hunter Lanier  Fayetteville, AR, BA, Washington University ’06, Program: MSTP, Second Year Medical Student  
Timothy Otto Laumann  Chicago, IL, BA, Dartmouth College ’06, Program: MSTP, Second Year Medical Student  
Huay-Zong Law  Houston, TX, BS, University of Texas at Austin ’06, Program: Doctor of Medicine, Elective Year  
Christopher William Arvind Lawrence  Sunnyvale, CA, Program: Doctor of Medicine, First Year Medical Student  
Aaron Han Qiao Lay  Wilmette, IL, BA, University of California - Berkeley ’05, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, Brigham & Women's Hospital, Boston, MA, Urology, Brigham & Women's Hospital, Boston, MA  
Catherine N. Le  Minneapolis, MN, Program: Doctor of Medicine, First Year Medical Student  
Aaron Yuntai Lee  Denver, CO, BA, Harvard University ’04, Program: Master of Science in Clinical Investigation, 2009 Graduate, Transitional Year, St. Johns Mercy Medical Center, St. Louis, MO, Ophthalmology, Washington University School of Medicine, St. Louis, MO  
Ada Ping Lee  Skokie, IL, BS, Northwestern University ’05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Univ of Washington Affiliated Hospitals, Seattle, WA  
Andrew Robert Lee  Orinda, CA, Program: Doctor of Medicine, First Year Medical Student  
Andrew Yoowon Lee  Munster, IN, BA, Washington University ’08, Program: Doctor of Medicine, Second Year Medical Student  
Arthur S Lee  Burnaby, BC, Canada, BA, Harvard University ’08, Program: MSTP, Second Year Medical Student  
Chung Albert Lee  Overland Park, KS, BA, The Johns Hopkins University ’02, Program: MSTP, Sixth Year Research  
Iris Lee  Madison, WI, Program: Doctor of Medicine, First Year Medical Student  
Courtney Marie Lehew  Hampton, VA, BA, Harding University ’05, Program: Doctor of Medicine, Elective Year  
Peng Lei  Louisville, KY, BS, University of Louisville ’05, Program: Doctor of Medicine, Elective Year  
Jeffrey Leong  Reno, NV, BS, University of Nevada-Reno ’07, MS, University of Nevada-Reno ’07, Program: MSTP, Second Year Medical Student
David Michael Levine  Lincolnshire, IL, BA, Pomona College '06, MA, National-Louis University '08, Program: Doctor of Medicine, Second Year Medical Student

Ethan Charles Levin  Buffalo, NY, BS, Cornell University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Vanessa Ann Lewis  Greenwich, CT, BA, Washington University '06, Program: Doctor of Medicine, Elective Year

Amy Margaret Liang  Whitestone, NY, Program: Doctor of Medicine, First Year Medical Student

Kelvin Yu Chung Liang  Bellevue, WA, BS, Johns Hopkins University '06, Program: MSTP, Second Year Research

Holly Brianne Lindsay  Durango, CO, BS, Pacific Union College '05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Children's Hospital, Los Angeles, CA

Kenny F Lin  Sammamish, WA, Program: Doctor of Medicine, First Year Medical Student

Leanne Yuanci Lin  Muncie, IN, Program: Doctor of Medicine, First Year Medical Student

Margaret Jane Lin  Santa Ana, CA, BS, Stanford University '06, Program: Doctor of Medicine, Elective Year

Tzuy-Nong Tina Liou  Taichung, Taiwan, Program: Doctor of Medicine, First Year Medical Student

Angelo B. Lipira  Saint Joseph, MO, BS, University of Missouri '05, Program: Master of Arts/ Doctor of Medicine, Elective Year

Qi Liu  Ellictt City, MD, BS, Duke University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Yisha Liu  Sedgwick, KS, BS, Stanford University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Joseph Gary Livingston  Kingston, Jamaica, BS, Ithaca College '06, Program: Doctor of Medicine, Clinical Clerkship Year

Dominique Virginiie Low  Oak Brook, IL, BS, University of Pennsylvania '06, Program: Doctor of Medicine, Elective Year

Luke Michaud Lowry  Ames, IA, Program: Doctor of Medicine, First Year Medical Student

Ryan David Luginbuhl  Jamison, PA, BA, Cornell University Endowed Colleges '03, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, Brigham & Women's Hospital, Boston, MA, Brigham & Women's Hospital, Boston, MA

Michael Dennis Lunt  Magna, UT, BS, Brigham Young University '06, Program: Doctor of Medicine, Elective Year

Christine Tzy-Yuh Luo  San Jose, CA, BS, University of California '07, Program: Doctor of Medicine, Second Year Medical Student

Christopher Edward Lust  Rochester, MN, BA, Williams College '08, Program: Doctor of Medicine, Second Year Medical Student

Ariel Maia Lyons-Warren  St. Louis, MO, BA, Johns Hopkins University '05, Program: MSTP, Second Year Research

Jennifer Jill Macdonald  Novi, MI, BS, University of Michigan-Ann Arbor '08, Program: Doctor of Medicine, Second Year Medical Student

Matthew Reagan MacEwan  Cleveland, OH, BS, Case Wester Reserve University '04, Program: MSTP, Fourth Year Research

Brendan Mackinnon-Patterson  St. Louis, MO, BS, University of Washington '03, MH, Saint Louis University '06, Program: Doctor of Medicine, Elective Year

Erik Christian Madsen  St. Louis, MO, BS, Furman University '02, Program: MSTP, Elective Year

Grace Kao Mahowald  Montville, NJ, BA, Harvard University '01, Program: MSTP, Clinical Clerkship Year

Michael Anthony Mahowald  Chicago, IL, BA, Swarthmore College '99, Program: MSTP, Clinical Clerkship Year

Raymond Bernard Mailhot  Birmingham, AL, BA, Washington University '08, Program: Doctor of Medicine, Second Year Medical Student

Robert Mestayer Mallery  Houston, TX, BA, Rice University '04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Brigham & Women's Hospital, Boston, MA, Neurology, Massachusetts General Hospital, Boston, MA

Nicole Samantha Maloney  Basseterre, St. Kitts, BA, New York University '05, Program: MSTP, Third Year Research

Mark David Mangano  Cincinnati, OH, BS, University of Cincinnati '08, Program: Doctor of Medicine, Second Year Medical Student

Sara Lynn Manning  London, KY, BS, University of Kentucky '08, Program: Doctor of Medicine, Second Year Medical Student

Mary Claire Manske  St. Louis, MO, BA, Dartmouth College '03, Program: Doctor of Medicine, Elective Year

Albert Mao  Bethesda, MD, BS, Duke University '04, Program: MSTP, Third Year Research
Erin June Martens Waupun, WI, BS, Northwestern University '04, Program: Doctor of Medicine (5 Year), 2009 Graduate, Orthopaedic Surgery, Barnes-Jewish Hospital, St. Louis, MO

Mona Mashayekhi Fort Lee, NJ, BA, University of Chicago '04, Program: MSTP, Third Year Research

Mary Clare Masters Oak Park, IL, Program: Doctor of Medicine, First Year Medical Student

Cheryl Alyssa Mather Albuquerque, NM, BS, Texas A & M '04, Program: Doctor of Medicine, Elective Year

Kareem Mawad Houston, TX, BS, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year

Jori Ellen May Birmingham, AL, Program: Doctor of Medicine, First Year Medical Student

Mona Mashayekhi Fort Lee, NJ, BA, University of Chicago '04, Program: MSTP, Third Year Research

Mary Clare Masters Oak Park, IL, Program: Doctor of Medicine, First Year Medical Student

Cheryl Alyssa Mather Albuquerque, NM, BS, Texas A & M '04, Program: Doctor of Medicine, Elective Year

Kareem Mawad Houston, TX, BS, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year

Jori Ellen May Birmingham, AL, Program: Doctor of Medicine, First Year Medical Student

Mona Mashayekhi Fort Lee, NJ, BA, University of Chicago '04, Program: MSTP, Third Year Research

Mary Clare Masters Oak Park, IL, Program: Doctor of Medicine, First Year Medical Student

Cheryl Alyssa Mather Albuquerque, NM, BS, Texas A & M '04, Program: Doctor of Medicine, Elective Year

Kareem Mawad Houston, TX, BS, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year

Jori Ellen May Birmingham, AL, Program: Doctor of Medicine, First Year Medical Student

Mona Mashayekhi Fort Lee, NJ, BA, University of Chicago '04, Program: MSTP, Third Year Research

Mary Clare Masters Oak Park, IL, Program: Doctor of Medicine, First Year Medical Student

Cheryl Alyssa Mather Albuquerque, NM, BS, Texas A & M '04, Program: Doctor of Medicine, Elective Year

Kareem Mawad Houston, TX, BS, Washington University '04, Program: Master of Arts/ Doctor of Medicine, Elective Year

Jori Ellen May Birmingham, AL, Program: Doctor of Medicine, First Year Medical Student
Stephanie Erin Moore  Fredericksburg, VA, BS, Virginia Polytechnic Institute '08, Program: Doctor of Medicine, Second Year Medical Student

Michael Land Morgan McComb, MS, BA, Rice University '97, BS, University of Mississippi '00, Program: MSTP, 2009 Graduate, Internal Medicine-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Neurology, Barnes-Jewish Hospital, St. Louis, MO

Carrie Laub Morris St. Louis, MO, Program: Doctor of Medicine, First Year Medical Student

Chelsea Morris San Diego, CA, BS, Brigham Young University '08, Program: Doctor of Medicine, Second Year Medical Student

Joshua Arthur Morrison-Reyes Rockford, IL, BS, University of Oklahoma - Norman '05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, George Washington University, Washington, DC, Ophthalmology, George Washington University, Washington, DC

David Eugene Mosley East St. Louis, IL, BS, Florida Agricultural and Mechanical University '07, Program: Doctor of Medicine, Second Year Medical Student

Dubenion Joseph Moss Palmer, AK, BS, University of Florida '07, Program: Doctor of Medicine, Clinical Clerkship Year

Clare Elizabeth Moynihan Oak Park, CA, BS, California Institute of Technology '05, Program: Doctor of Medicine, Elective Year

Brian Muegge Springfield, MO, BA, Princeton University '05, Program: MSTP, Third Year Research

Neil Kunal Munjal Saratoga, CA, BA, Saint Louis University '08, Program: Doctor of Medicine, Second Year Medical Student

Jennifer Michelle Murphy Atlanta, GA, BA, Boston College '05, Program: Doctor of Medicine, Elective Year

Valliammai Muthappan Murrysville, PA, BA, Northwestern University '04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, California Pacific Medical Center, San Francisco, CA, Ophthalmology, Johns Hopkins - Wilmer Eye Institute, Baltimore, MD

Jacob Ward Nadler Buffalo, NY, BS, University of Pittsburgh '01, Program: MSTP, 2009 Graduate, Anesthesiology, Duke University Medical Center, Durham, NC

Lina Nayak Elmhurst, IL, BS, Northwestern University '06, Program: Doctor of Medicine, Elective Year

Nana-Abu Nduom Accra, Ghana, Program: Doctor of Medicine, First Year Medical Student

Kevin Andrew Neal Tallahassee, FL, Program: Doctor of Medicine, First Year Medical Student

Leslie Chana Neems Highland Park, IL, BA, Tufts University '08, Program: Doctor of Medicine, Second Year Medical Student

Nicole L Nejedly Orland Park, IL, BA, Washington University '07, Program: Doctor of Medicine, Second Year Medical Student

Blake Joseph Newman Salt Lake City, UT, BS, University of Utah '07, Program: Doctor of Medicine, Clinical Clerkship Year

Alexander Thien An Nguyen West Palm Beach, FL, Program: Doctor of Medicine, First Year Medical Student

Nhi Hoai Nguyen Seattle, WA, Program: Doctor of Medicine, First Year Medical Student

Hailyn Vendelboe Nielsen Des Moines, IA, BS, University of Iowa '05, Program: MSTP, Third Year Research

Kathryn Elizabeth Niemeyer Saint Louis, MO, BS, University of Michigan-Ann Arbor '07, Program: Doctor of Medicine, Clinical Clerkship Year

Eric Preston Nolley Amherst, VA, BS, Bridgewater College '06, Program: Doctor of Medicine, Second Year Medical Student

Aaron John Norris Colorado Springs, CO, BA, Colorado State University '01, Program: MSTP, Fifth Year Research

Kimberly Lauren Norris Suwanee, GA, BS, University of Georgia '07, Program: Doctor of Medicine, Clinical Clerkship Year

Elizabeth Diane Nunemaker Wellington, KS, BA, Vanderbilt University '06, Program: Doctor of Medicine, Clinical Clerkship Year

Iheoma Yvonne Nwaogu Houston, TX, BS, University of Houston '06, Program: Doctor of Medicine, Elective Year

Gugumobi Onyinye Okafor Enugu, Nigeria, BS, University of Texas - Arlington '05, Program: Doctor of Medicine, Second Year Medical Student

Ugochi C Okoroafor Roswell, GA, Program: Doctor of Medicine, First Year Medical Student

Nora Faye Olomu Hilton Head Island, SC, Program: Doctor of Medicine, Second Year Medical Student

Kazuo Quan Omi Oakland, CA, BS, University of California-Davis '04, Program: MSTP, Second Year Research

Courtney Lynne Ondeck McMurray, PA, Program: MSTP, First Year Medical Student
Jesse Ernest Otero  Albuquerque, NM, BS, Stanford University ’04, Program: MSTP, Clinical Clerkship Year
Eric Michael Padegimas Manchester, CT, Program: Doctor of Medicine, First Year Medical Student
Gerald J Palagallo Peoria, IL, BA, Washington University ’06, Program: Doctor of Medicine, Elective Year
Pankaj Pal Tallahassee, FL, BS, Florida State University ’07, Program: MSTP, First Year Research
Priya Pal Tallahassee, FL, BS, Florida State University ’08, Program: MSTP, Second Year Medical Student
Esther Marie Papp  Riverside, CA, BS, Wheaton College-Wheaton ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Kevin Woo Park Sunnyvale, CA, Program: MSTP, First Year Medical Student
Sungkook Park Daejon, South Korea, BS, University of California, Berkeley ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Sunmin Park Seoul, South Korea, BA, University of Pennsylvania ’08, MS, University of Pennsylvania ’08, Program: MSTP, Second Year Medical Student
Laura Jean Paszkowski Kennesaw, GA, BS, Case Western Reserve University ’06, Program: Master of Arts/ Doctor of Medicine, Elective Year
Amit Patel Dalton, GA, BA, Duke University ’06, Program: Doctor of Medicine, Elective Year
Amit Arun Patel Allegany, NY, BA, New York University ’06, Program: Doctor of Medicine, Elective Year
Ami Yogesh Patel Alpharetta, GA, BS, Emory University ’08, Program: Doctor of Medicine, Second Year Medical Student
Gaurav Hiren Patel Evansville, IN, BA, Washington University ’99, Program: Doctor of Medicine, 2009 Graduate, Psychiatry, New York Presbyterian-Columbia Univ Med Ctr, New York, NY
Kaushal Vinod Patel North Olmsted, OH, BS, Case Western Reserve University ’04, Program: Doctor of Medicine, Elective Year
Kevin Ramesh Patel Rockaway, NJ, BA, Brown University ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Aniruddha Uday Patki Phoenix, AZ, BS, University of Arizona ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Nicole Marie Patterson Rockford, IL, BS, University of Illinois - Urbana/Champaign ’07, Program: MSTP, Second Year Medical Student
Ima Paydar Memphis, TN, Program: Doctor of Medicine, First Year Medical Student
Thomas Michael Pearce Madison, WI, BS, University of Wisconsin - Madison ’04, Program: MSTP, Third Year Research
Chelsea Elizabeth Pearson St. Louis, MO, Program: Doctor of Medicine, First Year Medical Student
David Richard Pearson Woodbury, MN, Program: Doctor of Medicine, First Year Medical Student
Zachary David Permutt Santa Rosa, CA, BS, Univ of California-LA ’06, Program: Doctor of Medicine, Elective Year
Stephen Phillip Persaud Fredonia, NY, BS, Cornell University ’05, Program: MSTP, Second Year Research
Elise Brianne Peterson Columbia, MO, BS, University of Rochester ’07, Program: MSTP, First Year Research
Mitchell Andrew Pet North Olmsted, OH, BS, Case Western Reserve University ’04, Program: Doctor of Medicine, Elective Year
Meredith Ellen Pittman Greer, SC, BA, Furman University ’05, Program: Doctor of Medicine, Elective Year
Joseph Planer North Manchester, IN, Program: MSTP, First Year Medical Student
Jonathan David Power Wichita, KS, BA, University of Kansas ’04, Program: MSTP, First Year Research
Craig Adam Press Scottsdale, AZ, BS, Northwestern University ’02, Program: MSTP, Clinical Clerkship Year
Sarah Proehl Pleasantville, NY, Program: Doctor of Medicine, First Year Medical Student
Erwin Calvo Puente Millsboro, DE, BA, University Delaware ’03, Program: MSTP, Fifth Year Research
Robert Joseph Purger Cleveland, OH, BA, Johns Hopkins University ’07, Program: MSTP, First Year Research
Sara Marie Putnam Wichita, KS, BS, University of Notre Dame ’08, Program: Doctor of Medicine, Second Year Medical Student
Jessica Anne Quinn Atlanta, GA, BS, University of Georgia ’05, Program: Doctor of Medicine, Elective Year
Saju Aby Rajan Staten Island, NY, BS, Temple University ’03, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate
Adam Michael Ralko Livonia, MI, BA, Washington University ’06, Program: Doctor of Medicine, Elective Year
Anna Leah Hartrich Ramsey  St. Louis, MO, BA, Macalester College ’08, Program: Doctor of Medicine, Second Year Medical Student
Ran Ran  Toronto, Canada, Program: Doctor of Medicine, First Year Medical Student
Deepika Suresh Rao  Princeton Jct, NJ, BS, College Of New Jersey ’06, Program: Doctor of Medicine, Elective Year
Tara Jean Rao  Huntington, IN, BS, Duke University ’07, Program: MSTP, First Year Research
Vinod Rao  Monroeville, PA, BS, Massachusetts Institute of Technology ’02, Program: MSTP, Clinical Clerkship Year
Yuan James Rao  Richmond, VA, Program: Doctor of Medicine, First Year Medical Student
Smith Ann Meile Rasmussen  Sioux Falls, SD, BA, University of Kansas ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Jane Alyce Ratner  Saint Louis, MO, BS, Washington University ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Amanda Kate Raya  South Pasadena, CA, BA, Pomona College ’04, Program: Doctor of Medicine (5 Year), 2009 Graduate, Internal Medicine-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Neurology, Barnes-Jewish Hospital, St. Louis, MO
Ronald Luke Rebenitsch  Bismarck, ND, BS, Univ of North Dakota ’05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, Sacred Heart Medical Center, Spokane, WA, Ophthalmology, University of Missouri, Kansas City, MO
Laxminarsimha Daram Reddy  Houston, TX, BS, Stanford University ’03, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Univ of Washington Affiliated Hospitals, Seattle, WA
Jennifer Lynn Reeve  Farmington, MI, BS, Univ of Michigan-Ann Arbor ’04, Program: MSTP, Clinical Clerkship Year
Jennifer Ann Reeves  Tulsa, OK, Program: Doctor of Medicine, First Year Medical Student
Nicholas Wadsworth Reeves  Berkeley, CA, BS, Univ of California - Santa Cruz ’05, Program: Doctor of Medicine, Elective Year
Adam Joseph Rensing  Vincennes, IN, BS, Loyola University ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Sunny Christopher Rhee  Daegu, Korea, BS, Brown University ’06, Program: Doctor of Medicine, Elective Year
Suzanne Michelle Rhodes  Safford, AZ, BS, University of Arizona ’04, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, University of Arizona Affiliated Hospitals, Tucson, AZ
Charles Gerard Rickert  Program: MSTP, Third Year Research
Elijah Wade Riddle  Trussville, AL, BS, Georgia Institute of Technology ’08, Program: Doctor of Medicine, Second Year Medical Student
Matthew Kevin Riddle  Ashland, KY, Program: Doctor of Medicine, First Year Medical Student
Cassandra Nicole Riggs  Bailey, CO, BS, Oklahoma Christian University ’08, Program: Doctor of Medicine, Second Year Medical Student
Andrew Walter Rinne  Cheyenne, WY, BA, Grinnell College ’06, Program: Doctor of Medicine, Clinical Clerkship Year
Jada Lane Roe  Omaha, NE, BA, New York University ’07, Program: Doctor of Medicine, Clinical Clerkship Year
Anjali Rohatgi  Novi, MI, BA, Michigan State University ’07, Program: MSTP, First Year Research
Amanda Elaine Rohn  Cleveland, OH, BA, Case Western Reserve University ’03, Program: Doctor of Medicine, 2009 Graduate, Obstetrics and Gynecology, Hospital of the University of Pennsylvania, Philadelphia, PA
Erin Kerr Romberg  Woodbury, MN, Program: Doctor of Medicine, First Year Medical Student
David Aaron Rosen  Farmington Hills, MI, BA, University of Michigan, Ann Arbor ’02, Program: MSTP, Elective Year
Elizabeth Bernette Roth  Wausau, WI, BS, Valparaiso University ’06, Program: Doctor of Medicine, Elective Year
Adam Gene Rouse  Huxley, IA, BS, Washington University ’04, Program: MSTP, Fourth Year Research
Michelle Catherine Sabo  Solon, OH, BS, Duquesne University ’04, Program: MSTP, Third Year Research
Neil Suresh Sachanandani  Houston, TX, BS, University of Texas at Austin ’05, Program: Doctor of Medicine, 2009 Graduate, Plastic Surgery, Barnes-Jewish Hospital, St. Louis, MO
Jose Bernardo Saenz  Miami, FL, BA, Cornell University ’03, Program: MSTP, Fifth Year Research
Maryam Saheb-Al-Zamani  Toronto, Ontario, Canada, BS, University Of Toronto ’08, Program: Doctor of Medicine, Second Year Medical Student
Gurmukh Singh Sahota Branchburg, NJ, BS, Rutgers University '02, MS, University of Illinois at Urbana '04, Program: MSTP, Third Year Research

Christian Alexander Salinas Kennesaw, GA, BS, University of Georgia '08, Program: Doctor of Medicine, Second Year Medical Student

Lauren Jeanne Saling Camarillo, CA, BA, University of Pennsylvania '08, Program: Doctor of Medicine, Second Year Medical Student

Czarina Elizabeth Sanchez Bentonville, AR, BA, Vanderbilt University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Philip James Sanchez Espanola, NM, BS, Davidson College '07, Program: Doctor of Medicine, Clinical Clerkship Year

Katherine Bernadette Santosa Flushing, NY, BA, Washington University '07, Program: Doctor of Medicine (5 Year), Research (Here)

Ansuman Satpathy Columbia, MO, Program: MSTP, Second Year Research

Jill Jadavji Savla Thousand Oaks, CA, BA, Washington University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Ira Hyman Schachar Dallas, TX, BS, Duke University '04, MS, University of Oxford '05, Program: Doctor of Medicine, Elective Year

Richard Anthony Schenkelberg Cleveland, OH, BA, Case Western Reserve University '06, Program: Doctor of Medicine, Elective Year

Tara Marie Scherer Peoria, IL, BA, Washington University '05, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, Vanderbilt University Medical Center, Nashville, TN

Matthew Robert Schill Gower, IA, Program: Doctor of Medicine, First Year Medical Student

Noah Corey Schoenberg Anchorage, AK, BA, Princeton University '07, Program: Doctor of Medicine, Clinical Clerkship Year

Drew Joel Schwartz Waverly Hall, GA, BS, Duke University '07, Program: MSTP, First Year Research

Forrest Hayes Schwartz Honolulu, HI, BA, Stanford University '08, Program: Doctor of Medicine, Second Year Medical Student

Katherine Elizabeth Schwetye Saint Louis, MO, BA, Washington University '01, Program: MSTP, Fifth Year Research

Adam Cory Searleman Canton, NY, BS, Clarkson University '06, Program: MSTP, Second Year Research

Jennifer Kathryn Sehn Canton, OH, BS, Georgia Institute of Technology '07, Program: Doctor of Medicine, Clinical Clerkship Year

Daniel Nathan Seitz South Bend, IN, Program: Doctor of Medicine, First Year Medical Student

Nicholas Paul Semenkovich St. Louis, MO, Program: MSTP, First Year Medical Student

Midori Jane Seppa Penngrove, CA, BA, Lewis and Clark College '99, Program: MSTP, 2009 Graduate, Pediatrics, Stanford University, Stanford, CA

Ghazal Shafiei Orland Park, IL, BS, Benedictine University '04, BS, Moraine Valley Cmty '04, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, Cook County Hospital, Chicago, IL

Manjool Manoj Shah Latham, NY, BS, University of Pennsylvania '06, Program: Doctor of Medicine, Elective Year

Samir Hemendra Shah Little Rock, AR, BA, University of Pennsylvania '05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, Tufts Medical Center, Boston, MA, Diagnostic Radiology, Beth Israel Deaconess Medical Center, Boston, MA

Lauren Kelly Shea Fairfax Station, VA, BS, Duke University ’07, Program: MSTP, Second Year Medical Student

Eugenia Shekhtman Santa Cruz, CA, BA, University of California, Berkeley '05, Program: Doctor of Medicine, 2009 Graduate, Neurological Surgery, New York University School of Medicine, New York, NY

Jeanne Shen Northridge, CA, BS, Stanford University '05, BS, Stanford University '05, Program: Doctor of Medicine, Elective Year

Susan Qi Shen Ames, IA, Program: MSTP, First Year Medical Student

Yeamie Marie Sheref Willingboro, NJ, BS, University of Pennsylvania ’04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Transitional Year, St. Johns Mercy Medical Center, St. Louis, MO, Diagnostic Radiology, Barnes-Jewish Hospital, St. Louis, MO

Marc Samuel Sherman Cincinnati, OH, BS, University of Michigan-Ann Arbor ’07, Program: MSTP, First Year Research

Shaanan Satish Shetty Tallahassee, FL, BS, Duke University ’07, Program: Doctor of Medicine, Second Year Medical Student
Arman Sheybani  Baton Rouge, LA, BS, Louisiana State University ‘08, Program: Doctor of Medicine, Second Year Medical Student

Travis Layne Shiba Los Angeles, CA, BS, University of California- Los Angeles ‘06, Program: Doctor of Medicine, Clinical Clerkship Year

Shirley Lynn Shih Corona, CA, BA, Pomona College ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Tammy Sue Shirley St. Louis, MO, Program: Doctor of Medicine, First Year Medical Student

Leonid Shmuylovich Newton, MA, BS, Cornell University ‘03, Program: MSTP, Fifth Year Research

Jessica Lynn Silverman Medfield, MA, BS, Georgetown University ‘05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Albert Einstein Medical Center, Philadelphia, PA, Anesthesiology, Beth Israel Deaconess Medical Center, Boston, MA

Philip Mark Sinatra Orlando, FL, BA, Washington University ’06, Program: Doctor of Medicine, Elective Year

Kavitha Rajeswa Sivaraman Salt Lake City, UT, BA, University of Southern California ’06, Program: Doctor of Medicine, Elective Year

Tara Rachelle Skebbia Cedarburg, WI, Program: Doctor of Medicine, First Year Medical Student

Emily Ann Slat Rochester, NY, BS, University of Michigan-Ann Arbor ’07, Program: MSTP, Second Year Medical Student

Clark Samuel Smith Conway, AR, BS, University of Arkansas - Fayetteville ’08, Program: Doctor of Medicine, Second Year Medical Student

Gillian Clare Smith Topanga, CA, BA, Univ of California - Berkeley ’06, Program: Master of Arts/ Doctor of Medicine, Master of Arts

Benjamin David Solomon Rockville, MD, Program: MSTP, First Year Medical Student

Isaac H. Solomon Wilmington, NC, BS, University of N Carolina -Chapel ’05, Program: MSTP, Third Year Research

Joseph B Song Snellville, GA, Program: Doctor of Medicine, First Year Medical Student

Janine Erin Spain Saint Cloud, MN, BS, University of Notre Dame ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Emily Anne Spataro St. Louis, MO, BS, Duke University ’07, Program: Doctor of Medicine, Second Year Medical Student

Kathryn Christine Squires Little Rock, AR, BA, Saint Louis University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Sreevathsan Sridhar Houston, TX, BS, Rice University ’06, Program: Doctor of Medicine, Elective Year

Jeffrey Gei-Hun Stepan Fremont, CA, Program: Doctor of Medicine, First Year Medical Student

Abby Ling-Lee Stephens Evansville, IN, Program: Doctor of Medicine, First Year Medical Student

Amanda Michelle Stewart Springfield, OH, Program: Doctor of Medicine, First Year Medical Student

Christopher Luke Stockburger Fort Collins, CO, Program: Doctor of Medicine, First Year Medical Student

Michael Vincent Stock Saint Louis, MO, BS, Vanderbilt University ’08, Program: Doctor of Medicine, Second Year Medical Student

Geoffrey Evan Stoker Holden, MA, Program: Doctor of Medicine, First Year Medical Student

LeRoy Joseph Stromberg III. St. Louis, MO, BA, Northwestern University ’05, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, MacNeal Memorial Hospital, Berwyn, IL, Diagnostic Radiology, Northwestern McGaw Medical Center, Chicago, IL

David Wesley Strong Southfield, MI, BA, The Johns Hopkins University ’03, Program: MSTP, Fifth Year Research

Jourdan Elizabeth Stuart East Grand Rapids, MI, BA, University of North Carolina - Chapel Hill ’06, Program: Master of Arts/ Doctor of Medicine, Clinical Clerkship Year

Sathish Subramanian Lusaka, Zambia, Program: MSTP, First Year Medical Student

Feng Su Springfield, MO, BS, Duke University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Sanaa Hasan Suwarwardy Danville, CA, Program: Doctor of Medicine, First Year Medical Student

Varun Sundaram Muncie, IN, Program: Doctor of Medicine, First Year Medical Student

Hank Haw Sun Muncie, IN, Program: Doctor of Medicine, First Year Medical Student

Kai Sun Rochester, NY, BS, Washington University ’06, Program: Doctor of Medicine (5 Year), Research (Away)
Lulu Sun Cupertino, CA, BS, McGill University ’07, Program: MSTP, First Year Research
Lulu Sun Cupertino, CA, Program: MSTP, Clinical Clerkship Year
Mengyang Sun Singapore, China, BA, Washington University ’07, Program: Doctor of Medicine, Second Year Medical Student
Michel Muzi Sun Randolph, NJ, BA, Rutgers University ’08, Program: MSTP, Second Year Medical Student
Teerawit Supakorndej Athens, GA, BS, University of Georgia ’07, Program: MSTP, First Year Research
Melanie Marie Sutter Steeleville, IL, BS, Baylor University ’04, Program: Doctor of Medicine (5 Year), 2009 Graduate, Emergency Medicine, Barnes-Jewish Hospital, St. Louis, MO
Yevgeniy V Sychev Ryazan, Russia, BS, University of California-Davis ’05, Program: Doctor of Medicine, Elective Year
Chad Michael Sylvester Racine, WI, BS, University of Notre Dame ’01, Program: MSTP, 2009 Graduate, Psychiatry, Barnes-Jewish Hospital, St. Louis, MO
Jane Wadsworth Symington Washington, DC, BS, Yale University ’07, Program: MSTP, Second Year Medical Student
Nicholas Paul Szrama Darien, IL, BS, University of Illinois - Urbana/Champaign ’06, Program: MSTP, Second Year Medical Student
Neda Tahmasebi Baton Rouge, LA, BS, Louisiana State University - Baton Rouge ’05, Program: Doctor of Medicine, 2009 Graduate, Emergency Medicine, Barnes-Jewish Hospital, St. Louis, MO
Jie Tang Spanish Fort, AL, Program: Doctor of Medicine, First Year Medical Student
Wen Hui Tan Henderson, NV, Program: Doctor of Medicine, First Year Medical Student
Golshid Tazhibi Stockholm, Sweden, BS, University of California-Irvine ’06, Program: Doctor of Medicine, Elective Year
Ameet Indravadan Thaker Cleveland, OH, BA, Washington University ’06, Program: Master of Arts/ Doctor of Medicine, Master of Arts
Jacob Antony Thomas Bradenton, FL, BA, Princeton University ’05, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, University of Washington Affiliated Hospitals, Seattle, WA, Diagnostic Radiology, University of Wisconsin Hospital and Clinicsq, Madison, WI
Jessica Thom Richmond Hill, Ontario, California, BS, Queen's Univ at Kingston ’08, Program: Doctor of Medicine, Second Year Medical Student
Robert John Thorsness Hinsdale, IL, BA, Northwestern University-Evanston ’05, Program: Doctor of Medicine, Elective Year
Kathleen Margaret Tibbetts Wilmington, DE, BS, Georgetown University ’06, Program: Doctor of Medicine, Elective Year
Illya Tolokh Guelph, Ontario, BS, University of Guelph ’04, MS, University of Guelph ’05, Program: MSTP, Third Year Research
Molly Katharine Tran Nashville, TN, BA, Washington University ’04, Program: Master of Arts/ Doctor of Medicine, 2009 Graduate, Emergency Medicine, Barnes-Jewish Hospital, St. Louis, MO
Timothy Trung-Tin Tran Wheaton, IL, BA, Washington University ’04, Program: Doctor of Medicine, 2009 Graduate, Anesthesiology, Barnes-Jewish Hospital, St. Louis, MO
Ilya V. Treskov Saint Louis, MO, BS, Washington University ’01, Program: Doctor of Medicine, Elective Year
Michael Paul Triebwasser Loveland, OH, BS, University of Wisconsin-Madison ’05, Program: MSTP, Second Year Research
Maria Chom Trissal Phoenix, AZ, BS, University of Arizona ’06, Program: MSTP, First Year Research
Jennifer Lee Troyer Evansville, IN, Program: Doctor of Medicine, First Year Medical Student
Shaw-Wei David Tseng Chandler, AZ, Program: MSTP, First Year Medical Student
Diwakar Turaga Chelmsford, MA, BS, University of Massachusetts ’04, Program: MSTP, Fourth Year Research
Jason Eric Turner Indianapolis, IN, BS, Indiana University, Bloomington ’08, Program: Doctor of Medicine, Second Year Medical Student
Nneka Nnaoke Ufere Marietta, GA, BA, Harvard University ’08, Program: Doctor of Medicine, Second Year Medical Student
Sanjeev Vaishnavi Snellville, GA, BS, Georgia Institute of Technology ’02, Program: MSTP, Clinical Clerkship Year
Emiliano Valles Albuquerque, NM, BS, University of New Mexico ’05, Program: Doctor of Medicine, Elective Year
Sara Ann Van Calcar Thorp, WI, BS, University of Wisconsin - Madison ’01, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA
Dorothy Van Oppen  Seattle, WA, Program: Doctor of Medicine, First Year Medical Student

Katherine Anne VandenHeuvel  Chandler, AZ, BS, Northern Arizona University ‘05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Medical College of Wisconsin, Milwaukee, WI

Sumeeta Varma  Pittsburgh, PA, BS, Stanford University ‘06, Program: Doctor of Medicine, Clinical Clerkship Year

John Michael Vaszari  Rancho Palos Ve, CA, BS, University of California - LA ’05, Program: Doctor of Medicine (5 Year), Research (Here)

Luis Alberto Vega  Strongsville, OH, BS, Carnegie Mellon University ’05, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Yale-New Haven Hospital, New Haven, CT

Atheendar Sivabala Venkataramani  Clifton Park, NY, BS, Duke University ’02, Program: Doctor of Medicine, Clinical Clerkship Year

Vivek Verma  Pittsburgh, PA, Program: Doctor of Medicine, First Year Medical Student

Michael C Verre  Niles, IL, Program: Doctor of Medicine, First Year Medical Student

Matthew David Vesely  Tampa, FL, BA, Creighton University ’03, Program: MSTP, Fifth Year Research

Natalie Marie Villafranco  San Antonio, TX, BS, Ohio State University ’08, Program: Doctor of Medicine, Second Year Medical Student

Alecia C Vogel  Freeburg, IL, Program: MSTP, Fourth Year Research

Matthew R Vogt  St. Peters, MO, BA, Washington University ’05, Program: MSTP, Third Year Research

Jamie Sue Votava  Fargo, ND, BS, Yale University ’06, Program: Doctor of Medicine, Elective Year

James Robert Wade  Decatur, IL, BA, Northwestern University ’05, Program: Doctor of Medicine, 2009 Graduate, Surgery-Preliminary, University of Massachusetts Medical School, Worcester, MA, University of Massachusetts Medical School, Worcester, MA

Monica R Walker  Orland Park, IL, BA, Northwestern University ’04, Program: MSTP, Fourth Year Research

Betsy Peixi Wan  Irvine, CA, Program: Doctor of Medicine, First Year Medical Student

Gary Xiaoshi Wang  Chantilly, VA, BA, University of Chicago ’05, Program: MSTP, Third Year Research

Vicky Patricia Wang  Westminster, CA, BS, University of California-LA ’06, Program: Doctor of Medicine, Elective Year

Xinyu Wang  Winchester, MA, Program: MSTP, First Year Medical Student

Yi Wang  Woodinville, WA, Program: Doctor of Medicine, First Year Medical Student

Stephen James Warner  Livonia, MI, BS, University of Michigan - Ann Arbor ’00, Program: MSTP, Clinical Clerkship Year

Julia Therese Warren  Summit, NJ, BA, The University of Chicago ’07, Program: MSTP, First Year Research

Daniel Alexander Wattson  Shorewood, MN, BS, Cornell University ’00, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Brigham & Women's Hospital, Boston, MA, Radiation Oncology, Brigham & Women's Hospital, Boston, MA

Iga Natalia Wegorzewska  Brooklyn, NY, BS, Georgetown University ’04, Program: MSTP, Third Year Research

Elliott M Weiss  Skokie, IL, BA, Washington University ’05, Program: Doctor of Medicine, Elective Year

Brian Richard White  Cape Elizabeth, ME, BA, Harvard University ’04, Program: MSTP, Fourth Year Research

Kristina Lynn Whitesell  Watertown, MN, BA, Gustavus Adolphus College ’05, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Indiana University School of Medicine, Indianapolis, IN

Ryan Thomas Whitesell  Dayton, OH, BS, Wright State University ’04, Program: Doctor of Medicine, 2009 Graduate, Transitional Year, Indiana University School of Medicine, Indianapolis, IN, Diagnostic Radiology, Indiana University School of Medicine, Indianapolis, IN

Eric Brandon Whiteside  Tulsa, OK, BS, Oklahoma State University ’06, Program: Doctor of Medicine, Elective Year

Elizabeth Whitley  Chapel Hill, NC, BA, Scripps College ’05, Program: Master of Arts/ Doctor of Medicine, Elective Year

Krista Renee Whitney  Olathe, KS, Program: Doctor of Medicine, First Year Medical Student

Jared Daniel Wilkinson  Indianapolis, IN, Program: Doctor of Medicine, First Year Medical Student
Alton Cleotha Williams  Huntsville, TN, BS, Austin Peay State University ’06, Program: Doctor of Medicine, Clinical Clerkship Year

Jennifer Brooke Williams  Braggs, OK, BA, Rice University ’06, Program: Doctor of Medicine, Elective Year

Jordan Williams  Dell Rapids, SD, BS, South Dakota State University ’05, Program: MSTP, Third Year Research

Michael Brandon Williams  Mission, TX, BS, Brown University ’08, Program: Doctor of Medicine, Second Year Medical Student

Robert David Wojahn  Denver, CO, Program: Doctor of Medicine, First Year Medical Student

Morgan Bernard Wolfe, Jr  Houma, LA, Program: Doctor of Medicine, First Year Medical Student

Ambroise Hon-Wai Wong  Vancouver, British Columbia, Canada, BS, University of British Columbia ’04, Program: Doctor of Medicine (5 Year), Research (Here)

Elizabeth Copeland Wright  Albuquerque, NM, BA, University of New Mexico ’06, Program: Master of Arts/ Doctor of Medicine, Elective Year

Melinda Youeen Wu  Riverside, CA, BS, University of Southern California ’05, Program: Doctor of Medicine, Clinical Clerkship Year

Tiffany Wu  Parsippany, NJ, BA, New York University ’08, Program: Doctor of Medicine, Second Year Medical Student

Xiaodi Wu  Toronto, Canada, Program: Doctor of Medicine, First Year Medical Student

Yuwei Wu  Shrewsbury, MA, Program: Doctor of Medicine, First Year Medical Student

Nicole Keiko Yamada  Sacramento, CA, BS, University of California - Los Angeles ’04, Program: Doctor of Medicine, 2009 Graduate, Pediatrics, Univ of California San Diego Medical Center, San Diego, CA

David Qianli Ying  Miami, FL, Program: Doctor of Medicine, First Year Medical Student

Michael Cheuk Ming Yip  Buffalo Grove, IL, BS, The University of Illinois at Chicago ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Shaun Robert Yockelson  Eugene, OR, BS, Tulane University ’08, Program: Doctor of Medicine, Second Year Medical Student

Christine C Yokoyama  St. Louis, MO, Program: MSTP, First Year Medical Student

Victoria Hyun Yom  Stevenson Ranch, CA, BA, University of California Berkeley ’05, Program: Doctor of Medicine, Clinical Clerkship Year

Erica Paige Young  Sharon, MA, Program: Doctor of Medicine, First Year Medical Student

Mae Ewing Young  Stillwater, OK, BS, Iowa State University ’05, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, Tulane University School of Medicine, New Orleans, LA

Margaret Ashley Young  Laytonsville, MD, BS, Carnegie Mellon University ’05, Program: MSTP, Third Year Research

Fang Yu  Mcallen, TX, BS, Duke University ’07, Program: Doctor of Medicine, Clinical Clerkship Year

Jennifer Yu  Columbus, IN, BS, Washington University ’08, Program: Doctor of Medicine, Second Year Medical Student

Yousef Zarbalian  Baton Rouge, LA, BS, Louisiana State University - Baton Rouge ’06, Program: Doctor of Medicine, Elective Year

Mark Alan Zaydman  Rochester, NY, BS, Case Western Reserve University ’07, Program: MSTP, First Year Research

David William Zeltser  Valencia, CA, BS, University of California - Berkeley ’04, Program: Doctor of Medicine, 2009 Graduate, Orthopaedic Surgery, University of Washington Affiliated Hospitals, Seat, WA

Joseph Zenga  Medford, MA, BA, Cornell University ’08, Program: Doctor of Medicine, Second Year Medical Student

Wenjing Zeng  Miami, FL, BS, Yale University ’08, Program: Doctor of Medicine, Second Year Medical Student

Cindy Erxin Zhang  St. Louis, MO, BS, Washington University ’06, Program: Doctor of Medicine, Elective Year

Yingxin Zhang  Worcester, MA, BS, Massachusetts Institute of Technology ’07, MH, Massachusetts Institute of Technology ’08, Program: Doctor of Medicine, Second Year Medical Student

Jeff Guanbo Zhao  Burnaby, British Columbia, Canada, BA, Dartmouth College ’08, Program: Doctor of Medicine, Second Year Medical Student

Victoria Nan Zheng  Boulder, CO, BA, University of California - Berkeley ’04, Program: Doctor of Medicine, 2009 Graduate, Internal Medicine-Preliminary, Barnes-Jewish Hospital, St. Louis, MO, Anesthesiology, New York Presbyterian Hospital-Columbia, New York, NY
Summary of Students in the School of Medicine

2008-09

Doctor of Medicine and Doctor of Philosophy Degrees
Graduating Class: 16
Third-Year Class: 14
Fifth-Year Research: 6
Fourth-Year Research: 25
Third-Year Research: 20
Second-Year Research: 31
First-Year Research: 18
Second-Year Class: 23
First-Year Class: 26

Doctor of Medicine and Master of Arts Degrees
Graduating Class: 13
Trainees: 7

Doctor of Medicine and Master of Science in Clinical Investigation Degree
Graduating Class: 4

Doctor of Medicine Degree
Graduating Class: 80
Five-Year Research Program: 2
Third-Year Class: 106
Second-Year Class: 100
First-Year Class: 98

Doctor of Physical Therapy Degree
Graduating Class: 81
Second-Year Class: 77
First-Year Class: 81
Part-Time Students: 36

Doctor of Occupational Therapy Degree
Graduating Class: 14
Third-Year Class: 16
Second-Year Class: 23
First-Year Class: 14

Doctor of Audiology
Graduating Class: 9
Third-Year Class: 13
Second-Year Class: 15
First-Year Class: 10

**Master of Health Administration Degree**
Graduating Class: 2

**Master of Science in Occupational Therapy Degree**
Graduating Class: 41
Second-Year Class: 58
First-Year Class: 0

**Master of Science in Psychiatric Epidemiology**
Graduating Class: 7
First-Year Class: 6

**Master of Science in Genetic Epidemiology**
Graduating Class: 7
First-Year Class: 8
Certificate/SCND: 1

**Master of Science in Deaf Education**
Graduating Class: 14
First-Year Class: 9

**Master of Science in Clinical Investigation**
Graduating Class: 7
Certificate: 16

**Total:** 1074
For a printable version of the School of Medicine campus map, please download this pdf: WU Medical Center Map.pdf

For additional information, see the map at: http://visitor.wustl.edu/medicalmap.pdf
Schools of Washington University

Schools of Washington University

All schools are located at One Brookings Drive, St. Louis, Missouri 63130 except Medicine (660 S. Euclid Ave., St. Louis, Missouri 63110). A University-sponsored shuttle bus travels between the Danforth Campus and the Medical Center at regular intervals.

Arts & Sciences
• College of Arts & Sciences
• Graduate School of Arts & Sciences
• University College

Sam Fox School of Design & Visual Arts
• College of Architecture
• Graduate School of Architecture & Urban Design
• College of Art
• Graduate School of Art

Olin Business School

School of Engineering & Applied Science

School of Law

School of Medicine

George Warren Brown School of Social Work

Alvin J. Siteman Cancer Center Web Site

http://www.siteman.wustl.edu/
ELLIO T EFREM ABBEY, MD  Professor of Clinical Medicine, Internal Medicine, BA CORNELL UNIVERSITY 71, MD NEW YORK UNIVERSITY 75

Camille N Abboud  Siteman Cancer Center, Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation, Washington University School of Medicine, 1973-1974: Intern, American University Hospital, Beirut, Lebanon, 1974-1976: Resident, medicine, University of Medicine and Dentistry of New Jersey and Rutgers University, Piscataway, N.J., 1976-1977: Clinical fellow, hematology, University of Rochester., 1974: MD, American University of Beirut, Beirut, Lebanon, Primary Specialty: Acute myeloid leukemia, chronic myeloid leukemia, myelodysplastic syndrome, myeloproliferative disorders, lymphoma, myeloma, chronic lymphoid leukemia, Board Certified:, 1976: American Board of Internal Medicine, Internal Medicine 1978: American Board of Internal Medicine, Hematology

CAMILLE N. ABBOUD, MD  Professor of Medicine, Internal Medicine, BS AMERICAN UNIVERSITY OF BEIRUT 70, MD AMERICAN UNIVERSITY OF BEIRUT 74

NABIL ABBOUD, MD  Instructor in Anesthesiology, Anesthesiology, BA CHRISTIAN BROTHERS COLLEGE 63, MD ST. JOSEPH UNIVERSITY, BEIRUT 70

SHADI ABDELNOUR  Instructor in Clinical Medicine, Internal Medicine

CHARLES C ABEL, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA WESTMINSTER COLLEGE 52, MD WASHINGTON UNIV IN ST. LOUIS 56

DANA RAY ABENDSCHEIN, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS STATE UNIVERSITY OF NEW YORK 74, PHD PURDUE UNIVERSITY 78

DANA RAY ABENDSCHEIN, PHD  Associate Professor of Medicine, Internal Medicine, BS STATE UNIVERSITY OF NEW YORK 74, PHD PURDUE UNIVERSITY 78

MARC BRUCE ABRAMS, DDENT  Instructor in Clinical Otolaryngology, Otolaryngology, BA UNIVERSITY OF MO KANSAS CITY 68, DDENT UNIVERSITY OF MO KANSAS CITY 72

BARRY K ABRAMSON, MD  Instructor in Clinical Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY 81, MD UNIVERSITY OF MIAMI 85

YOUSEF ABU-AMER, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS HEBREW UNIVERSITY 85, MS HEBREW UNIVERSITY 87, PHD HEBREW UNIVERSITY 93

YOUSEF ABU-AMER, PHD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS HEBREW UNIVERSITY 85, MS HEBREW UNIVERSITY 87, PHD HEBREW UNIVERSITY 93

NADA A ABUMRAD, PHD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS AMERICAN UNIVERSITY OF BEIRUT 72, PHD STATE UNIVERSITY OF NEW YORK 78

NADA A ABUMRAD, PHD  Robert C Atkins Professor of Obesity Research in Medicine, Internal Medicine, BS AMERICAN UNIVERSITY OF BEIRUT 72, PHD STATE UNIVERSITY OF NEW YORK 78

ANINDA BHAT ACHARYA, MD  Instructor in Clinical Neurology, Neurology, BS UNIVERSITY OF KANSAS 92, MD UNIVERSITY OF KANSAS 96, MD UNIVERSITY OF KANSAS 96

SAMUEL I ACHILEFU, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, PHD UNIVERSITY OF NANCY I 91

SAMUEL I ACHILEFU, PHD  Professor of Radiology, Radiology, PHD UNIVERSITY OF NANCY I 91

Samuel I Achilefu  Siteman Cancer Center, Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1991-1993: Postdoctoral research fellow, bioorganic/inorganic chemistry, Oxford University, Oxford, England, 1991: PhD, chemistry, University of Nancy, Nancy, France


JOSEPH J.H. ACKERMAN, PHD  Professor of Radiology, Radiology, BA BOSTON UNIVERSITY 72, PHD COLORADO ST UNIVERSITY 77
JOSEPH J.H. ACKERMAN, PHD Research Professor of Chemistry in Medicine, Internal Medicine, BA BOSTON UNIVERSITY 72, PHD COLORADO ST UNIVERSITY 77

TRACY ADAIR-KIRK, PHD Research Instructor in Medicine, Internal Medicine, PHD UNIVERSITY OF TENNESSEE 99

SUSAN E ADAMS, MD, PHD, BS Assistant Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF KANSAS 77, MD WASHINGTON UNIV IN ST. LOUIS 91, PHD UNIVERSITY OF KANSAS MEDICAL 84, BS UNIVERSITY OF KANSAS 77

SUSAN R ADAMS, MD Instructor in Clinical Medicine, Internal Medicine, BA CARLETON COLLEGE 85, MD UNIVERSITY OF MISSOURI 89

WILLIAM S ADAMS, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 85, MD UNIVERSITY OF MISSOURI 89

DOUGLAS R ADKINS, MD Associate Professor of Medicine, Internal Medicine, BS WRIGHT STATE UNIVERSITY 82, MD WRIGHT STATE UNIVERSITY 86

Douglas R Adkins Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1986-1989: Intern and resident, internal medicine, University of Texas Health Science Center, San Antonio, 1989-1990: Fellow, medical oncology/hematology, University of Texas Health Science Center, San Antonio, 1990-1992: Fellow, bone marrow transplantation, 1986: MD, Wright State University, Dayton, Ohio, Primary Specialty: Head and neck cancer, sarcoma, Board Certified:, 1990, 2000: American Board of Internal Medicine, Internal Medicine

1993, 2003: American Board of Internal Medicine, Medical Oncology

BENARD C ADLER, MD Professor Emeritus of Clinical Otolaryngology, Otolaryngology, BS WASHINGTON UNIV IN ST. LOUIS 37, MD WASHINGTON UNIV IN ST. LOUIS 37

REBECCA L AFT, MD, PHD Associate Professor of Surgery (General Surgery), Surgery, BS UNIV OF WISCONSIN MADISON 78, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD UNIV OF WISCONSIN MADISON 83

SIRAJUDDIN AGHA, MBBS Assistant Professor of Anesthesiology, Anesthesiology, MBBS LIAQUAT MEDICAL COLLEGE 69

ANN C AGNEW, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 86, MD UNIVERSITY OF MISSOURI 89

ARPANA AGRAWAL, PHD Assistant Professor of Psychiatry, Psychiatry, PHD VIRGINIA COMM UNIVERSITY 04

AQEEB AHMAD Assistant Professor of Psychiatry, Psychiatry, PHD VIRGINIA COMM UNIVERSITY 04

NAWAL MONA AHMED Instructor in Clinical Psychiatry, Psychiatry

SUN-YOUNG AHN, MD Instructor in Pediatrics, Pediatrics, BS YONSEI UNIVERSITY 96, MD YONSEI UNIVERSITY 00

GAIL G AHUMADA, MD Associate Professor Emerita of Clinical Medicine, Internal Medicine, BA STANFORD UNIVERSITY 61, MA STANFORD UNIVERSITY 62, MD UNIVERSITY OF CALIFORNIA 72

WALTER JOHN AKERS, DVM, PHD Instructor in Radiology, Radiology, BS UNIVERSITY OF MO COLUMBIA 04, DVM UNIVERSITY OF MO COLUMBIA 04, DVM UNIVERSITY OF MO COLUMBIA 05

Walter J. Akers Siteman Cancer Center, Instructor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 2001: DVM, University of Missouri, Columbia, 2005: PhD, biomedical engineering, University of Missouri

ABDULLA AKFALY Instructor in Clinical Medicine, Internal Medicine

GUSTAV AKK, PhD Assistant Professor of Anesthesiology, Anesthesiology, BS MOSCOW STATE UNIVERSITY 91, PHD STATE UNIV OF NY BUFFALO 97

NATALIA S AKOPYANTS, PHD, MS Research Instructor in Molecular Microbiology, Molecular Microbiology, MS MOSCOW STATE UNIVERSITY 80, PHD INST OF BIOORG CHEM-RUS A OF S 88, MS MOSCOW STATE UNIVERSITY 81

ETIHAD S. AL-FALahi Instructor in Clinical Pediatrics, Pediatrics

MUHAMMAD TAHER AL-LOZI, MD Professor of Neurology, Neurology, BA UNIVERSITY OF PANJAB 76, MS UNIVERSITY OF JORDAN 85, MD UNIVERSITY OF PANJAB 80

INGRID RENEE ALBERT, MD Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BA BARNARD COLLEGE 67, MD SCHOOL NOT LISTED 71

SUZANNE G ALBRECHT Instructor in Clinical Pediatrics, Pediatrics

MATTHEW BRIAN ALBRIGHT, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD UNIVERSITY OF ALABAMA 05

Kassandra Alcaraz Siteman Cancer Center
JORGE M ALEGRE, MD  Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 65

MORRIS ALEX, MD  Assistant Professor Emeritus of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MISSOURI 42, MD WASHINGTON UNIV IN ST. LOUIS 43

MUHAMMAD A ALI, MD  Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 85

PAUL M ALLEN, PHD  Robert L. Kroc Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF MICHIGAN 74, MS UNIVERSITY OF MICHIGAN 77, PHD UNIVERSITY OF MICHIGAN 81

Paul M Allen  Siteman Cancer Center, Robert L. Kroc Professor of Pathology and Immunology, Division of Immunology and Molecular Pathology, Washington University School of Medicine, 1981-1984: Research fellow, pathology, Harvard Medical School, Boston, 1977: MS, Immunology, University of Michigan, Ann Arbor, 1981: PhD, Immunology, University of Michigan, Ann Arbor

HENRY W ALLHOFF, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 76, OD ILLINOIS COLLEGE OF OPTOMETRY 81

ARDIS KAY ALLISON, DOST  Instructor in Clinical Pediatrics, Pediatrics, DOST OKLAHOMA ST UNIVERSITY 80

DONALD CRAIG ALLRED, MD  Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF UTAH 75, MD UNIVERSITY OF UTAH 79

D. Craig Allred  Siteman Cancer Center, Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1979-1981, 1982-1983: Resident, anatomic pathology, University of Connecticut Health Center, Farmington, 1981-1982: Fellow, immunobiology, University of Connecticut Health Center, 1979: MD, University of Utah, Salt Lake City, Primary Specialty: Breast pathology, Board Certified; 1984: American Board of Pathology, Anatomic Pathology

JENIFER ELIZABE ALLSWORTH, PHD  Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, PHD BROWN UNIVERSITY 01

C. ROBERT ALMLI, PHD  Associate Professor of Neurology, Neurology, BS MICHIGAN STATE UNIVERSITY 66, MA MICHIGAN STATE UNIVERSITY 68, PHD MICHIGAN STATE UNIVERSITY 70

C. ROBERT ALMLI, PHD  Associate Professor of Occupational Therapy, Occupational Therapy, BS MICHIGAN STATE UNIVERSITY 66, MA MICHIGAN STATE UNIVERSITY 68, PHD MICHIGAN STATE UNIVERSITY 70

ARGHAVAN ALMONY, MD  Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD UNIVERSITY OF CA LOS ANGELES 04

DAVID HERSHEY ALPERS, MD  William B Kountz Professor of Gerontology in Medicine, Internal Medicine, BA HARVARD UNIVERSITY 56, MD HARVARD UNIVERSITY 60

DENIS IAN ALTMAN, MBBCH  Assistant Professor of Clinical Pediatrics, Pediatrics, MBBCH UNIVERSITY OF THE WITWATERSRA 75

DENIS IAN ALTMAN, MBBCH  Associate Professor of Clinical Neurology, Neurology, MBBCH UNIVERSITY OF THE WITWATERSRA 75

LOUIS ALTSHULER, DDENT  Assistant Professor Emeritus of Clinical Otolaryngology, Otolaryngology, DDENT OHIO STATE UNIVERSITY 45, DDENT OHIO STATE UNIVERSITY 45

LIZETTE ALVAREZ-MONTERO, MD  Instructor in Clinical Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 87, MD SCHOOL NOT LISTED 91

ANASTASSIA AMARO, MD  Research Instructor in Medicine (Pending Dean's Approval), Internal Medicine, MD MOSCOW MEDICAL ACADEMY 99

MARYELLEN AMATO, MD  Instructor in Clinical Radiology, Radiology, BA NOTRE DAME COLLEGE 76, MD CASE WESTERN RESERVE UNIV 81

PATRICIA J AMATO, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BS NOTRE DAME COLLEGE 79, MD SCHOOL NOT LISTED 82

NAVINKUMAR J AMIN  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MS UNIVERSITY OF BOMBAY 66

SHILPA S AMIN, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MO KANSAS CITY 94, MD UNIVERSITY OF MO KANSAS CITY 94

MOHAMAD T AMJAD, MD  Professor of Clinical Pediatrics, Pediatrics, BS SCHOOL NOT LISTED 57, MD SCHOOL NOT LISTED 61

PING AN, MD  Research Assistant Professor of Genetics, Genetics, MD SHANGHAI MEDICAL UNIVERSITY 87

MILAN J. ANADKAT, MD  Assistant Professor of Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF AKRON 97,
Christopher D. Anderson  
Siteman Cancer Center, Assistant Professor of Surgery, Division of General Surgery, Sections of Transplant Surgery and Pancreatic, Hepatobiliary and Gastrointestinal Surgery, Washington University School of Medicine, 1999-2002: Intern and resident, general surgery, Vanderbilt University, Nashville, Tenn., 2002-2004: Research fellow, hepatobiliary surgery, Vanderbilt University, 2004-2006: Senior resident and chief resident, general surgery, Vanderbilt University, 2006, 1999: MD, Emory University, Atlanta, Primary Specialty: Liver, bile duct, gallbladder and pancreatic cancer; laparoscopic liver surgery; liver transplantation; ablative therapies for liver tumors, Board Certified:, 2007: American Board of Surgery, General Surgery

Dale J Anderson  
Instructor in Clinical Psychiatry, Psychiatry, MD Washington Univ in St. Louis 78

Dee Claire Anderson  
Professor of Radiology, Radiology, BS HENDRIX COLLEGE 67, MD Washington Univ in St. Louis 71

Frank Kim Anderson  
Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS University of Illinois 76, MD Northwestern University 80

Richard H Anderson, MD, PhD  
Instructor in Clinical Psychiatry, Psychiatry, BS Brigham Young University 82, MS Brigham Young University 84, MD Saint Louis University 89, PhD Brigham Young University 86

Scott J Anderson, MD, PhD  
Instructor in Clinical Medicine, Internal Medicine, BA University of California 75, MD Duke University 82, PhD Duke University 81

Usha P Andley, PhD  
Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS Delhi University 70, MS Delhi University 72, PhD School Not Listed 77

Usha P Andley, PhD  
Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS Delhi University 70, MS Delhi University 72, PhD School Not Listed 77

Dorothy A Andriole, MD  
Assistant Dean for Student Affairs and Medical Education, Assoc Dean Curriculum, BA New York University 76, MD New York University 80

Dorothy A Andriole, MD  
Associate Professor of Surgery (General Surgery), Surgery, BA New York University 76, MD New York University 80

Gerald L Andriole, MD  
Professor of Surgery (Urologic Surgery), Surgery, BS Pennsylvania State University 76, MD Jefferson Medical College 78

Dora Angelaki, PhD  
Alumni Endowed Professor of Neurobiology, Anatomy & Neurobiology, BS National Technical University 85, MS University of Minnesota 89, PhD University of Minnesota 91

Dana E Ankney, MD  
Instructor in Pediatrics, Pediatrics, BA Washington Univ in St. Louis 01, MD Wake Forest University 05

Andrey P Anokhin, PhD  
Research Associate Professor of Psychiatry, Psychiatry, MS Moscow State University 81, PhD School Not Listed 87

E. James Anthony, MD, PhD  
Professor Emeritus of Psychiatry (Child Psychiatry), Psychiatry, BS School Not Listed 38, MS School Not Listed 41, MD School Not Listed 49, PhD School Not Listed 48

Lucinda L. Antonacci-Fulton  
Research Instructor in Genetics, Genetics, BS Southern Ill Univ Edwardsville 91, MS Southern Ill Univ Edwardsville 92

Amal F. Antoun  
Instructor in Clinical Pediatrics, Pediatrics

John K Applebaum, MD  
Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA Saint Louis University 80, MD Washington University in St. Louis 84

Murray Howard Applebaum, DDENT  
Instructor in Clinical Otolaryngology (DMD), Otolaryngology, DDENT Washington University in St. Louis 83

Catherine M Appleton, MD  
Assistant Professor of Radiology, Radiology, BS University of Florida 96, MD University of Florida 00
<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rajendra Apte, MD, PhD</td>
<td>Assistant Professor of Developmental Biology, Developmental Biology, MD University of Bombay 93, PhD University of Texas Southwest 97</td>
</tr>
<tr>
<td>Rajendra Apte, MD, PhD</td>
<td>Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology &amp; Visual Sci, MD University of Bombay 93, PhD University of Texas Southwest 97</td>
</tr>
<tr>
<td>Scott J Arbaugh, MD</td>
<td>Instructor in Clinical Psychiatry, Psychiatry, BA Saint Louis University 80, MD Saint Louis University 85</td>
</tr>
<tr>
<td>Jeffrey Michael Arbeit, MD</td>
<td>Professor of Cell Biology and Physiology, Cell Biology &amp; Physiology, BS Boston University 72, MD Rush University 76</td>
</tr>
<tr>
<td>Jeffrey Michael Arbeit, MD</td>
<td>Professor of Surgery (Urologic Surgery), Surgery, BS Boston University 72, MD Rush University 76</td>
</tr>
<tr>
<td>Ana Marie Arbelaez Perez, MD</td>
<td>Assistant Professor of Pediatrics, Pediatrics, MD Universidad Nacional de Columbia 96</td>
</tr>
<tr>
<td>Ahmad Beheshti Ardekani, MD</td>
<td>Assistant Professor of Clinical Psychiatry, Psychiatry, MD School Not Listed 74</td>
</tr>
<tr>
<td>Max Quirin Arens, PhD</td>
<td>Associate Professor of Pediatrics, Pediatrics, BS Purdue University 67, PhD VA Polytechnic Inst &amp; State U 71</td>
</tr>
<tr>
<td>Kenneth J Arnold, MD</td>
<td>Assistant Professor of Clinical Surgery (General Surgery), Surgery, BA University of Notre Dame 64, MD Washington Univ in St. Louis 68</td>
</tr>
<tr>
<td>Neva P Arribas, MD, AA</td>
<td>Associate Professor Emerita of Clinical Ophthalmology and Visual Sciences, Ophthalmology &amp; Visual Sci, MD School Not Listed 54, AA School Not Listed 49</td>
</tr>
<tr>
<td>Anna Maria Arroyo, MD</td>
<td>Instructor in Medicine, Internal Medicine, BS University of Akron 99, MD Ohio University 03</td>
</tr>
<tr>
<td>Jennifer L. Arter</td>
<td>Instructor in Clinical Pediatrics, Pediatrics, BS University of Iowa 93</td>
</tr>
<tr>
<td>Swathi Arur, PhD</td>
<td>Research Instructor in Genetics, Genetics, BS Delhi University 94, MS School Not Listed 96, PhD School Not Listed 01</td>
</tr>
<tr>
<td>Phillip V. Asaro</td>
<td>Assistant Professor of Emergency Medicine in Medicine, Internal Medicine</td>
</tr>
<tr>
<td>Sarah Beth Zeff Aschkenasi, MD</td>
<td>Instructor in Pediatrics, Pediatrics, BS Emory University 96, MD Harvard University 02</td>
</tr>
<tr>
<td>Frank Ashall, MD, PhD</td>
<td>Instructor in Clinical Medicine, Internal Medicine, BA Oxford University 80, MD Saint Louis University 98, PhD Oxford University 82</td>
</tr>
<tr>
<td>Elizabeth L Atkinson, MD</td>
<td>Instructor in Clinical Pediatrics, Pediatrics, MD Hahnemann University 94</td>
</tr>
<tr>
<td>Jeffrey Jay Atkinson, MD, BS</td>
<td>Assistant Professor of Medicine, Internal Medicine, BS Loyola College 90, MD Hahnemann University 94, BS Loyola College 90, MD Hahnemann University 94</td>
</tr>
<tr>
<td>Jeffrey Jay Atkinson, MD, BS</td>
<td>Assistant Professor of Pediatrics, Pediatrics, BS Loyola College 90, MD Hahnemann University 94, BS Loyola College 90, MD Hahnemann University 94</td>
</tr>
<tr>
<td>John Patterson Atkinson, MD</td>
<td>Professor of Molecular Microbiology, Molecular Microbiology, BA University of Kansas 65, MD University of Kansas 69</td>
</tr>
<tr>
<td>John Patterson Atkinson, MD</td>
<td>Samuel Grant Professor of Medicine, Internal Medicine, BA University of Kansas 65, MD University of Kansas 69</td>
</tr>
<tr>
<td>Robert K Atteberry</td>
<td>Instructor in Clinical Pediatrics, Pediatrics</td>
</tr>
<tr>
<td>Chandra Aubin, MD</td>
<td>Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BA University of Missouri 83, MD University of Missouri 83</td>
</tr>
<tr>
<td>Vorachart Auethavekiat, MD</td>
<td>Assistant Professor of Medicine, Internal Medicine, MD School Not Listed 81</td>
</tr>
<tr>
<td>Paul F Austin, MD</td>
<td>Associate Professor of Surgery (Urologic Surgery), Surgery, BA Murray St University 87, MD University of Kentucky 91</td>
</tr>
<tr>
<td>James G Avery, MD</td>
<td>Assistant Professor of Clinical Medicine, Internal Medicine, BA Washington Univ in St. Louis 86, MD University of Tennessee 90</td>
</tr>
<tr>
<td>Michael Simon Avidan, MBBC</td>
<td>Associate Professor of Anesthesiology, Anesthesiology, MBBC University of The Witwatersra 91</td>
</tr>
<tr>
<td>Michael Simon Avidan, MBBC</td>
<td>Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, MBBC University of Kansas 69</td>
</tr>
</tbody>
</table>
Certified: American Board of Radiology, Diagnostic Radiology

FRED J BALIS, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF VERMONT 81, MS CORNELL UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 89

MELANIE JANETTE BALL, MD Instructor in Medicine, Internal Medicine, MD ROSS UNIV SCHOOL OF MEDICINE 05

WALTER F BALLINGER, MD Professor Emeritus of Surgery (General Surgery), Surgery, MD UNIVERSITY OF PENNSYLVANIA 48

ROBERT H BALOH, MD, PHD Assistant Professor of Neurology, Neurology, BS BROWN UNIVERSITY 95, MD WASHINGTON UNIV IN ST. LOUIS 01, PHD WASHINGTON UNIV IN ST. LOUIS 05, MD WASHINGTON UNIV IN ST. LOUIS 01

DAVID ANTHONY BALOTA, PHD Professor of Neurology, Neurology, BA UNIVERSITY OF MO ST LOUIS 76, MA UNIVERSITY OF SOUTH CAROLINA 78, PHD UNIVERSITY OF SOUTH CAROLINA 81

JANET MARIE BALOTA, PHD Assistant Professor of Neurology, Neurology, BA UNIVERSITY OF MISSOURI 76, MA UNIVERSITY OF SOUTH CAROLINA 79, PHD UNIVERSITY OF SOUTH CAROLINA 82

JANET MARIE BALOTA, PHD Associate Professor of Occupational Therapy, Occupational Therapy, BA UNIVERSITY OF MISSOURI 76, MA UNIVERSITY OF SOUTH CAROLINA 79, PHD UNIVERSITY OF SOUTH CAROLINA 82

DAVID T BALZER, MD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MO COLUMBIA 81, MD SAINT LOUIS UNIVERSITY 85

DAVID BAN, MD Instructor in Clinical Medicine, Internal Medicine, BA KALAMAZOO COLLEGE 76, MD UNIVERSITY OF OREGON 80

MICHAEL ROMAN BANTON, MD Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry, BA JOHNS HOPKINS UNIVERSITY MEDIC 81, MA SAINT LOUIS UNIVERSITY 85

JIANXIN BAO, PHD Research Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, PHD UNIVERSITY OF FLORIDA 92

JIANXIN BAO, PHD Research Associate Professor of Otolaryngology, Otolaryngology, PHD UNIVERSITY OF FLORIDA 92

ABRAHAM BARAKE, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MARYLAND 76, MD SCHOOL NOT LISTED 83

THOMAS J BARANSKI, MD, PHD Associate Professor of Developmental Biology, Developmental Biology, BS UNIVERSITY OF WISCONSIN MADISON 85, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

THOMAS J BARANSKI, MD, PHD Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF WISCONSIN MADISON 85, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

Thomas J Baranski Siteman Cancer Center, Assistant Professor of Medicine, Division of Endocrinology, Diabetes and Metabolism, Washington University School of Medicine, 1992-1995: Resident, internal medicine, University of California, San Francisco, 1995-1996: Fellow, endocrinology and metabolism, University of California, San Francisco, 1996-1998: Research fellow, endocrinology, University of California, San Francisco, 1992: MD/PhD, molecular cell biology, Washington University, St. Louis, Board Certified.; 1995: American Board of Internal Medicine, Internal Medicine

1997: American Board of Internal Medicine, Endocrinology, Diabetes and Metabolism

DENNIS L BARBOUR, MD, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, BE GEORGIA TECH 95, MD JOHNS HOPKINS UNIVERSITY MEDIC 03, PHD JOHNS HOPKINS UNIVERSITY MEDIC 03

DENNIS L BARBOUR, MD, PHD Assistant Professor of Otolaryngology, Otolaryngology, BE GEORGIA TECH 95, MD JOHNS HOPKINS UNIVERSITY MEDIC 03, PHD JOHNS HOPKINS UNIVERSITY MEDIC 03

DEANNA BARCH, PHD Assistant Professor of Psychology in Psychiatry, Psychiatry, BA NORTHWESTERN UNIVERSITY 87, MA UNIVERSITY OF ILLINOIS 91, PHD UNIVERSITY OF ILLINOIS 93

DEANNA BARCH, PHD Associate Professor of Radiology, Radiology, BA NORTHWESTERN UNIVERSITY 87, MA UNIVERSITY OF ILLINOIS 91, PHD UNIVERSITY OF ILLINOIS 93

PEGGY BARCO Instructor in Occupational Therapy, Occupational Therapy, MED WASHINGTON UNIV IN ST. LOUIS 87

ANGELA L BARD, MD Associate Professor of Clinical Pediatrics, Pediatrics, BS INDIANA UNIVERSITY BLOOMINGTON 76, MD INDIANA UNIVERSITY BLOOMINGTON 81

PHILIP M BARGER, MD Assistant Professor of Medicine (Pending Executive Faculty Approval), Internal Medicine, MD CASE WESTERN RESERVE UNIV 89

WAYNE MORRIS BARNES, PHD Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA UNIVERSITY OF CA RIVERSIDE 69, PHD UNIV OF WISCONSIN MADISON 74
EDWARD M BARNETT, MD, PHD Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIV OF WISCONSIN MADISON 88, MD UNIVERSITY OF IOWA 95, PHD UNIVERSITY OF IOWA 95

JOAQUIN BARNOYA, MD Research Assistant Professor of Surgery (General Surgery), Surgery, MS HARVARD UNIVERSITY 01, MD UNIVERSIDAD DE SAN CARLOS 98

ROBERT L BARRACK, MD Charles F and Joanne Knight Distinguished Professor of Orthopaedic Surgery, Orthopaedic Surgery, MD VANDERBILT UNIVERSITY 80

ERNIE-PAUL BARRETTE, MD Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF RHODE ISLAND 82, MA HARVARD UNIVERSITY 84, MD HARVARD UNIVERSITY 90

MELISSA ANNE BARROW, PHD Research Instructor in Pathology and Immunology, Pathology & Immunology, PHD UNIVERSITY OF QUEENSLAND 03

PERRY J BARTELS, DDENT Instructor in Clinical Otolaryngology, Otolaryngology, BA RIPON COLLEGE 86, DDENT MARQUETTE UNIVERSITY 91

Nancy L Bartlett Siteman Cancer Center, Koman Chair in Medical Oncology, Washington University School of Medicine, 1986-1990: Intern and resident, internal medicine, University of California, San Francisco, 1990-1994: Postdoctoral fellow, medical oncology, Stanford University, Stanford, Calif., 1986: MD, Washington University, St. Louis, Primary Specialty: Hematologic malignancies, lymphoma, Board Certified., 1989: American Board of Internal Medicine, Internal Medicine 1993, 2003: American Board of Internal Medicine, Medical Oncology

NANCY LEE BARTLETT, MD Professor of Medicine, Internal Medicine, BS STANFORD UNIVERSITY 78, MS MASS INST OF TECHNOLOGY (MIT) 79, MD UNIVERSITY OF IOWA 86

Premsri T Barton Siteman Cancer Center, Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1975-1976: Resident, radiology, Hackensack Hospital, Hackensack, N.J., 1976-1978: Resident, radiology, Saint Louis University, 1973: MD, Mahidol University, Bangkok, Thailand, Primary Specialty: Diagnostic radiology and breast imaging, Board Certified., 1978: American Board of Diagnostic Radiology

PREMSRI TANG BARTON, MD Associate Professor of Radiology, Radiology, BS MAHIDOL UNIVERSITY 69, MD MAHIDOL UNIVERSITY 73

ROBERT W BARTON, MD, PHD Assistant Professor of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF CHICAGO 62, MD UNIVERSITY OF CHICAGO 67, PHD UNIVERSITY OF CHICAGO 67

ADIL BASHIR, PHD Research Instructor in Radiology, Radiology, BS UNIV OF ENGINEERING AND TECH 91, MEE MASS INST OF TECHNOLOGY (MIT) 99

DONALD R BASSMAN, MD Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 71, MD WASHINGTON UNIV IN ST. LOUIS 75

STEVEN BASSNETT, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF WALES 82, PHD UNIVERSITY OF EAST ANGLIA 87

STEVEN BASSNETT, PHD Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF WALES 82, PHD UNIVERSITY OF EAST ANGLIA 87

AMY J BASTIAN, PHD Adjunct Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF OKLAHOMA 90, PHD WASHINGTON UNIV IN ST. LOUIS 95

MARIA S BASZIS Instructor in Clinical Pediatrics, Pediatrics

RANDALL JOHN BATEMAN, MD, BS Assistant Professor of Neurology, Neurology, BS WASHINGTON UNIV IN ST. LOUIS 95, MD CASE WESTERN RESERVE UNIV 00, BS WASHINGTON UNIV IN ST. LOUIS 95

MARGARET ELIZAB BAUM, MD, BA Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA SAINT LOUIS UNIVERSITY 97, MD JOHN HOPKINS UNIVERSITY 01, BA SAINT LOUIS UNIVERSITY 97

M. CAROLYN BAUM, PHD Professor of Neurology (Occupational Therapy), Neurology, BS UNIVERSITY OF KANSAS 66, MA WEBSTER UNIVERSITY 79, PHD WASHINGTON UNIV IN ST. LOUIS 93

M. CAROLYN BAUM, PHD Professor of Occupational Therapy, Elias Michael Executive Director of the Program in Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF KANSAS 66, MA WEBSTER UNIVERSITY 79, PHD WASHINGTON UNIV IN ST. LOUIS 93

SUSAN L BAUMER, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF OREGON 69, MD UNIVERSITY OF PENNSYLVANIA 75

BRIAN JOHN BAUSANO Instructor in Emergency Medicine in Medicine, Internal Medicine
FREDERICK D BAUSCHARD, MD  Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BA ALLEGHENY COLLEGE 64, MD UNIVERSITY OF PITTSBURGH 68

DANIEL B BAUWENS, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF NEBRASKA 71, MD WASHINGTON UNIV IN ST. LOUIS 75

MICHAEL D BAVLSIK, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BS SETON HALL UNIVERSITY 87, MD SCHOOL NOT LISTED 91

Melanie D Baxter  Siteman Cancer Center, Genetic/Clinical Counselor, Siteman Cancer Center, Washington University School of Medicine, 2009: MS, genetic counseling, Johns Hopkins University, Baltimore, Primary Specialty: Medical genetics

CHRISTIE A. BAYER, MD  Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 86, MD UNIVERSITY OF MO COLUMBIA 90

SUSAN JOY BAYLISS, MD  Professor of Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF TEXAS AUSTIN 70, MD UNIVERSITY OF TEXAS GALVESTON 74

SUSAN JOY BAYLISS, MD  Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF TEXAS AUSTIN 70, MD UNIVERSITY OF TEXAS GALVESTON 74

RONALD BEACH, MD  Instructor in Clinical Psychiatry, Psychiatry, BS SAINT LOUIS UNIVERSITY 70, MD SAINT LOUIS UNIVERSITY 74

WANDY L. BEATTY, PHD  Research Assistant Professor of Molecular Microbiology, Molecular Microbiology, BS MONTANA STATE UNIVERSITY 89, PHD UNIV OF WISCONSIN MADISON 94

PAUL DOUGLAS BECHERER, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA SOUTHERN ILLINOIS UNIVERSITY 71, OD SCHOOL NOT LISTED 75

ANNE MARIE BECK, MD, BS  Associate Professor of Pediatrics, Pediatrics, BS XAVIER UNIVERSITY 84, MS UNIVERSITY OF CINCINNATI 95, MD SOUTHERN ILLINOIS UNIVERSITY 88, BS UNIVERSITY OF CINCINNATI 97

BERNARD BECKER, MD  Lecturer in Ophthalmology and Visual Sciences, Professor Emeritus of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA PRINCETON UNIVERSITY 41, MD HARVARD UNIVERSITY 44

JULIA M. BECKER, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF MISSOURI 93, MD UNIVERSITY OF MISSOURI 97

ROBERT L BECKER, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA CORNELL UNIVERSITY 65, MD WASHINGTON UNIV IN ST. LOUIS 69

STANLEY C BECKER, MD, PHD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 48, MA WASHINGTON UNIV IN ST. LOUIS 50, MD UNIVERSITY OF CHICAGO 55, PhD WASHINGTON UNIV IN ST. LOUIS 51

WILLIAM L BECKER, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA EARLHAM COLLEGE 82, MA WASHINGTON UNIV IN ST. LOUIS 87, MD WASHINGTON UNIV IN ST. LOUIS 87

DAVID C BEEBE, PHD  Janet and Bernard Becker Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF RHODE ISLAND 66, MS BROWN UNIVERSITY 69, PHD UNIVERSITY OF VIRGINIA 74

DAVID C BEEBE, PHD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF RHODE ISLAND 66, MS BROWN UNIVERSITY 69, PhD UNIVERSITY OF VIRGINIA 74

David C Beebe  Siteman Cancer Center, Janet and Bernard Becker Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine, 1974-1976: Staff fellow, molecular genetics, National Institute of Child Health and Human Development, Bethesda, Md., 1969: MS, biomedical sciences, Brown University, Providence, R.I., 1974: PhD, biology, University of Virginia, Charlottesville

MARK EDWARD BEEHNER, DDENT, MD  Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BS LOYOLA UNIVERSITY 74, DDENT LOYOLA UNIVERSITY 79, MD SAINT LOUIS UNIVERSITY 90

EARL C BEEKS, JR, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BS HOWARD UNIVERSITY 77, MD UNIVERSITY OF MISSOURI 81

SRIDHAR BEERAM  Instructor in Clinical Medicine, Internal Medicine, MS OSMANIA MEDICAL COLLEGE 94

AVRAHAM BEIGELMAN, MD  Instructor in Pediatrics, Pediatrics, MD HEBREW UNIVERSITY 00

JAMES E BELCHER, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF TEXAS AUSTIN 72, MD WASHINGTON UNIV IN ST. LOUIS 76

ANDREW CURRY Belden  Research Instructor in Psychiatry, Psychiatry, BS UNIVERSITY OF MISSOURI 00, MS SAINT LOUIS UNIVERSITY 03
JOE E BELEW, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA CENTRAL METHODIST COLLEGE 53, MD SAINT LOUIS UNIVERSITY 57

RICHARD C BELL, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA NORTHWESTERN UNIVERSITY 84, MD WASHINGTON UNIV IN ST. LOUIS 88

C. ELLIOTT BELL, JR, MD Instructor in Clinical Medicine, Internal Medicine, BS TULANE UNIVERSITY 60, MD TULANE UNIVERSITY 64

DARIO BELTRAN, MD Instructor in Neurology, Neurology, MD UNIVERSIDAD DEL ROSARIO 89

WILLIAM WAITE BENEDICT, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 71, MD WASHINGTON UNIV IN ST. LOUIS 75

KENNETH J BENNETT, MD Associate Professor of Clinical Surgery (General Surgery), Surgery, MD TULANE UNIVERSITY 65

WALTER F BENOIST, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF PENNSYLVANIA 68, MD WASHINGTON UNIV IN ST. LOUIS 72

MAX PRELY BENZAQUEN Instructor in Clinical Neurology, Neurology

TAMMIE LEE SMIT BENZINGER, MD, PHD Assistant Professor of Radiology, Radiology, BA WILLIAMS COLLEGE 93, MD UNIVERSITY OF CHICAGO 00, PHD UNIVERSITY OF CHICAGO 98

Tammie LS Benninger Siteman Cancer Center

GEORGE RICHARD BENZINGER, III, MD, PHD Assistant Professor of Anesthesiology, Anesthesiology, BS CALIFORNIA INSTITUTE TECHNOLO 93, MD UNIVERSITY OF CHICAGO 00, PHD UNIVERSITY OF CHICAGO 98

KATHLEEN MARY BERCHELMANN, MD Instructor in Pediatrics, Pediatrics, BS AMHERST COLLEGE 98, MD UNIVERSITY OF CONNECTICUT 03

GREGG JONATHAN BERDY, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA DUKE UNIVERSITY 79, MD SAINT LOUIS UNIVERSITY 83

SUSAN BERDY, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA BROWN UNIVERSITY 80, MD SAINT LOUIS UNIVERSITY 84

MIKHAILO Y BEREZIN, PHD Instructor in Radiology, Radiology, MS MOSCOW INSTITUTE OF OIL & GAS 87, PHD MOSCOW INSTITUTE OF OIL & GAS 91

Mikhail Y. Berezin Siteman Cancer Center, Instructor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1996-2000: Postdoctoral fellow, chemistry, Monstanto Co., St. Louis, 2003-2004: Postdoctoral research assistant, optical imaging, Washington University, St. Louis, 1987: MSc, chemical engineering, Moscow Institute of Oil and Gas, 1991: PhD, organic chemistry, Moscow Institute of Oil and Gas

CHRISTINE R. BERG, PHD Instructor in Neurology, Neurology, BSOT TUFTS UNIVERSITY 76, MS BOSTON UNIVERSITY 80, PHD WASHINGTON UNIV IN ST. LOUIS 99

CHRISTINE R. BERG, PHD Instructor in Occupational Therapy, Occupational Therapy, BSOT TUFTS UNIVERSITY 76, MS BOSTON UNIVERSITY 80, PHD WASHINGTON UNIV IN ST. LOUIS 99

DOUGLAS E BERG, PHD Alumni Professor of Molecular Microbiology, Molecular Microbiology, BS CORNELL UNIVERSITY 64, PHD UNIVERSITY OF WASHINGTON 69

DOUGLAS E BERG, PHD Professor of Genetics, Genetics, BS CORNELL UNIVERSITY 64, PHD UNIVERSITY OF WASHINGTON 69

DOUGLAS E BERG, PHD Professor of Medicine, Internal Medicine, BS CORNELL UNIVERSITY 64, PHD UNIVERSITY OF WASHINGTON 69

LEONARD BERG, MD Professor Emeritus of Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 45, MD WASHINGTON UNIV IN ST. LOUIS 49

MARTIN BERGMANN, MD Associate Professor Emeritus of Clinical Surgery (Cardiothoracic Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 42, MD WASHINGTON UNIV IN ST. LOUIS 45

DAVID BERK Assistant Professor of Medicine (Dermatology) (Pending Executive Faculty Approval), Internal Medicine

MICHAEL A BERK, MD Associate Professor of Clinical Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 74, MD INDIANA UNIVERSITY BLOOMINGTON 79

LYNDA CHERYL BERKOWITZ Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS UNIVERSITY OF ILLINOIS 81, MS WASHINGTON UNIV IN ST. LOUIS 83

CARLOS BERNAL-MIZRACHI, MD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, MD
CARLOS BERNAL-MIZRACHI, MD  
Assistant Professor of Medicine, Internal Medicine, MD UNIVERSIDAD DEL VALLE MED SCH 90

Ernesto Bernal-Mizrachi Siteman Cancer Center. Assistant Professor of Medicine, Division of Endocrinology, Metabolism and Lipid Research, Washington University School of Medicine, 1991-1993: Resident, internal medicine, Universidad del Valle, Cali, Colombia. 1993-1996: Resident, internal medicine, University of Miami-Jackson Memorial Hospital, 1996-1999: Fellow, endocrinology and metabolism, Washington University, St. Louis, 1989: MD, Universidad del Valle, Cali, Colombia, Primary Specialty: Metabolism, endocrinology, Board Certified., 1996: American Board of Internal Medicine, Internal Medicine

1999: American Board of Internal Medicine, Endocrinology, Diabetes and Metabolism

LISA MARIE BERNHARD, MD  
Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, BA VANDERBILT UNIVERSITY 81, MD LOUISIANA ST UNIVERSITY 85

PAUL M BERNIER, OD  
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS INDIANA STATE UNIVERSITY 83, OD UNIVERSITY OF MISSOURI 87

AARON M BERNSTEIN, MD  
Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 48, MD UNIVERSITY OF CHICAGO 52

KEITH A BERNSTEIN, MD  
Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 87, MD UNIVERSITY OF MISSOURI 87

MARC JORDAN BERNSTEIN, MD  
Instructor in Clinical Medicine, Internal Medicine, BA HAVERFORD COLLEGE 88, MD WASHINGTON UNIV IN ST. LOUIS 92

DOUGLAS R BERNSTEIN, MD  
Instructor in Clinical Medicine, Internal Medicine, BA LEHIGH UNIVERSITY 81, MD UNIVERSITY OF PENNSYLVANIA 83

MARY ELLEN BERTRAND, MD  
Assistant Professor of Neurology, Neurology, BS MCKENDREE COLLEGE 87, MD SOUTHERN ILLINOIS UNIVERSITY 93

MARY ELLEN BERTRAND, MD  
Assistant Professor of Pediatrics, Pediatrics, BS MCKENDREE COLLEGE 87, MD SOUTHERN ILLINOIS UNIVERSITY 93

MONICA BESSLER, MD, PHD  
Professor of Developmental Biology, Developmental Biology, MD UNIVERSITY OF ZURICH 81, PHD UNIVERSITY OF LONDON 94

MONICA BESSLER, MD, PHD  
Professor of Medicine, Internal Medicine, MD UNIVERSITY OF ZURICH 81, PHD UNIVERSITY OF LONDON 94

STEPHEN M BEVERLEY, PHD  
Marvin A Brennecke Professor of Molecular Microbiology, Head of the Department of Molecular Microbiology, Molecular Microbiology, BS CALIFORNIA INSTITUTE TECHNOLO 73, PHD UNIVERSITY OF CALIFORNIA 79

SANJEEV BHALLA, MD  
Associate Professor of Radiology, Radiology, BS YALE UNIVERSITY 90, MD COLUMBIA COLLEGE OF PHY & SURG 94

MYTHILI C. BHARADWAJ  
Instructor in Clinical Medicine, Internal Medicine

SHOBHA BHASKAR, MBBS  
Instructor in Pediatrics, Pediatrics, MBBS BANGALORE UNIVERSITY 94

SAVITA BHAT, MS  
Instructor in Clinical Psychiatry, Psychiatry, MS ST XAVIER'S COLLEGE 80, MS SCHOOL NOT LISTED 89

DEEPTA BHATTACHARYA, PHD  
Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS INDIANA STATE UNIVERSITY 96, PHD UNIVERSITY OF CA BERKELEY 01

RAKHEE KAPADIA BHAYANI, MD  
Instructor in Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 99

SAM B BHAYANI, MD  
Assistant Professor of Surgery (Urologic Surgery), Surgery, BS CORNELL UNIVERSITY 92, MD WASHINGTON UNIV IN ST. LOUIS 96


ANJALI MARUTI BHORADE, MD  
Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD UNIVERSITY OF CHICAGO 99

STANLEY I BIEL, MD  
Instructor in Clinical Medicine, Internal Medicine, BA ROCKFORD COLLEGE 74, MD UNIVERSITY OF ILLINOIS 78

FRANK JOSEPH BIER, OD  
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS
ANDREW J BIERHALS, MD  
Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF PITTSBURGH 93, MPH UNIVERSITY OF PITTSBURGH 96, MD UNIVERSITY OF PITTSBURGH 00

JOELLE BIERNACKI, MD  
Instructor in Radiology, Radiology, BA UNIVERSITY OF MO KANSAS CITY, MD UNIVERSITY OF MO KANSAS CITY

LAURA J BIERUT, MD  
Professor of Psychiatry, Psychiatry, BA HARVARD UNIVERSITY 82, MD WASHINGTON UNIV IN ST. LOUIS 87

SCOTT W BIELST, MD  
Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD UNIVERSITY OF MISSOURI 89

RONALD C BILCHIK, MD  
Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF TOLEDO 63, MD WASHINGTON UNIV IN ST. LOUIS 67

JOSEPH JOHN BILLADELLO, MD  
Associate Professor of Medicine, Internal Medicine, BS STATE UNIVERSITY OF NEW YORK 73, MD GEORGETOWN UNIVERSITY 78

LAWRENCE J BILLY, MD  
Instructor in Clinical Surgery (General Surgery), Surgery, BA YOUNGSTOWN ST UNIVERSITY 62, MD SAINT LOUIS UNIVERSITY 66

ELLEN F BINDER, MD  
Associate Professor of Medicine, Internal Medicine, BA DAVENPORT UNIVERSITY 77, MD WASHINGTON UNIV IN ST. LOUIS 81

ELLEN F BINDER, MD  
Associate Professor of Occupational Therapy, Occupational Therapy, BA DAVENPORT UNIVERSITY 77, MD WASHINGTON UNIV IN ST. LOUIS 81

AARON BIRENBAUM, MD  
Assistant Professor of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 48

WILLIAM D BIRENBAUM, MD  
Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 78, MD UNIVERSITY OF MISSOURI 83

CLIFFORD ALLEN BIRGE, MD  
Assistant Professor of Clinical Medicine, Internal Medicine, BA AMHERST COLLEGE 56, MD WASHINGTON UNIV IN ST. LOUIS 61

STANLEY J BIRGE, MD  
Associate Professor of Medicine, Internal Medicine, BA AMHERST COLLEGE 59, MD WASHINGTON UNIV IN ST. LOUIS 63

REBECCA L BIRKENMEIER  
Instructor in Neurology, Neurology, BS TRUMAN STATE UNIVERSITY 98, MS WASHINGTON UNIV IN ST. LOUIS 01

REBECCA L BIRKENMEIER  
Instructor in Occupational Therapy, Occupational Therapy, BS TRUMAN STATE UNIVERSITY 98, MS WASHINGTON UNIV IN ST. LOUIS 01

THOMAS M BIRKENMEIER, MD  
Assistant Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 78, MD WASHINGTON UNIV IN ST. LOUIS 82

MARK GERALD BIRKMAN, OD  
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 88, OD UNIVERSITY OF MISSOURI 92

JEAN E BIRMINGHAM, MD  
Assistant Professor of Clinical Pediatrics, Pediatrics, BA OHIO WESLEYAN UNIVERSITY 84, MD UNIVERSITY OF MISSOURI 88

ELISA H BIRNBAUM, MD  
Professor of Surgery (General Surgery), Surgery, BS UNIV OF WISCONSIN MADISON 81, MD UNIVERSITY OF ILLINOIS 85


ALAN J BIRTWISTLE  
Assistant Professor of Clinical Neurology, Neurology

MONICA E. BISHOP  
Instructor in Psychiatry, Psychiatry

JOSEPH T BLACK, MD  
Professor of Clinical Neurology, Neurology, BA UNIVERSITY OF ROCHESTER 61, MD SCHOOL NOT LISTED 65

KEVIN J. BLACK, MD  
Associate Professor of Neurobiology, Anatomy & Neurobiology, BS BRIGHAM YOUNG UNIVERSITY 86, MD DUKE UNIVERSITY 90
KEVIN J. BLACK, MD  Associate Professor of Neurology, Neurology, BS BRIGHAM YOUNG UNIVERSITY 86, MD DUKE UNIVERSITY 90

KEVIN J. BLACK, MD  Associate Professor of Psychiatry, Psychiatry, BS BRIGHAM YOUNG UNIVERSITY 86, MD DUKE UNIVERSITY 90

KEVIN J. BLACK, MD  Associate Professor of Radiology, Radiology, BS BRIGHAM YOUNG UNIVERSITY 86, MD DUKE UNIVERSITY 90

LYNN BENNETT BLACKBURN, PHD  Assistant Professor of Clinical Neurology, Neurology, BS UNIV OF WISCONSIN MADISON 68, MA INDIANA UNIVERSITY BLOOMINGTON 70, PHD INDIANA UNIVERSITY BLOOMINGTON 72

HULDHAH C BLAMOVILLE, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS QUEENS COLLEGE 59, MD MEHARRY MED COLLEGE 65, MD UNIVERSITY OF LONDON 69

VALERIE BLANC, PHD  Research Instructor in Medicine, Internal Medicine, MS SCHOOL NOT LISTED 92, PHD SCHOOL NOT LISTED 95

MELVIN S BLANCHARD, MD  Associate Professor of Medicine, Director of Residency Program, Department of Internal Medicine, Internal Medicine, BBA TREVECCA NAZARENE COLLEGE 87, MD UNIVERSITY OF TENNESSEE 94

ROBERT E. BLANKENSHIP, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS NEBRASKA WESLEYAN UNIVERSITY 70, PHD UNIVERSITY OF CA BERKELEY 75

THOMAS J BLANKE, SR, MD  Instructor in Surgery (General Surgery), Surgery, MD WASHINGTON UNIV IN ST. LOUIS 71

KEVIN J BLANTON  Instructor in Clinical Pediatrics, Pediatrics

ANDREW N BLATT, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA DUKE UNIVERSITY 87, MA WASHINGTON UNIV IN ST. LOUIS 91, MD WASHINGTON UNIV IN ST. LOUIS 92

SUSAN A BLATTEL, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS SAINT LOUIS UNIVERSITY 88, MD SAINT LOUIS UNIVERSITY 92

PABLO M BLAZQUEZ GAMEZ, PHD  Research Assistant Professor of Otolaryngology, Otolaryngology, PHD UNIVERSITY OF SEVILLE 98

RICHARD BLIGH, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MARYLAND 77, MD SCHOOL NOT LISTED 93

KERIL J. BLIGHT, PHD, BS  Assistant Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF ADELAIDE 91, BS UNIVERSITY OF ADELAIDE 95, BS UNIVERSITY OF ADELAIDE 95, MD UNIVERSITY OF ADELAIDE 91

KEVIN JAY BLINDER, MD  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD UNIVERSITY OF MO KANSAS CITY 85

MOREY A BLINDER, MD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF NOTRE DAME 77, MD SAINT LOUIS UNIVERSITY 81

MOREY A BLINDER, MD  Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 77, MD SAINT LOUIS UNIVERSITY 81

Morey A Blinder  Siteman Cancer Center, Associate Professor of Medicine, Division of Hematology, Washington University School of Medicine, 1981-1984: Resident, internal medicine, University of Illinois College of Medicine, Chicago, 1984-1986: Fellow, hematology, University of Washington, Seattle, 1986-1990: Postdoctoral research fellow, hematology-oncology, Washington University, St. Louis, 1981: MD, Saint Louis University School of Medicine, Primary Specialty: Bleeding disorders, chronic leukemia, myeloma, anemia, iron deficiency anemia, red blood cell disorders, sickle cell disease, venous thromboembolism, transfusion therapy, Von Willebrand's disease, hemophilia, anticoagulation and blood thinners, Board Certified:, 1984: American Board of Internal Medicine, Internal Medicine

1987: American Board of Internal Medicine, Medical Oncology
1988: American Board of Internal Medicine, Hematology

Charles Bloch  Siteman Cancer Center

CHARLES D BLOCH, PHD  Associate Professor of Radiation Oncology (Pending Executive Faculty Approval), Radiation Oncology, BS WAYNE STATE UNIVERSITY 78, MS MICHIGAN STATE UNIVERSITY 83, PHD MICHIGAN STATE UNIVERSITY 87

GORDON R BLOOMBERG, MD, BS  Associate Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF ILLINOIS 55, MD UNIVERSITY OF ILLINOIS 59, BS UNIVERSITY OF ILLINOIS 55

JEFFREY D BLOSS  Adjunct Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology

Kendall J Blumer  Siteman Cancer Center, Professor of Cell Biology and Physiology, Washington University School of Medicine,

KENDALL JAY BLUMER, PHD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA RICE UNIVERSITY 77, PHD DUKE UNIVERSITY 86

TRINA BLYTHE, MD  Instructor in Clinical Pediatrics, Pediatrics, BA HARVARD RADCLIFF 92, MD ALBANY MEDICAL COLLEGE 96

JAMES C BOBROW, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA YALE UNIVERSITY 66, MD JOHNS HOPKINS UNIVERSITY MEDIC 70

IMRE BODO  Adjunct Instructor in Medicine, Internal Medicine

GEORGE M BOHIGIAN, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 61, MD SAINT LOUIS UNIVERSITY 65

BARBARA ANN BOHNE, PHD  Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA WASHINGTON UNIV IN ST. LOUIS 67, PHD WASHINGTON UNIV IN ST. LOUIS 71

BARBARA ANN BOHNE, PHD  Professor of Otolaryngology (Neurobiology), Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 67, PHD WASHINGTON UNIV IN ST. LOUIS 71

IRVING BOIME, PHD  Professor of Developmental Biology, Developmental Biology, BS ST LOUIS COLLEGE OF PHARMACY 64, MS PURDUE UNIVERSITY 66, PHD WASHINGTON UNIV IN ST. LOUIS 70

IRVING BOIME, PHD  Professor of Reproductive Biology in Obstetrics and Gynecology, Obstetrics & Gynecology, BS ST LOUIS COLLEGE OF PHARMACY 64, MS PURDUE UNIVERSITY 66, PHD WASHINGTON UNIV IN ST. LOUIS 70

JOHN P BOINEAU, MD  Professor of Medicine, Internal Medicine, MD DUKE UNIVERSITY 59

JOHN P BOINEAU, MD  Professor of Surgery (Cardiothoracic Surgery), Surgery, MD DUKE UNIVERSITY 59

JOSHUA P BOLDT  Instructor in Clinical Pediatrics, Pediatrics

MICHAEL BOLGER  Instructor in Clinical Medicine, Internal Medicine

ISAAC BONIUK, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS DALHOUSIE UNIVERSITY 58, MD DALHOUSIE UNIVERSITY 62

JAMES SCOTT BONNER, MD  Instructor in Clinical Neurology, Neurology, BA DRURY COLLEGE 76, MD UNIVERSITY OF MISSOURI 80

BENJE BOONSHAFT, MD  Assistant Professor Emeritus of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 57, MD WASHINGTON UNIV IN ST. LOUIS 61

INGRID B BORECKI, PHD  Associate Professor of Biostatistics, Biostatistics, BS UNIVERSITY OF ILLINOIS 77, MS UNIVERSITY OF HAWAII 80, PHD UNIVERSITY OF HAWAII 81

INGRID B BORECKI, PHD  Associate Professor of Genetics, Genetics, BS UNIVERSITY OF ILLINOIS 77, MS UNIVERSITY OF HAWAII 80, PHD UNIVERSITY OF HAWAII 81

Ingrid B Borecki  Siteman Cancer Center, Associate Professor of Genetics, Washington University School of Medicine, 1978-1979: Predoctoral fellow, human genetics, National Institutes of Health, Bethesda, Md., 1983-1986: Postdoctoral fellow, psychiatry and biostatistics, National Institutes of Health, 1980: MS, genetics, University of Hawaii, Honolulu, 1981: PhD, genetics, University of Hawaii

BERNITA BORN-WOLF, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BN SAINT LOUIS UNIVERSITY 78, OD UNIVERSITY OF MO ST LOUIS 87

BENJAMIN A BOROWSKY, MD  Professor of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 58

JONATHAN D BORTZ, MD  Instructor in Clinical Medicine, Internal Medicine, MD UNIVERSITY OF THE WITWATERSRRA 79

WALTER R BOSCH, PHS  Research Assistant Professor of Radiation Oncology, Radiation Oncology, BE WASHINGTON UNIV IN ST. LOUIS 80, MS WASHINGTON UNIV IN ST. LOUIS 83, PHS WASHINGTON UNIV IN ST. LOUIS 90

RON BOSE, MD, PHD, BS  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA UNIVERSITY OF RHODE ISLAND 91, MD CORNELL UNIVERSITY 99, PHD CORNELL UNIVERSITY 98, BS UNIVERSITY OF RHODE ISLAND 91, PHD CORNELL UNIVERSITY 98

RON BOSE, MD, PHD, BS  Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF RHODE ISLAND 91, MD CORNELL UNIVERSITY 99, PHD CORNELL UNIVERSITY 98, BS UNIVERSITY OF RHODE ISLAND 91, PHD CORNELL UNIVERSITY 98

Ron Bose  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology,
Washington University School of Medicine, 1999-2002: Intern and resident, internal medicine, Washington University, St. Louis, 2002-2007: Fellow, medical oncology, Johns Hopkins University, Baltimore, Md., 1998: PhD, pharmacology and biochemistry, Cornell University, New York, 1999: MD, Cornell University, Primary Specialty: Breast cancer, HER2 positive breast cancer, Board Certified:, 2002: American Board of Internal Medicine, Internal Medicine

2004: American Board of Internal Medicine, Medical Oncology

MATTHEW S BOSNER, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS MUHLENBERG COLLEGE 79, MD UNIVERSITY OF TEXAS AUSTIN 83

PAUL J BOTELHO, MD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA HOLY CROSS COLLEGE 88, MD BOSTON UNIVERSITY 92

KATHRYN L BOTNEY, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WASHINGTON UNIV IN ST. LOUIS 80, MD WASHINGTON UNIV IN ST. LOUIS 84

KELLY N BOTTERON, MD Associate Professor of Psychiatry (Child Psychiatry), Psychiatry, BA UNIVERSITY OF KANSAS 84, MD UNIVERSITY OF KANSAS MEDICAL 88

KELLY N BOTTERON, MD Associate Professor of Radiology, Radiology, BA UNIVERSITY OF KANSAS 84, MD UNIVERSITY OF KANSAS MEDICAL 88

LAILA M BOTTROS, MD Assistant Professor of Anesthesiology, Anesthesiology, MD AIN SHAMS UNIVERSITY 77

ANNE M BOWCOCK, PHD Professor of Genetics, Genetics, BS UNIVERSITY OF THE WITWATERSRA 78, PHD UNIVERSITY OF THE WITWATERSRA 84

ANNE M BOWCOCK, PHD Professor of Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF THE WITWATERSRA 78, PHD UNIVERSITY OF THE WITWATERSRA 84

ANNE M BOWCOCK, PHD Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF THE WITWATERSRA 78, PHD UNIVERSITY OF THE WITWATERSRA 84

WILLIAM G BOWEN, MD Associate Professor of Clinical Medicine, Internal Medicine, BS DAVIDSON COLLEGE 70, MD UNIVERSITY OF NORTH CAROLINA 74

JESSICA NAOMI BOWERS Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

GARY BOXER, MD Associate Professor of Psychiatry (Child Psychiatry), Psychiatry, BS COLORADO ST UNIVERSITY 75, MD UNIVERSITY OF COLORADO BOULDER 80

MARTIN I BOYER, MD Carol B and Jerome T Loeb Professor of Orthopaedic Surgery, Orthopaedic Surgery, MS UNIVERSITY OF TORONTO 93, MD UNIVERSITY OF TORONTO 88

SUSAN KATHLEEN BOYER, MD Instructor in Clinical Psychiatry, Psychiatry, BA ROCKHURST COLLEGE 88, MD UNIVERSITY OF MISSOURI 93

ALLYSON BOYLE, MD Instructor in Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF CALIFORNIA 75, MD COLUMBIA UNIVERSITY 83

WALTER A BOYLE, III, MD Assistant Professor of Developmental Biology, Developmental Biology, BS SCHOOL NOT LISTED 74, MD UNIVERSITY OF CA SAN FRANCISCO 77

WALTER A BOYLE, III, MD Professor of Anesthesiology, Anesthesiology, BS SCHOOL NOT LISTED 74, MD UNIVERSITY OF CA SAN FRANCISCO 77

WALTER A BOYLE, III, MD Professor of Surgery (General Surgery), Surgery, BS SCHOOL NOT LISTED 74, MD UNIVERSITY OF CA SAN FRANCISCO 77

JEFFREY D BRADLEY, MD S. Lee Kling Associate Professor of Radiation Oncology, Radiation Oncology, BA DRURY COLLEGE 89, MD UNIVERSITY OF ARKANSAS 93


RICHARD V BRADLEY, MD Associate Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BS PENNSYLVANIA STATE UNIVERSITY 45, MD WASHINGTON UNIV IN ST. LOUIS 52

ROBERT J BRADSHAW, MD, BS Instructor in Clinical Pediatrics, Pediatrics, BA EMORY UNIVERSITY 76, MD SAINT LOUIS
ROBERT HARRY BRADY, MD  Instructor in Clinical Psychiatry (Psychiatry), Psychiatry, BS EMORY UNIVERSITY 76, MD TUFTS UNIVERSITY 95

RYAN SCOTT BRAM, PHD  Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval), Radiation Oncology, BS UNIVERSITY OF TENNESSEE 99, MS UNIVERSITY OF TENNESSEE 00, PHD UNIVERSITY OF TENNESSEE 02

STEVEN B BRANDES, MD  Professor of Surgery (Urologic Surgery), Surgery, BS CITY COLLEGE 88, MD MOUNT SINAI SCHOOL OF MEDICINE 90


KEITH E BRANDT, MD  William G. Hamm Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS TEXAS A&M UNIVERSITY 79, MD UNIV TEXAS HEALTH SCIENCE CTR 83


1995: American Board of Plastic Surgery

1995: American Board of Surgery, Surgery of the Hand

GREGORY HARRIS BRANCH, MD  Associate Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF SOUTH CAROLINA 79, MD UNIVERSITY OF SOUTH CAROLINA 83

MILAM A BRANTLEY, JR, MD, PHD  Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA AUSTIN COLLEGE 88, MD BAYLOR UNIVERSITY 98, PHD BAYLOR UNIVERSITY 96

RICHARD D. BRASINGTON, JR, MD  Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 74, MD DUKE UNIVERSITY 80

REBEKAH ARLETTA BRASLOW, MD  Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS STANFORD UNIVERSITY 81, MD YALE UNIVERSITY 87

TODD BRAVER, PHD  Associate Professor of Radiology, Radiology, BA UNIVERSITY OF CALIFORNIA 92, MA CARNEGIE MELLON UNIVERSITY 94, PHD CARNEGIE MELLON UNIVERSITY 97

ALAN C BRAVERMAN, MD  Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 84, MD UNIVERSITY OF MISSOURI 85

SEAN MICHAEL BREIT, MD  Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD OHIO STATE UNIVERSITY 02

DANIEL C BRENNAN, MD  Professor of Medicine, Internal Medicine, BS CORNELL COLLEGE 81, MD UNIVERSITY OF IOWA 85

DONALD GEORGE BRENNAN, PHD  Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS SAINT LOUIS UNIVERSITY 67, MA SAINT LOUIS UNIVERSITY 69, PHD UNIVERSITY OF OKLAHOMA 74

MICHAEL R. BRENT, PHD  Professor of Genetics, Genetics, BS MASS INST OF TECHNOLOGY (MIT) 85, MS MASS INST OF TECHNOLOGY (MIT) 88, PHD MASS INST OF TECHNOLOGY (MIT) 91

TAMARA L. BREAT, MD, PHD  Associate Professor of Molecular Microbiology, Molecular Microbiology, BA JOHNS HOPKINS UNIVERSITY 83, MD JOHNS HOPKINS UNIVERSITY MEDIC 91, PHD JOHNS HOPKINS UNIVERSITY MEDIC 91

Thomas J Brett  Siteman Cancer Center, Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine, 1999-2006: Postdoctoral fellow, pathology and immunology, Washington University, St. Louis, 1999: Ph.D. chemistry, University of Nebraska, Lincoln

THOMAS J. BRETT, PHD  Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS NORTH DAKOTA STATE UNIVERSITY 92, PHD UNIVERSITY OF NEBRASKA 99

THOMAS J. BRETT, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS NORTH DAKOTA STATE UNIVERSITY 92, PHD UNIVERSITY OF NEBRASKA 99
THOMAS J. BRETT, PHD  Assistant Professor of Medicine, Internal Medicine, BS NORTH DAKOTA STATE UNIVERSITY 92, PHD UNIVERSITY OF NEBRASKA 99

G. LARRY BRETHORST, PHD  Research Associate Professor of Radiology, Radiology, BS LINCOLN UNIVERSITY 71, MS UNIVERSITY OF MO ST LOUIS 80, PHD WASHINGTON UNIV IN ST. LOUIS 87

PAUL C BRIDGMAN, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA UNIVERSITY OF SAN DIEGO 74, MS UNIVERSITY OF CA SAN DIEGO 76, PHD PURDUE UNIVERSITY 80

KEITH HAPP BRIDWELL, MD  Asa C. and Dorothy W. Jones Distinguished Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 73, MD WASHINGTON UNIV IN ST. LOUIS 77

KEITH HAPP BRIDWELL, MD  Professor of Neurological Surgery, Neurological Surgery, BA WASHINGTON UNIV IN ST. LOUIS 73, MD WASHINGTON UNIV IN ST. LOUIS 77

DAVID L BRODY, MD, PHD  Assistant Professor of Neurology, Neurology, BA STANFORD UNIVERSITY 92, MD JOHNS HOPKINS UNIVERSITY 00, PHD JOHNS HOPKINS UNIVERSITY 00

STEVEN L BRODY, MD  Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY OF MICHIGAN 80

Steven L Brody  Siteman Cancer Center, Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine, 1980-1983: Resident, internal medicine, University of Cincinnati, 1989-1993: Fellow, pulmonary medicine, Pulmonary Branch, National Heart, Lung and Blood Institute, Bethesda, Md., 1994-1995: Postdoctoral fellow, developmental biology, Washington Universit, 1980: MD, University of Michigan, Ann Arbor, Primary Specialty: Pulmonary disease, gene therapy, Board Certified:, 1983: American Board of Internal Medicine, Internal Medicine

1987, 2005: American Board of Internal Medicine, Critical Care Medicine

1992, 2005: American Board of Internal Medicine, Pulmonary Disease

LARRY G BROKERING, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD ILLINOIS COLLEGE OF OPTOMETRY 72

IGOR BRONDZ, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 78

CHRISTOPHER B. BROOKS, MD  Associate Professor of Emergency Medicine in Medicine, Internal Medicine, MD SCHOOL NOT LISTED 82

ROBERT HENRY BROPHY, IV, MD, BS  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA STANFORD UNIVERSITY 94, MS STANFORD UNIVERSITY 95, MD WASHINGTON UNIV IN ST. LOUIS 01, BS STANFORD UNIVERSITY 94

VICTORIA L. BROWN-KENNERLY, PHD  Research Instructor in Genetics, Genetics, PHD EMORY UNIVERSITY 01

ALEX JAY BROWN, PHD  Research Associate Professor of Medicine, Internal Medicine, BS WASHINGTON ST UNIVERSITY 76, PHD UNIVERSITY OF TENNESSEE 82

ANIELA L BROWN, MD  Assistant Professor of Medicine, Internal Medicine, BS SOUTHERN METHODIST UNIVERSITY 87, MD WASHINGTON UNIV IN ST. LOUIS 92

BARBARA I BROWN, PHD  Professor Emerita of Biological Chemistry, Biochem & Molec Biophysics, BA SMITH COLLEGE 46, PHD YALE UNIVERSITY 50

DAVID HENRY BROWN, PHD  Professor Emeritus of Biological Chemistry, Biochem & Molec Biophysics, BS CALIFORNIA INSTITUTE TECHNOLO 42, PHD CALIFORNIA INSTITUTE TECHNOLO 48

ELMER BURRELL BROWN, MD  Associate Dean Emeritus for Continuing Medical Education and Post-Graduate Education, Medical School Admin., BA OBERLIN COLLEGE 46, MD WASHINGTON UNIV IN ST. LOUIS 50

ELMER BURRELL BROWN, MD  Professor Emeritus of Medicine, Internal Medicine, BA OBERLIN COLLEGE 46, MD WASHINGTON UNIV IN ST. LOUIS 50

JEFFREY J BROWN, MD  Professor of Radiology, Radiology, BS UNIVERSITY OF CALIFORNIA 79, MBA WASHINGTON UNIV IN ST. LOUIS 99, MD UNIVERSITY OF CA SAN DIEGO 83

Jeffrey J Brown  Siteman Cancer Center, Professor of Radiology, Division of Diagnostic Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1983-1987: Resident and fellow, radiology, University of California, San Diego, 1987-1988: Fellow, MRI, University of California, San Francisco, 1983: MD, University of California, San Diego, Primary Specialty: Abdominal imaging, magnetic resonance imaging, Board Certified:, 1987: American Board of Radiology, Diagnostic Radiology

JUSTIN M BROWN, MD  Assistant Professor of Neurological Surgery, Neurological Surgery, BS VANDERBILT UNIVERSITY 96, MD EASTERN VIRGINIA MED SCHOOL 01

KATHRYN CORINNE BROWN  Instructor in Clinical Medicine, Internal Medicine

LAWRENCE R BROWN, MD, PHD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BS UNIV OF
WISCONSIN MADISON 82, MD WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 89

MARC RICHARD BROWN, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 74, OD SCHOOL NOT LISTED 80

MARYBETH BROWN, PHD Adjunct Associate Professor of Physical Therapy, Physical Therapy, BS RUSSELL SAGE COLLEGE 67, MA UNIVERSITY OF SOUTHERN CALIF 74, PHD UNIVERSITY OF SOUTHERN CALIF 84

ROBERT J BROWN, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS ST PETERS COLLEGE 77, MD WASHINGTON UNIV IN ST. LOUIS 83

YOLETTE V BROWN, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS CITY UNIVERSITY OF NEW YORK 73, MD WASHINGTON UNIV IN ST. LOUIS 82

EARLINE A BROWNRIDGE, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 78, MD UNIVERSITY OF MISSOURI 82

SETH J BROWNRIDGE, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 78, MD WASHINGTON UNIV IN ST. LOUIS 82

ROSS C BROWNSON, PHD Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF MONTANA MISSOULA 79, PHD COLORADO ST UNIVERSITY 85

GEORGE JOHN BROZE, JR, MD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF WASHINGTON 68, MD UNIVERSITY OF WASHINGTON 72

GEORGE JOHN BROZE, JR, MD Professor of Medicine, Internal Medicine, BS UNIVERSITY OF WASHINGTON 68, MD UNIVERSITY OF WASHINGTON 72

GEORGE JOHN BROZE, JR, MD Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF WASHINGTON 68, MD UNIVERSITY OF WASHINGTON 72

ROBERT M BRUCE, MD, BS Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 64, MD UNIVERSITY OF MINNESOTA 68, BS UNIVERSITY OF MINNESOTA 68

STEVEN E. BRUCE, PHD Visiting Assistant Professor of Psychiatry, Psychiatry, BA VIRGINIA TECH 92, MA VIRGINIA COMM UNIVERSITY 96, PHD VIRGINIA COMM UNIVERSITY 98

JANICE E BRUNSTROM-HERNANDEZ, MD Associate Professor of Neurology, Neurology, MD UNIVERSITY OF VIRGINIA 87

JANICE E BRUNSTROM-HERNANDEZ, MD Associate Professor of Pediatrics, Pediatrics, MD UNIVERSITY OF VIRGINIA 87

ELIZABETH M BRUNT, MD Professor of Pathology and Immunology, Pathology & Immunology, BS GEORGETOWN UNIVERSITY 74, MD UNIVERSITY OF TEXAS GALVESTON 81

L. MICHAEL BRUNT, MD Professor of Surgery (General Surgery), Surgery, BA UNIVERSITY OF MISSISSIPPI 76, MD JOHNS HOPKINS UNIVERSITY MEDIC 80


KATHLEEN S BRUNTS, MD Instructor in Clinical Medicine, Internal Medicine, BS WESTERN MICHIGAN UNIVERSITY 77, MD SAINT LOUIS UNIVERSITY 81

BRUCE L BRYAN, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BE PURDUE UNIVERSITY 73, MD SCHOOL NOT LISTED

GUOJUN BU, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS BEIJING NORMAL UNIVERSITY 85, PHD VIRGINIA TECH 90

GUOJUN BU, PHD Professor of Pediatrics, Pediatrics, BS BEIJING NORMAL UNIVERSITY 85, PHD VIRGINIA TECH 90

KATHLEEN K BUCHOLZ, PHD, MS Professor of Psychiatry, Psychiatry, BA YALE UNIVERSITY 72, MS YALE UNIVERSITY 76, PHD YALE UNIVERSITY 86, MS YALE UNIVERSITY 82

JACOB M BUCHOWSKI, MD Assistant Professor of Neurological Surgery, Neurological Surgery, BS YALE UNIVERSITY 96, MS YALE UNIVERSITY 96, MD JOHNS HOPKINS UNIVERSITY 00

JACOB M BUCHOWSKI, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS YALE UNIVERSITY 96, MS YALE UNIVERSITY 96, MD JOHNS HOPKINS UNIVERSITY 00
STANLEY BUCK, MD  Instructor in Clinical Medicine, Internal Medicine, BS PRINCETON UNIVERSITY 73, MD WASHINGTON UNIV IN ST. LOUIS 77

VIRGINIA D BUCKLES, PHD  Research Associate Professor of Neurology, Neurology, BS CALIFORNIA ST POLY POMONA 74, MS CALIFORNIA ST POLY POMONA 77, PHD UNIV OF WISCONSIN MADISON 81

TARA M. BUDETTI  Instructor in Clinical Pediatrics, Pediatrics

JOHN B BUETTNER, MD  Instructor in Clinical Surgery (General Surgery), Surgery, BA DARTMOUTH COLLEGE 63, MD WASHINGTON UNIV IN ST. LOUIS 67

LORENA BUFFA, MD  Instructor in Clinical Pediatrics, Pediatrics, MD UNIVERSITY OF MO COLUMBIA 98

JEREMY D. BUHLER, PHD  Assistant Professor of Genetics, Genetics, BA RICE UNIVERSITY 96, MS UNIVERSITY OF WASHINGTON 98, PHD UNIVERSITY OF WASHINGTON, PHD UNIVERSITY OF WASHINGTON 01

RICHARD S BULLER, PHD  Research Assistant Professor of Pediatrics, Pediatrics, BS MICHIGAN TECH UNIVERSITY 72, MS MICHIGAN TECH UNIVERSITY 74, PHD UNIVERSITY OF MONTANA MISSOULA 83

REBECCA KAY BULLIVANT, MD  Instructor in Clinical Pediatrics, Pediatrics, BS EASTERN ILLINOIS UNIVERSITY 88, MD UNIVERSITY OF ILLINOIS 92

ARNOLD D BULLOCK, MD  Associate Professor of Surgery (Urologic Surgery), Surgery, BS XAVIER UNIVERSITY LOUISIANA 83, MD JOHNS HOPKINS UNIVERSITY 87


MICHELLE A. BURACK, MD, PHD  Adjunct Instructor in Neurology, Neurology, BS DUKE UNIVERSITY 90, MD WASHINGTON UNIV IN ST. LOUIS 02, PHD UNIVERSITY OF VIRGINIA 00

MAX H BURGDORF, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 70, MD WASHINGTON UNIV IN ST. LOUIS 74

PETER M BURGERS, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS LEIDEN UNIVERSITY 69, MS LEIDEN UNIVERSITY 72, PHD LEIDEN UNIVERSITY 77

Peter MJ Burgers  Siteman Cancer Center, Professor of Biochemistry and Molecular Biophysics, Washington University School of Medicine, 1972: MS, organic chemistry, State University of Leiden, Netherlands, 1977: PhD, State University of Leiden

DEAN B BURGESS, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA OCCIDENTAL COLLEGE 63, MD UNIVERSITY OF CALIFORNIA 67

ANDREAS H BURKHALTER, PHD  Associate Professor of Neurobiology in Neurological Surgery, Neurological Surgery, MS UNIVERSITY OF ZURICH 73, PHD UNIVERSITY OF ZURICH 77

ANDREAS H BURKHALTER, PHD  Professor of Neurobiology, Anatomy & Neurobiology, MS UNIVERSITY OF ZURICH 73, PHD UNIVERSITY OF ZURICH 77

TAMARA LAVON BURLIS, DPT, BS  Assistant Professor of Medicine, Internal Medicine, BA WARTBURG COLLEGE 88, MHS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 03, BS WASHINGTON UNIV IN ST. LOUIS 88

TAMARA LAVON BURLIS, DPT, BS  Associate Director for Clinical Education in Physical Therapy, Assistant Professor of Physical Therapy, Physical Therapy, BA WARTBURG COLLEGE 88, MHS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 03, BS WASHINGTON UNIV IN ST. LOUIS 88

SCOTT H BURNER, MD  Associate Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval), Internal Medicine, MD MEDICAL UNIVERSITY OF STH CAR 78

CAREY-ANN DAWN BURNHAM, PHD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF ALBERTA 02, PHD UNIVERSITY OF ALBERTA 07

GARRETT C BURRIS, MD  Associate Professor of Clinical Neurology, Neurology, BS SCHOOL NOT LISTED 64, MD SAINT LOUIS UNIVERSITY 68

GARRETT C BURRIS, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BS SCHOOL NOT LISTED 64, MD SAINT LOUIS UNIVERSITY 68

ROBERT BURSTEIN, MD  Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD WASHINGTON UNIV IN ST. LOUIS 48

HAROLD BURTON, PhD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA UNIVERSITY OF MICHIGAN 64, PHD UNIV OF WISCONSIN MADISON 68
HAROLD BURTON, PHD Professor of Neurobiology, Anatomy & Neurobiology, BA UNIVERSITY OF MICHIGAN 64, PHD UNIV OF WISCONSIN MADISON 68

HAROLD BURTON, PHD Professor of Radiology, Radiology, BA UNIVERSITY OF MICHIGAN 64, PHD UNIV OF WISCONSIN MADISON 68

DONALD F BUSIEK, MD Instructor in Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 74, MD UNIVERSITY OF MISSOURI 83

Trent Buskirk Siteman Cancer Center, Assistant Professor of Community Health, Division of Biostatistics, Saint Louis University School of Public Health, 1994: MS, mathematics, University of South Alabama, Mobile, 1999: PhD, statistics, Arizona State University, Tempe

JOAN RACHEL BUTCHER Instructor in Clinical Psychiatry, Psychiatry

MELVIN J BUTCHER Instructor in Clinical Medicine, Internal Medicine

MEREDITH S BYERS, MD Instructor in Radiology, Radiology, BA UNIVERSITY OF TEXAS AUSTIN 93, MD UNIVERSITY OF TEXAS SOUTHWEST 97

JAMES BYRD, MD Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry, BS SOUTHEAST MISSOURI ST UNIVERS 87, MD SCHOOL NOT LISTED 91

GALILEU CABRAL, MD Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 64

Charlene A. Caburnay Siteman Cancer Center

WILLIAM TODD CADE, PHD Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MARYLAND 91, MS UNIVERSITY OF MIAMI 94, PHD UNIVERSITY OF MARYLAND 02

WILLIAM TODD CADE, PHD Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF MARYLAND 91, MS UNIVERSITY OF MIAMI 94, PHD UNIVERSITY OF MARYLAND 02

ALISON GALE CAHILL, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, BA YALE UNIVERSITY 97, MD UNIVERSITY OF CONNECTICUT 02

NIGEL JOHN CAIRNS, PHD Research Associate Professor of Neurology, Neurology, PHD UNIVERSITY OF LONDON 95

NIGEL JOHN CAIRNS, PHD Research Associate Professor of Pathology and Immunology, Pathology & Immunology, PHD UNIVERSITY OF LONDON 95

CHERYL ANN CALDWELL, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF COLORADO BOULDER 76, MHS WASHINGTON UNIV IN ST. LOUIS 88, DPT WASHINGTON UNIV IN ST. LOUIS 02

CHERYL ANN CALDWELL, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF COLORADO BOULDER 76, MHS WASHINGTON UNIV IN ST. LOUIS 88, DPT WASHINGTON UNIV IN ST. LOUIS 02

ARCHNA CALFEE, MD Instructor in Clinical Pediatrics, Pediatrics, BA CASE WESTERN RESERVE UNIV 97, MD WASHINGTON UNIV IN ST. LOUIS 01

RYAN PATRICK CALFEE, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF VIRGINIA 97, MD WASHINGTON UNIV IN ST. LOUIS 01

DAVID J CALLAHAN, MD Assistant Professor of Clinical Neurology, Neurology, BS UNIVERSITY OF NOTRE DAME 82, MD WASHINGTON UNIV IN ST. LOUIS 86

WILMA J. CALVERT, PHD Adjunct Instructor in Psychiatry, Psychiatry, BN ORAL ROBERTS UNIVERSITY 81, MSN UNIVERSITY OF OKLAHOMA 86, PHD UNIVERSITY OF MISSOURI 02

GRETA CAMEL, MD Assistant Professor Emerita of Medicine, Internal Medicine, BA UNIV OF WISCONSIN MADISON 46, MD UNIV OF WISCONSIN MADISON 49

H. MARVIN CAMEL, MD Professor Emeritus of Obstetrics and Gynecology, Obstetrics & Gynecology, MD CREEGHTON UNIVERSITY 50

BERNARD CHIONG CAMINS, MD Assistant Professor of Medicine, Internal Medicine, BS LOUISIANA ST UNIVERSITY 93, MD EMORY UNIVERSITY 97

JOHN WILLIAM CAMPBELL, MD Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 73, MD WASHINGTON UNIV IN ST. LOUIS 77

MEGHAN CLARK CAMPBELL, PHD Research Assistant Professor of Neurology (Pending Executive Faculty Approval), Neurology, BS UNIVERSITY OF ILLINOIS 99, PHD INDIANA STATE UNIVERSITY 04

SAMUEL A CANAAN, JR, MD Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF IOWA 42, MA COLUMBIA UNIVERSITY 48, MD MEHARRY MED COLLEGE 54
JOSEPH EDWARD CANGAS Instructor in Clinical Pediatrics, Pediatrics
CHARLES E CANTER, MD, BS Professor of Pediatrics, Pediatrics, BS BROWN UNIVERSITY 74, MD SAINT LOUIS UNIVERSITY 79, BS BROWN UNIVERSITY 76
RUSSELL C. CANTRELL, MD Instructor in Clinical Neurology, Neurology, BS SCHOOL NOT LISTED 85, MD UNIVERSITY OF TENNESSEE 89
DENGFENG CAO, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD PEKING UNION MEDICAL COLLEGE 96, PHD UNIVERSITY OF PITTSBURGH 01
Dengfeng Cao Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 2001-2005: Intern and resident, anatomic and clinical pathology, Johns Hopkins University, Baltimore, 2005-2006: Fellow, surgical pathology, Johns Hopkins University, 2006-2007: Fellow, gynecologic pathology, Johns Hopkins University, 1996: MD, Peking Union Medical College, Beijing, 2001: PhD, biophysics, University of Pittsburgh, Primary Specialty: Gynecologic pathology, urologic pathology and pancreatic pathology, Board Certified:, 2005: American Board of Pathology, Anatomic Pathology and Clinical Pathology
YUQING CAO, PHD Assistant Professor of Anesthesiology, Anesthesiology, BS FUDAN UNIVERSITY 89, PHD UNIVERSITY OF CA SAN FRANCISCO 99
MICHAEL G CAPARON, JR., PHD Professor of Molecular Microbiology, Molecular Microbiology, BS MICHIGAN STATE UNIVERSITY 81, PHD UNIVERSITY OF IOWA 85
CELESTE CAPERS, MD Instructor in Pediatrics, Pediatrics, BS WELLESLEY COLLEGE 97, MD UNIVERSITY OF IOWA 02
DAVID ANTHONY CAPLIN, MD Instructor in Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BA KENYON COLLEGE 71, MD UNIVERSITY OF CINCINNATI 75
DOUGLAS A CARANO, DDENT Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BS UNIVERSITY OF IOWA 81, DDENT UNIVERSITY OF IOWA 84
JOHN R CARLILE, MD Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF KANSAS 72, MD UNIVERSITY OF KANSAS MEDICAL 75
M. RICHARD CARLIN, MD Associate Professor Emeritus of Clinical Surgery (Urologic Surgery), Surgery, BA DARTMOUTH COLLEGE 43, MD YALE UNIVERSITY 47
DOUGLAS W CARLSON, MD Professor of Pediatrics, Pediatrics, BA ILLINOIS WESLEYAN UNIVERSITY 81, MD SOUTHERN ILLINOIS UNIVERSITY 84
KIM ALAN CARMICHAEL, MD Associate Professor of Medicine, Internal Medicine, BS VIRGINIA COLLEGE 78
MICHAEL J. CARNEY, MD Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF NOTRE DAME 87, MD UNIVERSITY OF MO COLUMBIA 91
ROBERT MICHAEL CARNEY, PHD Professor of Psychiatry, Psychiatry, BA UNIVERSITY OF MISSOURI 69, MS SCHOOL NOT LISTED 72, PHD WASHINGTON UNIV IN ST. LOUIS 78
CHRISTOPHER ROB CARPENTER, MD Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD WAYNE STATE UNIVERSITY 94
DAVID A CARPENTER, MD Associate Professor of Neurology, Neurology, BS AMHERST COLLEGE 79, MD WASHINGTON UNIV IN ST. LOUIS 83
DAVID B CARR, MD Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MO COLUMBIA 81, MD UNIVERSITY OF MO COLUMBIA 85
DAVID B CARR, MD Associate Professor of Neurology, Neurology, BA UNIVERSITY OF MO COLUMBIA 81, MD UNIVERSITY OF MO COLUMBIA 85
BEATRIZ M CARRENO, PHD Research Assistant Professor of Medicine, Internal Medicine, BS SIMON BOLIVAR UNIVERSITY 81, PHD GEORGETOWN UNIVERSITY 89
Beatriz M Carreno Siteman Cancer Center
JAVIER A CARRERO-BREWER Research Instructor in Pathology and Immunology, Pathology & Immunology, BS EMORY UNIVERSITY 96
KENNETH R CARSON, MD Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF SOUTHERN CALIF 95, MD UNIVERSITY OF SOUTHERN CALIF 00
Kenneth R. Carson  Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 2000-2003: Resident, internal medicine, Duke University, Durham, N.C., 2004-2006: Postdoctoral research fellow, Northwestern University, Chicago, 2005-2008: Fellow, hematology and oncology, Northwestern University, 2000: MD, University of Southern California, Los Angeles, Primary Specialty: Medical oncology, lymphoma, leukemia, internal medicine, Board Certified; 2003: American Board of Internal Medicine, Internal Medicine

2008: American Board of Internal Medicine, Hematology

2008: American Board of Internal Medicine, Medical Oncology

ALEXANDRE CARTER, MD, PHD  Instructor in Neurology, Neurology, BS BRANDEIS UNIVERSITY 91, MD HARVARD UNIVERSITY 03, PHD HARVARD UNIVERSITY 03

ARTHUR L CASEY, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD UNIVERSITY OF MISSOURI 77

AMANDA FISHBACK CASHEN, MD, BS  Assistant Professor of Medicine, Internal Medicine, BS YALE UNIVERSITY 95, MD WASHINGTON UNIV IN ST. LOUIS 99, BS YALE UNIVERSITY 95

RUBILINDA Q CASINO, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF SANTO TOMAS 79, MD UNIVERSITY OF SANTO TOMAS 79

CARMEN F CASTELLANO, OD, BS  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MO ST LOUIS 77, OD ILLINOIS COLLEGE OF OPTOMETRY 82, BS ILLINOIS COLLEGE OF OPTOMETRY 80

MARIO CASTRO, MD  Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 88, M PH SAINT LOUIS UNIVERSITY 98, MD UNIVERSITY OF MISSOURI 88

MARIO CASTRO, MD  Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF MO KANSAS CITY 88, M PH SAINT LOUIS UNIVERSITY 98, MD UNIVERSITY OF MISSOURI 88

VALERIA CAVALLI, PHD  Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF GENEVA 91, MS UNIVERSITY OF GENEVA 92, PHD UNIVERSITY OF GENEVA 00

LAURA FRANCESCA CAVALLONE, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF MILAN 93

PATRICIA A CAVAZOS-REHG, PHD  Research Instructor in Psychiatry, Psychiatry, BA UNIVERSITY OF TEXAS SAN ANTONIO 98, PHD STATE UNIVERSITY OF NEW YORK 04

LILIBETH MARIA CAYABYAB-LOE, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 86, MD UNIVERSITY OF MISSOURI 90

MARINA CELLA, MD  Research Associate Professor of Pathology and Immunology, Pathology & Immunology, MD UNIVERSITY OF GENOVA 89

SASO CEMERSKI, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF BELGRADE 98, PHD UNIVERSITE PAUL SABATIER 03

CHAD PHADUNG CHADARATANA, MD  Instructor in Clinical Otolaryngology, Otolaryngology, MD SCHOOL NOT LISTED 64

MURALI M CHAKINALA, MD  Associate Professor of Medicine, Internal Medicine, BS DUKE UNIVERSITY 90, MD VANDERBILT UNIVERSITY 94

SZEMAN RUBY CHAN, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF KANSAS 97, PHD UNIVERSITY OF KANSAS MEDICAL 01

TATTAMANGALAM P CHANDRIKA  Associate Professor of Clinical Pediatrics, Pediatrics, MS UNIVERSITY OF CALCUTTA 00

JINNY E CHANG, MD  Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF CA BERKELEY 01, MD WASHINGTON UNIV IN ST. LOUIS 06

KAE PYNG CHANG, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 91, MD UNIVERSITY OF MISSOURI 95

SIDNEY TAN CHANG, MD  Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD CORNELL UNIVERSITY 04

EARL S CHANGAR, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD SCHOOL NOT LISTED 57

WILLIAM T CHAO, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 75, MD UNIVERSITY OF ILLINOIS 79
HUGH CHAPLIN, JR, MD  Professor Emeritus of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 43, MD COLUMBIA UNIVERSITY 47

HUGH CHAPLIN, JR, MD  Professor Emeritus of Pathology, Pathology & Immunology, BA PRINCETON UNIVERSITY 43, MD COLUMBIA UNIVERSITY 47

WILL C CHAPMAN, MD  Professor of Surgery (General Surgery), Surgery, BA UNIVERSITY OF NORTH CAROLINA 80, MD UNIVERSITY OF SOUTH CAROLINA 84


2001: American Board of Surgery, Surgical Critical Care

DOUGLAS CHAR, MD  Associate Professor of Emergency Medicine in Medicine, Internal Medicine, BS BOSTON COLLEGE 83, MA BOSTON UNIVERSITY 85, MD UNIVERSITY OF HAWAII 89

LEWIS ROBERT CHASE, MD  Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 80, MD HARVARD UNIVERSITY 64

SONIA CHAUDHRY, MD  Instructor in Pediatrics, Pediatrics, BS SAINT LOUIS UNIVERSITY 01, MD SAINT LOUIS UNIVERSITY 05

PAUL A CHECCHIA, MD  Associate Professor of Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 89, MD SOUTHERN ILLINOIS UNIVERSITY 93

MARK A CHECCONE, MD  Assistant Professor of Otolaryngology, Otolaryngology, BS BROWN UNIVERSITY 94, MD OHIO STATE UNIVERSITY 02

ALEXANDER CHI CHEN, MD  Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF MO KANSAS CITY 01

CHIEN-HUAN CHEN, MD, PHD  Assistant Professor of Medicine, Internal Medicine, MD NATIONAL TAIWAN UNIVERSITY 93, PHD JOHNS HOPKINS UNIVERSITY MEDIC 99

DELPHINE L. CHEN, MD  Assistant Professor of Radiology, Radiology, BA HARVARD RADCLIFF 95, MD WASHINGTON UNIV IN ST. LOUIS 99, MD WASHINGTON UNIV IN ST. LOUIS 99

FENG CHEN, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS FUDAN UNIVERSITY 91, PHD UNIVERSITY OF UTAH 98

FENG CHEN, PHD  Assistant Professor of Medicine, Internal Medicine, BS FUDAN UNIVERSITY 91, PHD UNIVERSITY OF UTAH 98

JANE CHEN, MD  Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 89, MD WASHINGTON UNIV IN ST. LOUIS 93

JUNJIE CHEN, PHD  Research Instructor in Medicine, Internal Medicine, PhD WASHINGTON UNIV IN ST. LOUIS 01

Junjie Chen  Siteman Cancer Center, Research Instructor of Medicine, Washington University School of Medicine, 2001: MS, biomedical engineering, Washington University, St. Louis, 2005: ScD, biomedical engineering, Washington University

LI-SHIUN CHEN, MD, PHS  Instructor in Psychiatry, Psychiatry, M PH JOHN HOPKINS UNIVERSIT 95, MD NATIONAL TAIWAN UNIVERSITY 93, PHS JOHNS HOPKINS UNIVERSITY 98

LING CHEN, PHD, MS  Research Instructor in Biostatistics, Biostatistics, BS BEIJING MEDICAL UNIVERSITY 96, MPH UNIVERSITY SOUTH CAROLINA 03, PHD UNIVERSITY OF MO COLUMBIA 09, MS BEIJING MEDICAL UNIVERSITY 98

MAY M CHEN  Research Instructor in Medicine, Internal Medicine, BS BAKER UNIVERSITY 63

PHYLIS CHEN, MD  Instructor in Clinical Medicine, Internal Medicine, MD NORTHWESTERN UNIVERSITY MED 92

QING CHEN, MD  Instructor in Clinical Medicine, Internal Medicine, MS NANJING MEDICAL UNIVERSITY 88, MD NANJING MEDICAL UNIVERSITY 83

SHIMING CHEN, PHD  Associate Professor of Developmental Biology, Developmental Biology, BS BEIJING UNIVERSITY 81, MS BEIJING MEDICAL UNIVERSITY 84, PHD STATE UNIVERSITY OF NEW YORK 92

SHIMING CHEN, PHD  Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS BEIJING UNIVERSITY 81, MS BEIJING MEDICAL UNIVERSITY 84, PHD STATE UNIVERSITY OF NEW YORK 92

SWAINE L CHEN, MD, PHD  Research Instructor in Molecular Microbiology, Molecular Microbiology, BS HARVARD UNIVERSITY 96, MD STANFORD UNIVERSITY 04, PHD STANFORD UNIVERSITY 03
ZHOUFENG CHEN, PHD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF ANESTHESIOLOGY, ANESTHESIOLOGY, BS WUHAN UNIVERSITY 83, MS SCHOOL NOT LISTED 87, PHD UNIVERSITY OF TEXAS AUSTIN 94

ZHOUFENG CHEN, PHD, SITEMAN CANCER CENTER, ASSISTANT PROFESSOR OF DEVELOPMENTAL BIOLOGY, DEVELOPMENTAL BIOLOGY, BS WUHAN UNIVERSITY 83, MS SCHOOL NOT LISTED 87, PHD UNIVERSITY OF TEXAS AUSTIN 94

ZHOUFENG CHEN, PHD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF PSYCHIATRY, PSYCHIATRY, BS WUHAN UNIVERSITY 83, MS SCHOOL NOT LISTED 87, PHD UNIVERSITY OF TEXAS AUSTIN 94

ZHOUJI CHEN, PHD, SITEMAN CANCER CENTER, RESEARCH ASSISTANT PROFESSOR OF MEDICINE, INTERNAL MEDICINE, BS SCHOOL NOT LISTED 83, MS SCHOOL NOT LISTED 86, PHD MICHIGAN STATE UNIVERSITY 94

ZIWEI CHEN, MBBS, PHD, SITEMAN CANCER CENTER, RESEARCH INSTRUCTOR IN ANESTHESIOLOGY, ANESTHESIOLOGY, MS DALIAN MEDICAL UNIVERSITY 98, MBBS DALIAN MEDICAL UNIVERSITY 95, PHD PEKING UNIVERSITY 01

EMILY CHENG, MD, PHD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF MEDICINE, INTERNAL MEDICINE, MD TAIPEI MEDICAL UNIVERSITY 90, PHD JOHNS HOPKINS UNIVERSITY 97

EMILY CHENG, MD, PHD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF PATHOLOGY AND IMMUNOLOGY, PATHOLOGY & IMMUNOLOGY, MD TAIPEI MEDICAL UNIVERSITY 90, PHD JOHNS HOPKINS UNIVERSITY 97


GLENN S CHENG, MD, SITEMAN CANCER CENTER, INSTRUCTOR IN CLINICAL PEDIATRICS, PEDIATRICS, BS UNIVERSITY OF TEXAS AUSTIN 84, MD UNIVERSITY OF TEXAS SAN ANTONIO 88

PEI-HSIN CHENG, MD, PHD, SITEMAN CANCER CENTER, INSTRUCTOR IN MEDICINE, INTERNAL MEDICINE, BS UNIVERSITY OF CALIFORNIA LOS ANGELES 96, MD WASHINGTON UNIVERSITY, ST. LOUIS 02, PHD WASHINGTON UNIVERSITY, ST. LOUIS 96

STEVEN CHIH NUN CHENG, MD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF MEDICINE, INTERNAL MEDICINE, BA NORTHWESTERN UNIVERSITY 01, MD NORTHWESTERN UNIVERSITY MED 02

SU-LI CHENG, PHD, SITEMAN CANCER CENTER, RESEARCH ASSOCIATE PROFESSOR OF MEDICINE, INTERNAL MEDICINE, BS NATIONAL TAIWAN UNIVERSITY 71, MS NATIONAL TAIWAN UNIVERSITY 73, PHD UNIVERSITY OF LOUISVILLE 78

REBECCA D CHERNOCK, MD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF PATHOLOGY AND IMMUNOLOGY (PENDING EXECUTIVE FACULTY APPROVAL), PATHOLOGY & IMMUNOLOGY, BS BROWN UNIVERSITY 99, MD UNIVERSITY OF PENNSYLVANIA 04

JAMES M CHEVERUD, PHD, SITEMAN CANCER CENTER, PROFESSOR OF ANATOMY, ANATOMY & NEUROBIOLOGY, BA NORTHWESTERN UNIVERSITY 75, MS UNIVERSITY OF WISCONSIN MADISON 77, PHD UNIVERSITY OF WISCONSIN MADISON 79

JAMES M CHEVERUD, PHD, SITEMAN CANCER CENTER, PROFESSOR OF GENETICS, GENETICS, BA NORTHWESTERN UNIVERSITY 75, MS UNIVERSITY OF WISCONSIN MADISON 77, PHD UNIVERSITY OF WISCONSIN MADISON 79

WAK S CHIA, MD, SITEMAN CANCER CENTER, INSTRUCTOR IN CLINICAL PEDIATRICS, PEDIATRICS, MD SCHOOL NOT LISTED 74

JOHN N CHIAPEL, SITEMAN CANCER CENTER, INSTRUCTOR IN CLINICAL OTOLARYNGOLOGY, OTOLARYNGOLOGY

MICHAEL R CHICOINE, MD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF NEUROLOGICAL SURGERY, NEUROLOGICAL SURGERY, BS UNIVERSITY OF ILLINOIS 85, MD UNIVERSITY OF CALIFORNIA 90

JONATHAN C CHILES, MD, SITEMAN CANCER CENTER, INSTRUCTOR IN PEDIATRICS, PEDIATRICS, BS UNIVERSITY OF MISSOURI KANSAS CITY 04, MD UNIVERSITY OF MISSOURI KANSAS CITY 04

KELLY LYNNE CHILSON, MD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF ANESTHESIOLOGY, ANESTHESIOLOGY, BS UNIVERSITY OF MISSOURI KANSAS CITY 99

PETER TRISTRAM CHIVERS, PHD, SITEMAN CANCER CENTER, ASSISTANT PROFESSOR OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS, BIOCHEM & MOLECULAR BIOPHYSICS, BS UNIVERSITY OF CALGARY 91, PHD UNIVERSITY OF WISCONSIN MADISON 96

RONALD J CHOD, MD, SITEMAN CANCER CENTER, ADJUNCT ASSOCIATE PROFESSOR OF OBSTETRICS AND GYNECOLOGY, OBSTETRICS & GYNECOLOGY, BS UNIVERSITY OF TEXAS AUSTIN 78, MD SOUTHERN UNIVERSITY 83

ERIC THAI KUN CHOI, MD, SITEMAN CANCER CENTER, ASSOCIATE PROFESSOR OF SURGERY (GENERAL SURGERY), SURGERY, BS UNIVERSITY OF CHICAGO 85, MD UNIVERSITY OF CHICAGO 90

JAEBOK CHOI, PHD, SITEMAN CANCER CENTER, RESEARCH INSTRUCTOR IN MEDICINE, INTERNAL MEDICINE, BS KOREA UNIVERSITY 96, MS KOREA UNIVERSITY 98
JaeBok Choi  Siteman Cancer Center

KYUNGHEE CHOI, PHD  Associate Professor of Pathology and Immunology, Pathology & Immunology, BS SEOUL NATIONAL UNIVERSITY 82, MS SEOUL NATIONAL UNIVERSITY 84, PHD UNIVERSITY OF ILLINOIS 88

Kyunghue Choi  Siteman Cancer Center, Associate Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine, 1988-1989: Postdoctoral fellow, University of Illinois, Chicago, 1990-1995: Postdoctoral fellow, National Jewish Center for Immunology and Respiratory Medicine, Denver, 1984: MS, microbiology, Seoul National University, Seoul, South Korea, 1988: PhD, genetics/cancer biology, University of Illinois, Chicago

RICHARD A CHOLE, MD, PHD  Head of the Department of Otolaryngology, Lindburg Professor of Otolaryngology, Otolaryngology, MD UNIVERSITY OF SOUTHERN CALIF 69, PHD UNIVERSITY OF MINNESOTA 77

RICHARD A CHOLE, MD, PHD  Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, MD UNIVERSITY OF SOUTHERN CALIF 69, PHD UNIVERSITY OF MINNESOTA 77

RICHARD A CHOLE, MD, PHD  Professor of Developmental Biology, Developmental Biology, MD UNIVERSITY OF SOUTHERN CALIF 69, PHD UNIVERSITY OF MINNESOTA 77

VESSELIN M. CHORBOV  Research Instructor in Psychiatry, Psychiatry

PHILIP CHU PAK-YU, MD  Instructor in Clinical Medicine, Internal Medicine, BS CALIFORNIA STATE FRESNO 86, MD UNIVERSITY OF CA LOS ANGELES 92

WENHUA CHU, PHD  Research Instructor in Radiology, Radiology, BS QUIDGDAO OCEAN UNIV 82, MS ACADEMIA SINICA CHINA 85, PHD ACADEMIA SINICA CHINA 88

DUCK SUNG CHUN, MD  Instructor in Clinical Medicine, Internal Medicine, MD SEOUL NATIONAL UNIVERSITY

THEODORE J CICERO, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BS VILLANOVA UNIVERSITY 64, MS PURDUE UNIVERSITY 66, PHD PURDUE UNIVERSITY 69

THEODORE J CICERO, PHD  Vice Chairman for Research, Department of Psychiatry, Professor of Neuropharmacology in Psychiatry, Psychiatry, BS VILLANOVA UNIVERSITY 64, MS PURDUE UNIVERSITY 66, PHD PURDUE UNIVERSITY 69

MATTHEW AARON CIORBA, MD  Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF IOWA 01

JOHN R. CIRRITO, PHD  Research Assistant Professor of Neurology, Neurology, BA BOSTON COLLEGE 98, PHD WASHINGTON UNIV IN ST. LOUIS 04

GEOFFREY CISLO, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 93, MD UNIVERSITY OF MICHIGAN 96

ROBERTO CIVITELLI, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF SIENA 80, MD UNIVERSITY OF SIENA 80

ROBERTO CIVITELLI, MD  Professor of Medicine, Internal Medicine, BS UNIVERSITY OF SIENA 80, MD UNIVERSITY OF SIENA 80

ROBERTO CIVITELLI, MD  Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF SIENA 80, MD UNIVERSITY OF SIENA 80

BILLIE RUTH CLARK, PHD  Assistant Professor of Neurology, Neurology, BS SAINT LOUIS UNIVERSITY 74, PHD SAINT LOUIS UNIVERSITY 88

BILLIE RUTH CLARK, PHD  Assistant Professor of Physical Therapy, Physical Therapy, BS SAINT LOUIS UNIVERSITY 74, PHD SAINT LOUIS UNIVERSITY 88


WILLIAM W. CLARK, PHD  Director of the Program in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA UNIVERSITY OF MICHIGAN 69, MS UNIVERSITY OF MICHIGAN 73, PHD UNIVERSITY OF MICHIGAN 75, PHD UNIVERSITY OF MICHIGAN 75

WILLIAM W. CLARK, PHD  Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA UNIVERSITY OF MICHIGAN 69, MS UNIVERSITY OF MICHIGAN 73, PHD UNIVERSITY OF MICHIGAN 75, PHD UNIVERSITY OF MICHIGAN 75

WILLIAM W. CLARK, PHD  Professor of Otolaryngology, Otolaryngology, BA UNIVERSITY OF MICHIGAN 69, MS UNIVERSITY OF MICHIGAN 73, PHD UNIVERSITY OF MICHIGAN 75, PHD UNIVERSITY OF MICHIGAN 75

WILLIAM W. CLARK, PHD  Professor of Clinical Psychiatry, Psychiatry, MD UNIVERSITY OF TENNESSEE 63
Graham A. Colditz
Siteman Cancer Center, Associate Director, Prevention and Control, Alvin J. Siteman Cancer Center, and Niess-Gain Professor in the School of Medicine, Department of Surgery, Washington University School of Medicine, 1979-1981: Intern and resident, internal medicine, Royal Brisbane Hospital, Brisbane, Australia, 1981-1983: Research fellow, Harvard University, Boston, Mass., 1979: MB BS, University of Queensland, Brisbane, Australia, 1982: MPH, epidemiology, Harvard University, Boston, Mass., 1986: DrPH, epidemiology, Harvard University, 1998: MD, University of Queensland

Brent K Cole, MD
Instructor in Clinical Medicine, Internal Medicine, BS Pennsylvania State University 93, MD Cornell University 97

Danita L Cole, MD
Instructor in Clinical Medicine, Internal Medicine, BA University of MO Kansas City 90, MD University of MO Kansas City 91

F. Sessions Cole, MD
Assistant Vice Chancellor for Children's Health, Washington University School of Medicine, Vice Chancellor & Dean, BA Amherst College 69, MD Yale University 73

F. Sessions Cole, MD
Park J White, M.D. Professor of Pediatrics, Pediatrics, BA Amherst College 69, MD Yale University 73

F. Sessions Cole, MD
Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA Amherst College 69, MD Yale University 73

Jennifer W Cole, MD
Associate Professor of Anesthesiology, Anesthesiology, BA Washington University in St. Louis 80, MD Washington University in St. Louis 84

John C. Cole, MD, PhD
Instructor in Clinical Pediatrics, Pediatrics, BA Washington University in St. Louis 95, MD Washington University in St. Louis 03, PhD Washington University in St. Louis 03

Patricia L Cole, MD
Associate Professor of Clinical Medicine, Internal Medicine, BA Mount Holyoke College 72, MA Brown University 75, MD Harvard University 81

Lloyd W Coleman, PhD
Research Instructor in Medicine, Internal Medicine, BS Northeast Missouri State University 73, MS Iowa State University 76, PhD Iowa State University 84

Ivan E Collier, PhD
Retiree - Research Assistant Professor of Medicine (Dermatology), Internal Medicine, BS Kentucky Wesleyan College 68, MS Western Kentucky University 70, PhD Florida State University 80

Sharon L. Collins, MD, PhD
Associate Professor of Otolaryngology, Otolaryngology, BS University of Michigan 68, MS University of Michigan 70, MD University of Michigan 78, PhD University of Michigan 72

Vicente M Colon-Alcaraz, MD
Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA University of Puerto Rico 78, MD School Not Listed 82

Marco Colonna, MD
Professor of Medicine, Internal Medicine, MD Parma University 83

Marco Colonna, MD
Professor of Pathology and Immunology, Pathology & Immunology, MD Parma University 83

Nicholas J Colosi, MD
Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA La Salle University 64, MA Saint Louis University 68

Eric S Colton, MD
Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS University of California 87, MD Saint Louis University 96

Arthur Hamilton Combs
Associate Professor of Clinical Medicine, Internal Medicine

Phillip Comens, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BS University of Missouri 49, MD Washington University in St. Louis 51

Paul Kevin Commean
Research Instructor in Radiology, Radiology, BS Georgia Tech 82

Susan Conger
Instructor in Clinical Pediatrics, Pediatrics

David M Conner, MD
Instructor in Clinical Psychiatry, Psychiatry, BA University of Oklahoma 79, MD University of Oklahoma 83

Anne Maureen Connolly, MD
Professor of Neurology, Neurology, BS Saint Mary's College 80, MD Indiana University Bloomington 84

Anne Maureen Connolly, MD
Professor of Pediatrics, Pediatrics, BS Saint Mary's College 80, MD Indiana
UNIVERSITY BLOOMINGTON 84

JANET M CONNOLLY, PHD Research Professor of Genetics, Genetics, BA CATHOLIC UNIVERSITY AMERICA 68, MS THE AMERICAN UNIVERSITY 70, PHD GEORGE WASHINGTON UNIVERSITY 79

JANET M CONNOLLY, PHD Research Professor of Pathology and Immunology, Pathology & Immunology, BA CATHOLIC UNIVERSITY AMERICA 68, MS THE AMERICAN UNIVERSITY 70, PHD GEORGE WASHINGTON UNIVERSITY 79

Janet M Connolly Siteman Cancer Center, Research Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine, 1980-1983: Postdoctoral fellow, biochemistry, Rutgers University, New Brunswick, N.J., 1984-1986: Postdoctoral fellow, pathology and genetics, Washington University, St. Louis, 1970: MS, biology, American University, Washington, D.C., 1979: PhD, microbiology, George Washington University, Washington, D.C.

LISA TABOR CONNOR, PHD Assistant Professor of Neurology, Neurology, BA JOHNS HOPKINS UNIVERSITY 86, MA WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 92

LISA TABOR CONNOR, PHD Assistant Professor of Occupational Therapy, Occupational Therapy, BA JOHNS HOPKINS UNIVERSITY 86, MA WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 92

LISA TABOR CONNOR, PHD Assistant Professor of Radiology, Radiology, BA JOHNS HOPKINS UNIVERSITY 86, MA WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 92

JOHN MICHAEL CONOYER, MD Instructor in Clinical Otolaryngology, Otolaryngology, BS SOUTHEAST MISSOURI ST UNIVERS 71, MD VANDERBILT UNIVERSITY 75

MARK STEPHEN CONRADI, PHD Professor of Radiology, Radiology, BS WASHINGTON UNIV IN ST. LOUIS 73, PHD WASHINGTON UNIV IN ST. LOUIS 77

GLENN C CONROY, PHD Professor of Anatomy, Anatomy & Neurobiology, BA UNIVERSITY OF CA BERKELEY 70, M PHIL YALE UNIVERSITY 72, PHD YALE UNIVERSITY 74

JOHN NICHOLAS CONSTANTINO, MD Blanche F Ittleson Professor of Psychiatry (Child Psychiatry), Psychiatry, BA CORNELL UNIVERSITY 84, MD WASHINGTON UNIV IN ST. LOUIS 88

JOHN NICHOLAS CONSTANTINO, MD Professor of Pediatrics, Pediatrics, BA CORNELL UNIVERSITY 84, MD WASHINGTON UNIV IN ST. LOUIS 88

THOMAS E CONTURO, MD, PHD Associate Professor of Radiology, Radiology, BA UNIVERSITY OF PENNSYLVANIA 81, MD VANDERBILT UNIVERSITY 89, PHD VANDERBILT UNIVERSITY 89

CHARLES RICHARD CONWAY, MD Associate Professor of Psychiatry, Psychiatry, MD UNIVERSITY OF MISSOURI COLUMBI 95

H. GROVES COOKE, III, DDENT Instructor in Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BA DE PAUL UNIVERSITY 67, MS GEORGE WASHINGTON UNIVERSITY 75, DDENT WASHINGTON UNIV IN ST. LOUIS 71

JOHN A COOPER, MD, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS BROWN UNIVERSITY 77, MD JOHNS HOPKINS UNIVERSITY 82, PHD JOHNS HOPKINS UNIVERSITY 83


JONAS AARON COOPER, MD Assistant Professor of Medicine, Internal Medicine, BS HARVARD UNIVERSITY 97, MD WASHINGTON UNIV IN ST. LOUIS 01

CRAIG M COOPERSMITH, MD Associate Professor of Anesthesiology, Anesthesiology, BA UNIVERSITY OF PENNSYLVANIA 87, MD UNIVERSITY OF PENNSYLVANIA 91

CRAIG M COOPERSMITH, MD Professor of Surgery (General Surgery), Surgery, BA UNIVERSITY OF PENNSYLVANIA 87, MD UNIVERSITY OF PENNSYLVANIA 91

DOUGLAS E COPLEN, MD Associate Professor of Surgery (Urologic Surgery), Surgery, BA WABASH COLLEGE 81, MD INDIANA UNIVERSITY BLOOMINGTON 85


RALPH COPP, JR, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52
MARY MICHAELINE CRADOCK, Assistant Professor of Clinical Pediatrics, Pediatrics, BA RICE UNIVERSITY 87

JOHNETTA M CRAIG, MD, Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MISSOURI 80, MBA UNIVERSITY OF PENNSYLVANIA 94, MD UNIVERSITY OF IOWA 86

JAMES P CRANE, MD, Associate Professor of Genetics, Genetics, BS INDIANA UNIVERSITY BLOOMINGTON 66, MD INDIANA UNIVERSITY BLOOMINGTON 70

JAMES P CRANE, MD, Associate Vice Chancellor for Clinical Affairs, Vice Chancellor & Dean, BS INDIANA UNIVERSITY BLOOMINGTON 66, MD INDIANA UNIVERSITY BLOOMINGTON 70

JAMES P CRANE, MD, Chief Executive Officer-Faculty Practice Plan, Faculty Practice Plan, BS INDIANA UNIVERSITY BLOOMINGTON 66, MD INDIANA UNIVERSITY BLOOMINGTON 70

JAMES P CRANE, MD, Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS INDIANA UNIVERSITY BLOOMINGTON 66, MD INDIANA UNIVERSITY BLOOMINGTON 70

JAMES P CRANE, MD, Professor of Radiology, Radiology, BS INDIANA UNIVERSITY BLOOMINGTON 66, MD INDIANA UNIVERSITY BLOOMINGTON 70

JOHN BRUCE CRANE, II, OD, Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WILLIAM JEWELL COLLEGE 87, OD UNIVERSITY OF MO ST LOUIS 91

JOHN JEFFREY CRAS, MD, Instructor in Medicine, Internal Medicine, BS LOYOLA COLLEGE 94, MS GEORGETOWN UNIVERSITY 98, MD GEORGETOWN UNIVERSITY 03

PETER A. CRAWFORD, MD, PHD, Assistant Professor of Developmental Biology, Developmental Biology, BS DUKE UNIVERSITY 91, MD WASHINGTON UNIV IN ST. LOUIS 99, PHD WASHINGTON UNIV IN ST. LOUIS 99

PETER A. CRAWFORD, MD, PHD, Assistant Professor of Medicine, Internal Medicine, BS DUKE UNIVERSITY 91, MD WASHINGTON UNIV IN ST. LOUIS 99, PHD WASHINGTON UNIV IN ST. LOUIS 99

CHARLES CRECELIUS, MD, PHD, Instructor in Clinical Medicine, Internal Medicine, BA CARLETON UNIVERSITY 76, MD SAINT LOUIS UNIVERSITY 84, PHD SAINT LOUIS UNIVERSITY 84

SHARON CRESCI, MD, Assistant Professor of Medicine, Internal Medicine, BS STATE UNIV OF NY BINGHAMPTON 82, MD NEW YORK UNIVERSITY 86

STEPHEN R CRESPIN, MD, Associate Professor of Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 60, MD HARVARD UNIVERSITY 65

JEFFREY S CRIPPIN, MD, Professor of Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 80, MD UNIVERSITY OF KANSAS 84

ROBERT D CRIST, Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

SUSAN R CRISWELL, MD, Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF NEBRASKA 97, MD UNIVERSITY OF NEBRASKA 01

ANDREW CRONYN, MD, Instructor in Clinical Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 87, MD ALBERT EINSTEIN COLLEGE OF MED 96

SETH DANIEL CROSBY, MD, Research Assistant Professor of Genetics, Genetics, BS UNIVERSITY OF CALIFORNIA 84, MD UNIVERSITY TEXAS SAN ANTONIO 89

BETTY CROSS, MD, Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF KANSAS 79, MD UNIVERSITY OF KANSAS 83

DOROTHY ANNE CROSS, MD, Professor of Neurology, Neurology, BS UNIVERSITY OF SOUTH ALABAMA 76, MD UNIVERSITY OF ALABAMA 80

VERONICA LYNN CROSS, Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

DEWITTE T CROSS, III, MD, Professor of Neurological Surgery, Neurological Surgery, BA VANDERBILT UNIVERSITY 75, MD UNIVERSITY OF ALABAMA 80

DEWITTE T CROSS, III, MD, Professor of Radiology, Radiology, BA VANDERBILT UNIVERSITY 75, MD UNIVERSITY OF ALABAMA 80

ERIKA C CROUCH, MD, PHD, Professor of Pathology and Immunology, Pathology & Immunology, MD UNIVERSITY OF WASHINGTON 79, PHD UNIVERSITY OF WASHINGTON 78

Erika C. Crouch, Siteman Cancer Center, Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1979-1982: Resident, anatomic pathology, University of Washington, Seattle, 1982-1983: Fellow, pulmonary pathology, University of British Columbia, Vancouver, 1979: MD/PhD, biochemistry, University of
CHARLES M CROWDER, MD, PHD
Associate Professor of Anesthesiology, Anesthesiology, BA HENDRIX COLLEGE 82, MD WASHINGTON UNIV IN ST. LOUIS 89, PHD WASHINGTON UNIV IN ST. LOUIS 89

CHARLES M CROWDER, MD, PHD
Associate Professor of Developmental Biology, Developmental Biology, BA HENDRIX COLLEGE 82, MD WASHINGTON UNIV IN ST. LOUIS 89, PHD WASHINGTON UNIV IN ST. LOUIS 89

MICHAEL G CROWLEY, PHD
Instructor in Radiology, Radiology, BS UNIVERSITY OF MISSOURI 74, PHD UNIVERSITY OF FLORIDA 82

BETH ELAINE CROWNER, DPT, MS
Assistant Professor of Neurology, Neurology, BS PT WASHINGTON UNIV IN ST. LOUIS 89, M PP UNIVERSITY OF MO ST LOUIS 97, DPT WASHINGTON UNIV IN ST. LOUIS 07, MS WASHINGTON UNIV IN ST. LOUIS 89

BETH ELAINE CROWNER, DPT, MS
Assistant Professor of Physical Therapy, Division Director of Clinical Practice in Physical Therapy, Physical Therapy, BS PT WASHINGTON UNIV IN ST. LOUIS 89, M PP UNIVERSITY OF MO ST LOUIS 97, DPT WASHINGTON UNIV IN ST. LOUIS 07, MS WASHINGTON UNIV IN ST. LOUIS 89

PHILIP E CRYER, MD
Irene E and Michael M Karl Professor of Endocrinology and Metabolism in Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 62, MD NORTHWESTERN UNIVERSITY MED 65

PHILLIP S. CUCULICH, MD
Assistant Professor of Medicine, Internal Medicine, MD VANDERBILT UNIVERSITY 01

JIANMIN CUI, PHD
Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS PEKING UNIVERSITY 83, MS PEKING UNIVERSITY 85, PHD SUNY - EMPIRE STATE COLLEGE 92

SUSAN MARGARET CULICAN, MD, PHD
Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 90, MD WASHINGTON UNIV IN ST. LOUIS 98, PHD WASHINGTON UNIV IN ST. LOUIS 98

PHILIP L CUSTER, MD
Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS VANDERBILT UNIVERSITY 74, MD VANDERBILT UNIVERSITY 78

ROBERT CULVERHOUSE, PHD
Assistant Professor of Biostatistics, Biostatistics, BA VANDERBILT UNIVERSITY 83, MA UNIVERSITY OF CA BERKELEY 87, PHD WASHINGTON UNIV IN ST. LOUIS 98

ROBERT CULVERHOUSE, PHD
Assistant Professor of Medicine, Internal Medicine, BA VANDERBILT UNIVERSITY 83, MA UNIVERSITY OF CA BERKELEY 87, PHD WASHINGTON UNIV IN ST. LOUIS 98

CLAYTON CUMMINGS, MD
Instructor in Pediatrics, Pediatrics, BSBA UNIVERSITY OF MO COLUMBIA 96, MD UNIVERSITY OF MO COLUMBIA 00

KRISTOPHER W CUMMINGS, MD
Instructor in Radiology, Radiology, BS UNIVERSITY OF ALABAMA 98, MD UNIVERSITY OF AL BIRMINGHAM 02

SIMONE MARIE CUMMINGS, PHD
Research Instructor in Psychiatry, Psychiatry, BBA WASHINGTON UNIV IN ST. LOUIS 88, PHD UNIVERSITY OF NORTH CAROLINA 99

BRIAN P. CUPPS, PHD
Research Assistant Professor of Surgery (Cardiothoracic Surgery), Surgery, BS UNIVERSITY OF CA DAVIS 83, MS TEXAS A&M UNIVERSITY 88, PHD TEXAS A&M UNIVERSITY 94

JOHN A CURCI, MD, BS
Assistant Professor of Surgery (General Surgery), Surgery, BA MIAMI UNIVERSITY 90, MD YALE UNIVERSITY 94, BS MIAMI UNIVERSITY 90, MD YALE UNIVERSITY 94

PHILIP L CUSTER, MD
Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS VANDERBILT UNIVERSITY 74, MD VANDERBILT UNIVERSITY 78

SYLVIA LIN CZUPPON
Instructor in Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 00, MS WASHINGTON UNIV IN ST. LOUIS 02

SYLVIA LIN CZUPPON
Instructor in Physical Therapy, Physical Therapy, BA WASHINGTON UNIV IN ST. LOUIS 00, MS WASHINGTON UNIV IN ST. LOUIS 02

GINA MARIE D’ANGELO, PHD, BS
Assistant Professor of Biostatistics, Biostatistics, BS OHIO UNIVERSITY 94, PHD
GINA MARIE D'ANGELO, PHD, BS | Assistant Professor of Neurology, Neurology, BS OHIO UNIVERSITY 94, PHD
UNIVERSITY OF PITTSBURGH 05, BS OHIO UNIVERSITY 94

Ralph G Dacey Jr | Siteman Cancer Center, Edith R. and Henry G. Schwartz Professor and Chairman of Neurosurgery,
Washington University School of Medicine, 1974-1976: Resident, internal medicine, Strong Memorial Hospital, Rochester, N.Y.,
1976-1977: Resident, surgery, University of Virginia, Charlottesville, 1977-1981: Resident, neurosurgery, University of Virginia,
Charlottesville, 1979-1980: Postdoctoral f, 1974: MD, University of Virginia, Charlottesville, Primary Specialty: Brain and nervous
system cancers, Board Certified, 1978: American Board of Internal Medicine, Internal Medicine
1985: American Board of Neurological Surgery

RALPH G DACEY, JR, MD | Henry G and Edith R Schwartz Professor of Neurological Surgery, Head of the Department of
Neurological Surgery, Neurological Surgery, BA HARVARD UNIVERSITY 70, MD UNIVERSITY OF VIRGINIA 74

NIRVIKAR Dahiya, MD | Assistant Professor of Radiology, Radiology, MD GOVERNMENT MEDICAL COLLEGE 91

JEANENNE M DALLAS | Instructor in Neurology, Neurology, BS UNIVERSITY OF CENTRAL ARKANSAS 79, MA WEBSTER
UNIVERSITY 93

JEANENNE M DALLAS | Instructor in Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF CENTRAL
ARKANSAS 79, MA WEBSTER UNIVERSITY 93

TRACEY M. DALY, MD, BS | Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF CALIFORNIA 91, MD SAINT
LOUIS UNIVERSITY 95, BS UNIVERSITY OF CA IRVINE 91

RALPH JAMES DAMIANO, JR, MD | John M. Shoenberg Professor of Surgery (Cardiothoracic Surgery), Surgery, BA
DARTMOUTH COLLEGE 76, MD DUKE UNIVERSITY 80

WILLIAM H DANFORTH, MD | Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 47, MD HARVARD
UNIVERSITY 51

ERIK D. DANIELS, MD | Instructor in Clinical Medicine, Internal Medicine, BS HOWARD UNIVERSITY 85, MD HOWARD
UNIVERSITY 89

JOHN S DANIELS, MD | Associate Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 70,
MA UNIVERSITY OF ARKANSAS 74, MD UNIVERSITY OF ARKANSAS 74

RAND E DANKNER, MD | Associate Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF PENNSYLVANIA 74,
MD BAYLOR UNIVERSITY 78

MARIA CRISTINA DANS, MD | Assistant Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 89, MD
WASHINGTON UNIV IN ST. LOUIS 99

GAUTAM DANTAS, PHD | Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology &
Immunology, BS MACALESTER COLLEGE 00, PHD UNIVERSITY OF WASHINGTON 05

MICHAEL E DANTER, MD | Assistant Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF MISSOURI 83, MD
UNIVERSITY OF ILLINOIS 87

MICHAEL D DARCY, MD | Associate Professor of Surgery (General Surgery), Surgery, BS OHIO STATE UNIVERSITY 76, MD
OHIO STATE UNIVERSITY 79

MICHAEL D DARCY, MD | Professor of Radiology, Radiology, BS OHIO STATE UNIVERSITY 76, MD OHIO STATE
UNIVERSITY 79

MOHAMMAD KHALED DARDARI, MD | Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 91

LAKSHMAN DARSI, MD | Assistant Professor of Medicine (Pending Executive Faculty Approval), Internal Medicine, MD
SCHOOL NOT LISTED 87

THEMISTOCLES DASSOPOULOS, MD | Associate Professor of Medicine, Internal Medicine, MD BROWN UNIVERSITY 91

ALEJANDRO M DATUIN, MD, AA | Assistant Professor of Clinical Psychiatry (On Staff at Malcolm Bliss Mental Health Center),
Psychiatry, MD UNIVERSITY OF SANTO TOMAS 56, AA UNIVERSITY OF SANTO TOMAS 51

YASMEEN DAUD, MD | Assistant Professor of Pediatrics, Pediatrics, MD UNIVERSITY OF MO KANSAS CITY 00

CARLOS COLTON DAUGHADAY, MD | Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 67, MD
WASHINGTON UNIV IN ST. LOUIS 71

WILLIAM H DAUGHADAY, MD | Irene E and Michael M Karl Professor Emeritus of Endocrinology and Metabolism in the John
Milliken Department of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 40, MD HARVARD UNIVERSITY 43

BAKUL DAVE, MD | Assistant Professor of Anesthesiology, Anesthesiology, MD BJ MEDICAL COLLEGE 84, MD UNIVERSITY
DAVID L DAVIDSON, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD SCHOOL NOT LISTED 64

JOHN D DAVIDSON, MD  Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52

LISA S. DAVIDSON, PHD  Research Assistant Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS EAST TENNESSEE STATE UNIVERSI 85, MS WASHINGTON UNIV IN ST. LOUIS 87, PHD WASHINGTON UNIV IN ST. LOUIS 03

LISA S. DAVIDSON, PHD  Research Assistant Professor of Otolaryngology, Otolaryngology, BS EAST TENNESSEE STATE UNIVERSI 85, MS WASHINGTON UNIV IN ST. LOUIS 87, PHD WASHINGTON UNIV IN ST. LOUIS 03

NICHOLAS O DAVIDSON, MD  Professor of Developmental Biology, Developmental Biology, MD SCHOOL NOT LISTED 74

NICHOLAS O DAVIDSON, MD  Professor of Medicine, Internal Medicine, MD SCHOOL NOT LISTED 74


RICHARD DAVIDSON, DDENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 66, MS UNIVERSITY OF MISSOURI 79, DDENT WASHINGTON UNIV IN ST. LOUIS 70

VICTOR G DAVILA-ROMAN, MD  Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF PUERTO RICO 77, MD UNIVERSITY OF PUERTO RICO 81

VICTOR G DAVILA-ROMAN, MD  Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PUERTO RICO 77, MD UNIVERSITY OF PUERTO RICO 81

VICTOR G DAVILA-ROMAN, MD  Professor of Radiology, Radiology, BS UNIVERSITY OF PUERTO RICO 77, MD UNIVERSITY OF PUERTO RICO 81

Rosa M Davila  Siteman Cancer Center, Associate Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, Resident, pathology, Baptist Memorial Hospital, San Antonio, Resident, pathology, Saint Louis University, 1990-1993: Postgraduate fellow, pediatric hemotolgy/oncology, Washington University, St. Louis, 1981: MD, University of Puerto Rico, San Juan, Primary Specialty: Cytopathology and renal pathology, Board Certified: 1987: American Board of Pathology, Anatomic Pathology and Clinical Pathology 1989: American Board of Pathology, Cytopathology

DAVID S DAVIS  Instructor in Emergency Medicine in Medicine, Internal Medicine

JOHN C DAVIS, MD  Associate Professor of Clinical Pediatrics, Pediatrics, MD UNIVERSITY OF MICHIGAN 80

MARRY A DAVIS, MD  Assistant Professor Emeritus of Clinical Psychiatry, Psychiatry, BA OHIO STATE UNIVERSITY 47, MD WASHINGTON UNIV IN ST. LOUIS 52

RAY S DAVIS, MD  Professor of Clinical Pediatrics, Pediatrics, MD UNIVERSITY OF LOUISVILLE 78

THOMAS ALLEN DAVIS, MD  Associate Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF TENN MEMPHIS 69

THOMAS ALLEN DAVIS, MD  Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, MD UNIVERSITY OF TENN MEMPHIS 69

GENE LAYTON DAVIS, JR, MD  Assistant Professor of Clinical Radiology, Radiology, BA UNIVERSITY OF VIRGINIA 68, MBA WEBSTER UNIVERSITY 91, MD UNIVERSITY OF VIRGINIA 72

WARWICK E. DAW, PHD  Research Associate Professor of Genetics, Genetics, BA COLUMBIA UNIVERSITY 86, MA UNIVERSITY OF CALIFORNIA 88, PHD UNIVERSITY OF CALIFORNIA 92

JEFFREY G DAWSON, MD  Associate Professor of Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 82, MD UNIVERSITY OF LOUISVILLE 82

WILLIAM B DAWSON, MD  Associate Professor of Radiology, Radiology, BA TULANE UNIVERSITY 69, MD UNIVERSITY OF OKLAHOMA 73

THOMAS M DE FER, MD  Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 85, MD UNIVERSITY OF MISSOURI 89
LISA DE LAS FUENTES, MD  Assistant Professor of Medicine, Internal Medicine, BA STANFORD UNIVERSITY 91, MD UNIVERSITY OF TEXAS SOUTHWEST 96

VINCENT R DE MELLO, MD  Assistant Professor of Clinical Medicine, Internal Medicine, MS UNIVERSITY OF BOMBAY 65, MD UNIVERSITY OF BOMBAY 69

CHARL JOHAN DE WET, MBCHB  Associate Professor of Anesthesiology, Anesthesiology, MBCHB UNIVERSITY OF PRETORIA 90

CHARL JOHAN DE WET, MBCHB  Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, MBCHB UNIVERSITY OF PRETORIA 90

ANNE V DEAN, MD  Instructor in Clinical Medicine, Internal Medicine, BA BOWDOIN COLLEGE 86, MD LOYOLA UNIVERSITY 95

CATHERINE L DEAN, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MO KANSAS CITY 81, M PH SCHOOL NOT LISTED 92, MD UNIVERSITY OF MO KANSAS CITY 83

JON TODD DEAN, MD  Instructor in Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF TEXAS AUSTIN 82, MD UNIVERSITY OF TEXAS AUSTIN 87

Joseph O Deasy  Siteman Cancer Center

JOSEPH O. DEASY, PHD  Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF KENTUCKY 84, PHD UNIVERSITY OF KENTUCKY 92

MICHAEL R DEBAUN, MD, MS  Professor of Biostatistics, Biostatistics, BS HOWARD UNIVERSITY 82, MPH JOHNS HOPKINS UNIVERSITY MEDIC 93, MD STANFORD UNIVERSITY 87, MS JOHNS HOPKINS UNIVERSITY 92

MICHAEL R DEBAUN, MD, MS  Professor of Neurology, Neurology, BS HOWARD UNIVERSITY 82, MPH JOHNS HOPKINS UNIVERSITY MEDIC 93, MD STANFORD UNIVERSITY 87, MS JOHNS HOPKINS UNIVERSITY 92

MICHAEL R DEBAUN, MD, MS  Professor of Pediatrics, Pediatrics, BS HOWARD UNIVERSITY 82, MPH JOHNS HOPKINS UNIVERSITY MEDIC 93, MD STANFORD UNIVERSITY 87, MS JOHNS HOPKINS UNIVERSITY 92

INDRANIL DEBNATH, MD  Assistant Professor of Otolaryngology, Otolaryngology, BA HARVARD UNIVERSITY 96, MD UNIVERSITY OF TENNESSEE 01

JAMES ALLEN DECLUE, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS BUTLER UNIVERSITY 67, OD ILLINOIS COLLEGE OF OPTOMETRY 49

COREY RENEE DEEKEN, PHD  Instructor in Surgery (General Surgery), Surgery, BS UNIVERSITY OF MO COLUMBIA 05, PHD UNIVERSITY OF MO COLUMBIA 08

JANE E. DEFAUCI, MD  Instructor in Clinical Pediatrics, Pediatrics, BA RUTGERS UNIVERSITY 77, MS RUTGERS UNIVERSITY 78, MD CASE WESTERN RESERVE UNIV 84

JOHN JAMES DEGUIRE, MD  Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 83, MD UNIVERSITY OF ILLINOIS 88

FARROKH DEHDASHTI, MD  Professor of Radiology, Radiology, MD PAHLAVI UNIVERSITY 77

LOUIS P DEHNER, MD  Professor of Pathology and Immunology, Pathology & Immunology, BA WASHINGTON UNIV IN ST. LOUIS 62, MD WASHINGTON UNIV IN ST. LOUIS 66

LOUIS P DEHNER, MD  Professor of Pathology in Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 62, MD WASHINGTON UNIV IN ST. LOUIS 66

CAROLYN DELANEY, MD  Instructor in Pediatrics, Pediatrics, BA RICE UNIVERSITY 96, MD WASHINGTON UNIV IN ST. LOUIS 00

JENNIFER A. DELANEY, MD  Instructor in Clinical Medicine, Internal Medicine, BA GEORGETOWN UNIVERSITY 92, MD WASHINGTON UNIV IN ST. LOUIS 97

JAMES ALBERT DELMEZ, MD  Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 69, MD UNIVERSITY OF ROCHESTER 73

JENNIFER LEE DEMERTZIS, MD  Instructor in Radiology, Radiology, BS UNIVERSITY OF NOTRE DAME 99, MD EMORY UNIVERSITY 03

MISTY LANELL DEMING, MD  Instructor in Pediatrics, Pediatrics, BS HARDING UNIVERSITY 99, MD UNIVERSITY OF TEXAS SOUTHWEST 03

CARMEN S DENCE  Research Associate Professor of Radiology, Radiology, BS UNIVERSIDAD DEL ATLANTICO 67, MS FLORIDA STATE UNIVERSITY 72
ALEX EUGENE DENES, MD Associate Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 69, MD UNIVERSITY OF MO COLUMBIA 73

Alexander E Denes Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1973-1975: Intern and resident, medicine, Johns Hopkins University, Baltimore, 1975-1977: Epidemiologist, Centers for Disease Control and Prevention, Atlanta, 1977-1979: Fellow, hematology/oncology, Washington University, St. Louis, 1973: MD, University of Missouri, Columbia, Primary Specialty: Medical oncology, Board Certified:, 1976: American Board of Internal Medicine

1979: American Board of Internal Medicine, Medical Oncology
1988: American Board of Internal Medicine, Geriatric Medicine

COLIN PIETER DERDEYN, MD Professor of Neurological Surgery, Neurological Surgery, BA UNIVERSITY OF VIRGINIA 84, MD UNIVERSITY OF VIRGINIA 88

COLIN PIETER DERDEYN, MD Professor of Neurology, Neurology, BA UNIVERSITY OF VIRGINIA 84, MD UNIVERSITY OF VIRGINIA 88

COLIN PIETER DERDEYN, MD Professor of Radiology, Radiology, BA UNIVERSITY OF VIRGINIA 84, MD UNIVERSITY OF VIRGINIA 88

ALANA C DESAI, MD Assistant Professor of Surgery (Urologic Surgery), Surgery, BS MARQUETTE UNIVERSITY 97, MD GEORGETOWN UNIVERSITY 02

SUNNY DESAI Instructor in Clinical Medicine, Internal Medicine, MS SCHOOL NOT LISTED 91

GERRY DESCHAMPS, MD, PHS Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 76, MD UNIVERSITY OF MISSOURI 83, PHS SCHOOL NOT LISTED 78


ANJALI DESAI DESHPANDE, PHD Research Assistant Professor of Medicine (Pending Executive Faculty Approval), Internal Medicine, MPH UNIVERSITY OF OKLAHOMA 95, PHD EMORY UNIVERSITY 00

GEORGE J DESPOTIS, MD Associate Professor of Anesthesiology, Anesthesiology, BA GREENVILLE COLLEGE 81, MD SAINT LOUIS UNIVERSITY 85

GEORGE J DESPOTIS, MD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA GREENVILLE COLLEGE 81, MD SAINT LOUIS UNIVERSITY 85

ROBERT H DEUSINGER, PHD Associate Professor of Medicine, Internal Medicine, BS SLIPPERY ROCK UNIVERSITY 67, MS UNIVERSITY OF MASSACHUSETTS 68, PHD UNIVERSITY OF IOWA 81

ROBERT H DEUSINGER, PHD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS SLIPPERY ROCK UNIVERSITY 67, MS UNIVERSITY OF MASSACHUSETTS 68, PHD UNIVERSITY OF IOWA 81

ROBERT H DEUSINGER, PHD Associate Professor of Physical Therapy, Physical Therapy, BS SLIPPERY ROCK UNIVERSITY 67, MS UNIVERSITY OF MASSACHUSETTS 68, PHD UNIVERSITY OF IOWA 81

SUSAN S. DEUSINGER, PHD Executive Director of the Program in Physical Therapy, Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF KANSAS 69, MA WASHINGTON UNIV IN ST. LOUIS 80, PHD WASHINGTON UNIV IN ST. LOUIS 87

SUSAN S. DEUSINGER, PHD Professor of Neurology, Neurology, BS UNIVERSITY OF KANSAS 69, MA WASHINGTON UNIV IN ST. LOUIS 80, PHD WASHINGTON UNIV IN ST. LOUIS 87

MICHELLE R DEVERA, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WASHINGTON UNIV IN ST. LOUIS 85, MD WASHINGTON UNIV IN ST. LOUIS 93

Steven M Devine Siteman Cancer Center, Co-Director, Alvin J. Siteman Cancer Center Good Manufacturing Practice Facility, Assistant Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation and Stem Cell Biology, Washington University School of Medicine, 1987-1990: Internship and Residency, Internal Medicine, Michael Reese Medical Center, Chicago, IL, 1990-1992: Medical Hematology/Oncology Fellowship, University of Chicago Hospital, Chicago, IL, 1992-1993: Medical Hematology/Oncology Fellowship, Emory Uni, 1983-1987: MD, University of Massachusetts Medical School, Worcester, MA, Primary Specialty: Bone Marrow Transplantation, Leukemia and Lymphoma, Board Certified:, 1990: Diplomate, American Board of Internal Medicine

1993: Diplomate, American Board of Internal Medicine, Medical Oncology

VENKATA RAO DEVINENI, MD Associate Professor of Clinical Radiation Oncology, Radiation Oncology, MD OSMANIA MEDICAL COLLEGE 73
DAVID GUSTAD DEVITRE  Instructor in Clinical Pediatrics, Pediatrics

PAUL DEWALD, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA SWARTHMORE COLLEGE 42, MD UNIVERSITY OF ROCHESTER 45

PLARIDEL C DEZA, MD  Assistant Professor of Clinical Psychiatry (On Staff at Malcolm Bliss Mental Health Center), Psychiatry, MD UNIVERSITY OF SANTO TOMAS 56

RAJAT DHAR, MD  Assistant Professor of Neurology, Neurology, MD MCMASTER UNIVERSITY 00

SUNITA DHARMAVARAPU, MD  Instructor in Anesthesiology, Anesthesiology, MD UNIVERSITY OF MISSISSIPPI MED 96

ENRICO DI CERA, MD  Professor of Medicine, Internal Medicine, MD CATHOLIC UNIVERSITY 85

ENRICO DI CERA, MD  Roy and Diana Vagelos Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, MD CATHOLIC UNIVERSITY 85

MARC I DIAMOND, MD  Associate Professor of Neurology (Pending Executive Faculty Approval), Neurology, BS PRINCETON UNIVERSITY 87, MD UNIVERSITY OF SAN FRANCISCO 93

MICHAEL DIAMOND, MD, PhD  Professor of Medicine, Internal Medicine, BA COLUMBIA COLLEGE 85, MD HARVARD UNIVERSITY 94, PHD HARVARD UNIVERSITY 92

MICHAEL DIAMOND, MD, PhD  Professor of Molecular Microbiology, Molecular Microbiology, BA COLUMBIA COLLEGE 85, MD HARVARD UNIVERSITY 94, PHD HARVARD UNIVERSITY 92

MICHAEL DIAMOND, MD, PhD  Professor of Pathology and Immunology, Pathology & Immunology, BA COLUMBIA COLLEGE 85, MD HARVARD UNIVERSITY 94, PHD HARVARD UNIVERSITY 92

AARON DIANTONIO, MD, PHD  Associate Professor of Developmental Biology, Developmental Biology, BA HARVARD UNIVERSITY 88, M PHIIL CAMBRIDGE UNIVERSITY 89, MD STANFORD UNIVERSITY 95, PHD STANFORD UNIVERSITY 95

Aaron DiAntonio  Siteman Cancer Center, Associate Professor of Developmental Biology, Washington University School of Medicine, 1995-1999: Postdoctoral fellow, developmental biology, University of California, Berkeley, 1989: MPhil, biochemistry, Cambridge University, Cambridge, England, 1995: MD/PhD, physiology, Stanford University, Stanford, Calif.

JASON ANTHONY DIAZ  Assistant Professor of Otolaryngology, Otolaryngology

DONALD V. DICHSEN, MD  Instructor in Clinical Pediatrics, Pediatrics, BA SCHOOL NOT LISTED 61, MD UNIVERSITY OF NEBRASKA 64

JEFFREY M DICKE, MD  Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF TOLEDO 75, MD OHIO STATE UNIVERSITY 78

J. DAVID DICKMAN, PHD  Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA UNIVERSITY OF OKLAHOMA 79, MS UNIVERSITY OF WYOMING 83, PHD UNIVERSITY OF WYOMING 85

J. DAVID DICKMAN, PHD  Associate Professor of Otolaryngology, Otolaryngology, BA UNIVERSITY OF OKLAHOMA 79, MS UNIVERSITY OF WYOMING 83, PHD UNIVERSITY OF WYOMING 85

J. DAVID DICKMAN, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA UNIVERSITY OF OKLAHOMA 79, MS UNIVERSITY OF WYOMING 83, PHD UNIVERSITY OF WYOMING 85

LIZBETH H DIDRIKSEN  Assistant Professor of Clinical Pediatrics, Pediatrics

BRIAN K DIECKGRAEFE, MD, PhD  Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF KANSAS 82, MD WASHINGTON UNIV IN ST. LOUIS 88, PHD WASHINGTON UNIV IN ST. LOUIS 87

Brian K Dieckgraefe  Siteman Cancer Center, Assistant Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine, 1988-1991: Resident, internal medicine, Washington University, St. Louis, 1991-1993: Clinical fellow, gastroenterology, Washington University, 1993-1996: Postdoctoral research fellow, medicine, Washington University, 1988: MD/PhD, molecular and cell biology, Washington University, St. Louis

PAUL E DIEHL, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD ILLINOIS COLLEGE OF OPTOMETRY 59

KATHRYN M DIEMER, MD  Assistant Dean for Career Counseling, Assoc Dean Curriculum, BA UNIVERSITY OF MISSOURI 84, MD UNIVERSITY OF MISSOURI 85

KATHRYN M DIEMER, MD  Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 84, MD UNIVERSITY OF MISSOURI 85

JAMES A DIESTELHORST, MD  Instructor in Clinical Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 64, MD UNIVERSITY OF MISSOURI 67

RUSSELL B DIETERICH, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA KNOX COLLEGE
HANS H DIETRICHR, PHD Assistant Professor of Neurological Surgery, Neurological Surgery, BS RUHR UNIVERSITY 79, MS RUHR UNIVERSITY 83, PHD MAX-PALANCH INST. OF NEUROBIOLO 86

DENNIS J. DIETZEN, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BS MARIAN COLLEGE 86, PHD INDIANA UNIVERSITY BLOOMINGTON 92

DENNIS J. DIETZEN, PHD Associate Professor of Pediatrics, Pediatrics, BS MARIAN COLLEGE 86, PHD INDIANA UNIVERSITY BLOOMINGTON 92

KRIFOR T DHRKMANIAN, MD, PHD Assistant Professor of Anatomy, Anatomy & Neurobiology, MD MEDICAL UNIVERSITY - VARNA 78, PHD MEDICAL UNIVERSITY - SOFIA 92

KRIFOR T DHRKMANIAN, MD, PHD Associate Professor of Physical Therapy, Physical Therapy, MD MEDICAL UNIVERSITY - VARNA 78, PHD MEDICAL UNIVERSITY - SOFIA 92

PATRICK A DILLON, MD Associate Professor of Pediatrics, Pediatrics, BA BROWN UNIVERSITY 83, MD GEORGETOWN UNIVERSITY 88

PATRICK A DILLON, MD Associate Professor of Surgery (Pediatric Surgery), Surgery, BA BROWN UNIVERSITY 83, MD GEORGETOWN UNIVERSITY 88


1998: American Board of Surgery, Pediatric Surgery

TULAY F DINCER, MD Assistant Professor of Clinical Pediatrics, Pediatrics, MD SCHOOL NOT LISTED 77

LI DING, PHD Research Assistant Professor of Genetics, Genetics, PHD UNIVERSITY OF UTAH 98

JOHN F DIPERSIO, MD, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA WILLIAMS COLLEGE 73, MD UNIVERSITY OF ROCHESTER 80, PHD UNIVERSITY OF ROCHESTER 80

JOHN F DIPERSIO, MD, PHD Associate Professor of Pediatrics, Pediatrics, BA WILLIAMS COLLEGE 73, MD UNIVERSITY OF ROCHESTER 80, PHD UNIVERSITY OF ROCHESTER 80

JOHN F DIPERSIO, MD, PHD Lewis T and Rosalind B Apple Professor of Medicine, Internal Medicine, BA WILLIAMS COLLEGE 73, MD UNIVERSITY OF ROCHESTER 80, PHD UNIVERSITY OF ROCHESTER 80

John F DiPersio Siteman Cancer Center, Deputy Director, Alvin J. Siteman Cancer Center; Lewis T. and Rosalind B. Apple Professor of Oncology in Medicine; and Chief, Division of Oncology, Washington University School of Medicine, 1980-1984: Intern and resident, internal medicine, University of Texas Southwestern Medical Center, Dallas, 1984-1987: Fellow, hematology/oncology, University of California, Los Angeles, 1980: MD/PhD, microbiology, University of Rochester, Rochester, N.Y., Primary Specialty: Bone marrow transplantation and leukemia, Board Certified: 1984: American Board of Internal Medicine, Internal Medicine

1987: American Board of Internal Medicine, Medical Oncology

1988: American Board of Internal Medicine, Hematology

MICHAEL N DIRINGER, MD Professor of Anesthesiology, Anesthesiology, BA STATE UNIV OF NY STONYBROOK 74, MA UNIVERSITY OF LOUISVILLE 78, MD UNIVERSITY OF KENTUCKY 82

MICHAEL N DIRINGER, MD Professor of Neurological Surgery, Neurological Surgery, BA STATE UNIV OF NY STONYBROOK 74, MA UNIVERSITY OF LOUISVILLE 78, MD UNIVERSITY OF KENTUCKY 82

MICHAEL N DIRINGER, MD Professor of Neurology, Neurology, BA STATE UNIV OF NY STONYBROOK 74, MA UNIVERSITY OF LOUISVILLE 78, MD UNIVERSITY OF KENTUCKY 82

MICHAEL N DIRINGER, MD Professor of Occupational Therapy, Occupational Therapy, BA STATE UNIV OF NY STONYBROOK 74, MA UNIVERSITY OF LOUISVILLE 78, MD UNIVERSITY OF KENTUCKY 82

MARILYN DISCH, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF KANSAS 84, MD UNIVERSITY OF KANSAS 88

RICHARD M DIVALERIO, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 84, MD WASHINGTON UNIV IN ST. LOUIS 88

ABHINAV DIWAN, MD Assistant Professor of Medicine, Internal Medicine, MD ALL-INDIA INST OF MEDICAL SCI 97

KATHLEEN KOLLER DIXON Instructor Emeritia in Physical Therapy, Physical Therapy

MATTHEW BARRETT DOBBS, MD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF
DEBORAH E DOBSON, PHD  Research Associate Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF ILLINOIS 76, PHD UNIVERSITY OF CA BERKELEY 81

MARTIN A DOCHERTY, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BS EDINBURGH UNIVERSITY 78, MD SAINT LOUIS UNIVERSITY 83

ALLAN DOCTOR, MD  Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA UNIVERSITY OF VIRGINIA 84, MD UNIVERSITY OF VIRGINIA 89

ALLAN DOCTOR, MD  Associate Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF VIRGINIA 84, MD UNIVERSITY OF VIRGINIA 89

PHILIP ROGERS DODGE, MD  Professor Emeritus of Neurology, Neurology, MD UNIVERSITY OF ROCHESTER 48

PHILIP ROGERS DODGE, MD  Professor Emeritus of Pediatrics, Pediatrics, MD UNIVERSITY OF ROCHESTER 48

KAREN W DODSON, PHD  Research Instructor in Molecular Microbiology, Molecular Microbiology, BA UNIVERSITY OF MISSOURI 83, PHD WASHINGTON UNIV IN ST. LOUIS 90

WILLIAM EDWIN DODSON, MD  Associate Dean for Admissions, Associate Vice Chancellor for Admissions, Student Support Services, BA DUKE UNIVERSITY 63, MD DUKE UNIVERSITY 67

WILLIAM EDWIN DODSON, MD  Associate Vice Chancellor for Continuing Medical Education, Associate Dean for Continuing Medical Education, Continuing Medical Education, BA DUKE UNIVERSITY 63, MD DUKE UNIVERSITY 67

WILLIAM EDWIN DODSON, MD  Professor of Neurology, Neurology, BA DUKE UNIVERSITY 63, MD DUKE UNIVERSITY 67

WILLIAM EDWIN DODSON, MD  Professor of Pediatrics, Pediatrics, BA DUKE UNIVERSITY 63, MD DUKE UNIVERSITY 67

JESSICA A. DOMINGUEZ, PHD  Assistant Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF ARIZONA 01, MHS UNIVERSITY OF ARIZONA 04, PHD UNIVERSITY OF ARIZONA 06

IRL JOSEPH DON, MD  Associate Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 69, MD WASHINGTON UNIV IN ST. LOUIS 72

STEVEN DON, MD  Associate Professor of Radiology, Radiology, BA JOHNS HOPKINS UNIVERSITY 81, MD VANDERBILT UNIVERSITY 85

JAMES W DONNELLY, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA NORTHWESTERN UNIVERSITY 82, MD WASHINGTON UNIV IN ST. LOUIS 86

JAMIE K DONNELLY, MD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF NOTRE DAME 99, MD INDIANA UNIVERSITY INDIANAPOLI 03

JOSEPH M DOOLEY, JR, MD  Associate Professor of Clinical Neurology, Neurology, BS SAINT LOUIS UNIVERSITY 54, MD SAINT LOUIS UNIVERSITY 58

DAVID J. DOOLING, PHD  Research Instructor in Genetics, Genetics, BE UNIVERSITY OF DAYTON 95, PHD NORTHWESTERN UNIVERSITY 00

BALRAJ DORAY, PHD  Research Instructor in Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 93, PHD UNIVERSITY OF ILLINOIS 99

ALLA DORFMAN, MD  Instructor in Clinical Pediatrics, Pediatrics, MD CHERUOVTSY STATE SCHOOL OF MED 86

GERALD W. DORN, II, MD  Philip and Sima K Needleman Professor of Medicine, Internal Medicine, MD MEDICAL UNIVERSITY OF STH CAR 81

CATHERINE J DOTY  Instructor in Clinical Pediatrics, Pediatrics

CHARLES H DOUGHERTY, MD  Professor of Clinical Pediatrics, Pediatrics, BA HOLY CROSS COLLEGE 69, MD UNIVERSITY OF ROCHESTER 73

MATTHEW P DOUGHERTY  Instructor in Clinical Pediatrics, Pediatrics

JOSHUA L DOWLING, MD  Associate Professor of Neurological Surgery, Neurological Surgery, BA YALE UNIVERSITY 85, MD TULANE UNIVERSITY 89

JOAN CATHERINE DOWNEY, MD  Assistant Professor of Pediatrics, Pediatrics, BA BOSTON UNIVERSITY 79, M PH HARVARD UNIVERSITY 85, MD HARVARD UNIVERSITY 85

MARIA BERNADETT DOYLE, MD  Assistant Professor of Surgery (General Surgery), Surgery, BS TRINITY COLLEGE DUBLIN 90, MD TRINITY COLLEGE DUBLIN 96
M.B. Majella Doyle  Siteman Cancer Center, Assistant Professor of Surgery, Division of General Surgery, Sections of Transplant Surgery and Pancreatic, Hepatobiliary and Gastrointestinal Surgery, Washington University School of Medicine, 1997-2005: Resident, surgery, Royal College of Surgeons in Ireland, 1999-2001: Clinical research fellow, National University of Ireland and Cork University Hospital, Cork, 2005-2006: Fellow, hepatobiliary, pancreatic and liver transplant surgery, Washington, 1996: MB BCh, Royal College of Surgeons in Ireland, Dublin, 2004: MD, University College Cork, Cork, Ireland, Primary Specialty: Liver transplantation, hepatobiliary surgery, pancreatic surgery

BETTINA DRAKE, PHD  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval), Surgery, BS BAYLOR UNIVERSITY 01, M PH UNIV TEXAS HEALTH SCIENCE CTR 03, PHD UNIVERSITY OF SOUTH CAROLINA 06
Bettina F. Drake  Siteman Cancer Center

ANDREW J. DRESCHER, MD  Assistant Professor of Otolaryngology, Otolaryngology, BS YALE UNIVERSITY 98, MD UNIVERSITY OF MICHIGAN 02

REBECCA SUSAN DRESSER, JD  Professor of Ethics in Medicine, Internal Medicine, BA INDIANA UNIVERSITY BLOOMINGTON 73, MS INDIANA UNIVERSITY BLOOMINGTON 75, JD HARVARD UNIVERSITY 79

ROBERT C DREWS, MD, BA  Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 52, MD WASHINGTON UNIV IN ST. LOUIS 55, BA WASHINGTON UNIV IN ST. LOUIS 52

WILLIAM H Drippen, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BA UNIVERSITY OF NORTH CAROLINA 85, MD UNIVERSITY OF NORTH CAROLINA 90

ALEXANDER W DROMERICK, MD  Adjunct Associate Professor of Neurology, Neurology, BA UNIVERSITY OF VIRGINIA 80, MD UNIVERSITY OF MARYLAND 86

ALEXANDER W DROMERICK, MD  Adjunct Associate Professor of Occupational Therapy, Occupational Therapy, BA UNIVERSITY OF VIRGINIA 80, MD UNIVERSITY OF MARYLAND 86

NORMAN STEVEN DRUCK, MD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 67, MD UNIVERSITY OF MARYLAND 70

TODD Druley, MD, PHD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 94, MD UNIVERSITY OF ILLINOIS CHICAGO 02, PHD UNIVERSITY OF ILLINOIS CHICAGO 02

Todd E. Druley  Siteman Cancer Center, Instructor of Pediatrics, Division of Hematology/Oncology, Washington University School of Medicine, 2002-2005: Intern and resident, pediatrics, Washington University, St. Louis, 2005-2008: Fellow, pediatric hematology and oncology, Washington University, 2002: MD/PhD, University of Illinois, Chicago, Primary Specialty: Pediatric oncology, Board Certified:, 2006: American Board of Pediatrics, General Pediatrics

GEORGE ROBERT DRYSDALE, PHD  Professor Emeritus of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS SCHOOL NOT LISTED 48, MS UNIV OF WISCONSIN MADISON 50, PHD UNIV OF WISCONSIN MADISON 52

ROBERT E DRZYMALA, PHD  Associate Professor of Neurological Surgery, Neurological Surgery, BS NORTHERN ILLINOIS UNIVERSITY 72, PHD UNIVERSITY OF OKLAHOMA 77

ROBERT E DRZYMALA, PHD  Associate Professor of Radiation Oncology, Radiation Oncology, BS NORTHERN ILLINOIS UNIVERSITY 72, PHD UNIVERSITY OF OKLAHOMA 77

ERIK R DUBBERKE, MD  Assistant Professor of Medicine, Internal Medicine, BA AUGUSTANA UNIVERSITY COLLEGE 95, MPH SAINT LOUIS UNIVERSITY 08, MD UNIVERSITY OF ILLINOIS 99

MARIA C DUMADAG-SABIO, MD  Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 88, MD UNIVERSITY OF MISSOURI 88

WILLIAM C DUNAGAN, MD  Professor of Medicine, Internal Medicine, BS UNIVERSITY OF TEXAS AUSTIN 78, MS UNIVERSITY OF TEXAS AUSTIN 80, MD WASHINGTON UNIV IN ST. LOUIS 83

ALEXIS E. DUNCAN, PHD  Research Instructor in Psychiatry, Psychiatry, PHD SAINT LOUIS UNIVERSITY 06

IAN WILLIAM DUNCAN, PHD  Associate Professor of Genetics, Genetics, BS UNIVERSITY OF BRITISH COLUMBIA 74, PHD UNIVERSITY OF WASHINGTON 78

JAMES R DUNCAN, MD, PHD  Associate Professor of Radiology, Radiology, BS UNIVERSITY OF MICHIGAN 82, MD WASHINGTON UNIV IN ST. LOUIS 88, PHD WASHINGTON UNIV IN ST. LOUIS 88

JENNIFER GRIES DUNCAN, MD  Assistant Professor of Pediatrics, Pediatrics, BS VANDERBILT UNIVERSITY 93, MD UNIVERSITY OF CHICAGO 97

LAKSHMI VIJAYA DUNDOO  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS SCHOOL NOT LISTED 86, MS SCHOOL NOT LISTED 86
TIMOTHY J EBERLEIN, MD  Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF PITTSBURGH 73, MA HARVARD UNIVERSITY 96, MD UNIVERSITY OF PITTSBURGH 77

TIMOTHY J EBERLEIN, MD  Spencer T. and Ann W. Olin Distinguished Professor, Siteman Cancer Center, BS UNIVERSITY OF PITTSBURGH 73, MA HARVARD UNIVERSITY 96, MD UNIVERSITY OF PITTSBURGH 77

Timothy J Eberlein  Siteman Cancer Center, Director, Alvin J. Siteman Cancer Center; Spencer T. and Ann W. Olin Distinguished Professor; and Bixby Professor and Chairman, Department of Surgery, Washington University School of Medicine, 1977-1979: Intern and resident, surgery, Peter Bent Brigham Hospital, Boston, 1979-1982: Research fellow, Surgery Branch, National Cancer Institute, Bethesda, Md., 1982-1984: Resident and chief resident, surgery, Brigham and Women's Hospital, Boston, 1985, 1977: MD, University of Pittsburgh, Primary Specialty: Breast cancer, Board Certified.; 1987, 1995: American Board of Surgery, General Surgery

CHARLES S EBY, MD  Associate Professor of Pathology and Immunology, Pathology & Immunology, BS DUKE UNIVERSITY 77, MD VANDERBILT UNIVERSITY 81

CHARLES S EBY, MD  Associate Professor of Pathology and Immunology, Pathology & Immunology, BS DUKE UNIVERSITY 77, MD VANDERBILT UNIVERSITY 81

ROBERT W EDMONDS, MD  Assistant Professor Emeritus of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 56, MD WASHINGTON UNIV IN ST. LOUIS 60

Steven A Edmoundowicz  Siteman Cancer Center, Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine, 1983-1986: Resident, internal medicine, Washington University, St. Louis, 1986-1988: Fellow, gastroenterology, Washington University, 1983: MD, Jefferson Medical College, Philadelphia, Primary Specialty: Gastroenterology, interventional endoscopy, biliary disease, Board Certified.; 1986: American Board of Internal Medicine, Internal Medicine

1989: American Board of Internal Medicine, Gastroenterology

STEVEN A. EDMUNDOWICZ, MD  Professor of Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 79, MD SCHOOL NOT LISTED 83

CHARMAINE E. EDWARDS, MD  Instructor in Clinical Medicine, Internal Medicine, BS ALCORN STATE UNIVERSITY 87, MD HOWARD UNIVERSITY 92

JAMES EARL EDWARDS, MD  Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, BA UNIVERSITY OF TENNESSEE 59, MD UNIVERSITY OF TENNESSEE 62

WILSON B EDWARDS, PHD  Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF NORTH CAROLINA 85, MS FLORIDA STATE UNIVERSITY 89, PHD WASHINGTON UNIV IN ST. LOUIS 99

W. Barry Edwards  Siteman Cancer Center, Research Instructor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1990: MS, organic chemistry, Florida State University, Tallahassee, 1999: PhD, inorganic chemistry, Washington University, St. Louis

IGOR R EFIMOV, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS MOSCOW INST OF PHYSICS & TECHN 83, MS MOSCOW INST OF PHYSICS & TECHN 86, PHD MOSCOW INST OF PHYSICS & TECHN 92

IGOR R EFIMOV, PHD  Associate Professor of Radiology, Radiology, BS MOSCOW INST OF PHYSICS & TECHN 83, MS MOSCOW INST OF PHYSICS & TECHN 86, PHD MOSCOW INST OF PHYSICS & TECHN 92

TATIANA EFIMOVA, PHD  Research Assistant Professor of Medicine (Dermatology), Internal Medicine, MS MOSCOW INST OF PHYSICS & TECHN 87, PHD CASE WESTERN RESERVE UNIV 00

RUSSELL E EGGBRECHT, MD  Associate Professor of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 67, MD WASHINGTON UNIV IN ST. LOUIS 71

TAMARA KAY EHLERT, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BA NORTHWESTERN UNIVERSITY 79, MD UNIV OF WISCONSIN MADISON 83

CARL F EHRlich, MD  Assistant Professor of Otolaryngology, Otolaryngology, MD UNIVERSITY OF MO COLUMBIA 65

ALI A EHSANI, MD  Professor of Medicine, Internal Medicine, MD SCHOOL NOT LISTED 65

ZAMIR EIDELMAN, MD  Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 87

JOHN ROBERT EIGENBRODT, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SOUTHERN ILL UNIV EDWARDSVILLE 85, OD UNIVERSITY OF MISSOURI 88

ARTHUR Z EISEN, MD  The Winfred A and Emma R Showman Professor of Dermatology in Medicine, Internal Medicine, BA STATE UNIV OF NY BUFFALO 51, MS BROWN UNIVERSITY 53, MD UNIVERSITY OF PENNSYLVANIA 57

SETH A EISEN, MD  Professor of Medicine, Internal Medicine, BA REED COLLEGE 63, MS HARVARD UNIVERSITY 89, MD
WASHINGTON UNIV IN ST. LOUIS 66

SETH A EISEN, MD Professor of Psychiatry, Psychiatry, BA REED COLLEGE 63, MS HARVARD UNIVERSITY 89, MD Washington University in St. Louis 66

Seth A Eisen Siteman Cancer Center, Professor of Medicine, Division of Rheumatology, Washington University School of Medicine, 1966: MD, Washington University, St. Louis, 1989: M Sc, epidemiology, Harvard Medical School, Boston, Board Certified., 1975: American Board of Internal Medicine, Internal Medicine

DAVID LOUIS EISENBERG, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, BS UNIVERSITY OF PITTSBURGH 99, M PH NORTHWESTERN UNIVERSITY 09, MD UNIVERSITY OF ALABAMA 03

LAWRENCE N EISENMAN, MD, PHD Assistant Professor of Neurology, Neurology, BS JOHNS HOPKINS UNIVERSITY 88, MD NORTHWESTERN UNIVERSITY 97, PHD NORTHWESTERN UNIVERSITY 97

LINDA G EISSENBERG, PHD Research Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF TENNESSEE 77, PHD UNIVERSITY OF NORTH CAROLINA 82

JOSIAH O. EKUNNO, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS SCHOOL NOT LISTED 65, MD SCHOOL NOT LISTED 74

Samir K El-Mofty Siteman Cancer Center, Associate Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1961: DDS, Cairo University, Cairo, Egypt, 1966: MS, Oral surgery, University of Pennsylvania, Philadelphia, 1976: PhD, Pathology, Temple University, Philadelphia, 1987: DMD, Washington University St. Louis, Primary Specialty: Head and neck pathology, Board Certified., American Board of Oral and Maxillofacial Surgery

SAMIR KHATTAB EL-MOFTY, DENT, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, MS UNIVERSITY OF PENNSYLVANIA 66, DENT SCHOOL NOT LISTED 59, PHD TEMPLE UNIVERSITY 76, DENT Washington University in St. Louis 87

ISSAM M EL NAQA, PHD Assistant Professor of Radiation Oncology, Radiation Oncology, BS SCHOOL NOT LISTED 92, MEE SCHOOL NOT LISTED 95, PHD ILLINOIS INSTITUTE OF TECHNOLOGY 02

SARAH C.R. ELGIN, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA POMONA COLLEGE 67, PHD CALIFORNIA INSTITUTE TECHNOLOGY 71

SARAH C.R. ELGIN, PHD Professor of Genetics, Genetics, BA POMONA COLLEGE 67, PHD CALIFORNIA INSTITUTE TECHNOLOGY 71

SVEN GUSTAV ELIASSON, MD, PHD Professor Emeritus of Neurology, Neurology, BS UNIVERSITY OF LUND 49, MLA Washington University in St. Louis 91, MD SCHOOL NOT LISTED 54, PHD SCHOOL NOT LISTED 52

JOHN ELENA, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 80, MD SOUTHERN ILLINOIS UNIVERSITY 83

THOMAS E ELLENBERGER, DVM, PHD Head of the Department of Biochemistry and Molecular Biophysics, Raymond H. Witcoff Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, DVM IOWA STATE UNIVERSITY 83, PHD HARVARD UNIVERSITY 89

Tom Ellenberger Siteman Cancer Center, Raymond H. Witcoff Professor and Chair, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, 1989-1993: Postdoctoral fellow, structural biology, Harvard University, Cambridge, Mass., 1983: DVM, Iowa State University, Ames, 1989: PhD, biochemistry and parasitology, Harvard University, Cambridge, Mass.

MATTHEW JAMES ELLIS, MBBCH, PHD Professor of Medicine, Internal Medicine, BS UNIVERSITY OF LONDON 81, MBBCH CAMBRIDGE UNIVERSITY 84, PHD UNIVERSITY OF LONDON 92

ELLIOIT L ELSON, PHD Alumni Endowed Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA HARVARD UNIVERSITY 59, PHD STANFORD UNIVERSITY 66

ALEXIS M ELWARD, MD Assistant Professor of Pediatrics, Pediatrics, BA LOYOLA COLLEGE 88, MPH SAINT LOUIS UNIVERSITY 06, MD UNIVERSITY OF MARYLAND 94

AMANDA R. EMKE, MD Instructor in Pediatrics, Pediatrics, BS ST MARYS UNIVERSITY 98, MD UNIVERSITY OF MO ROLLA 02

NICHOLAS EARL ENGELBRECHT Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci

JACK R. ENGSBERG, PHD, MS Associate Professor of Neurological Surgery, Neurological Surgery, BS UNIV OF WISCONSIN LA CROSSE 73, MS UNIV OF WISCONSIN LA CROSSE 78, PHD UNIVERSITY OF IOWA 85, MS UNIV OF WISCONSIN LA CROSSE 79
JACK R. ENGSBERG, PHD, MS Associate Professor of Occupational Therapy, Occupational Therapy, BS UNIV OF WISCONSIN LA CROSSE 73, MS UNIV OF WISCONSIN LA CROSSE 78, PHD UNIVERSITY OF IOWA 85, MS UNIV OF WISCONSIN LA CROSSE 79

JACK R. ENGSBERG, PHD, MS Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIV OF WISCONSIN LA CROSSE 73, MS UNIV OF WISCONSIN LA CROSSE 78, PHD UNIVERSITY OF IOWA 85, MS UNIV OF WISCONSIN LA CROSSE 79

JAMES MICHAEL EPSTEIN, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 65, MD WASHINGTON UNIV IN ST. LOUIS 69

JAY S EPSTEIN, MD Professor of Clinical Pediatrics, Pediatrics, BA EMORY UNIVERSITY 77, MS EMORY UNIVERSITY 78, MD EMORY UNIVERSITY 83

LAWRENCE W ERNST, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD UNIVERSITY OF MISSOURI 90

CHRISTOPHER R. ERWIN, PHS Research Associate Professor of Surgery (Pediatric Surgery), Surgery, BS UNIVERSITY OF CA DAVIS 76, MS UNIVERSITY OF CA DAVIS 78, PHS UNIVERSITY OF IOWA 83

JUAN ESCANDON, MD Assistant Professor of Clinical Neurology, Neurology, BS SCHOOL NOT LISTED 85, MD SCHOOL NOT LISTED 89

Diane M Eschmann, MD Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 89, MD UNIVERSITY OF MISSOURI 93

JENNIFER ESS Instructor in Clinical Pediatrics, Pediatrics

LAURA ANN ESSWEIN, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 87, MD UNIVERSITY OF MISSOURI 91

Michele Marie Estabrook, MD Professor of Pediatrics, Pediatrics, BA BATES COLLEGE 76, MA STANFORD UNIVERSITY 79, MD CASE WESTERN RESERVE UNIV 83

Jacqueline Esthappan, PHD Assistant Professor of Radiation Oncology, Radiation Oncology, BA UNIVERSITY OF CHICAGO 95, PHD UNIVERSITY OF CHICAGO 00

Neil A Ettinger, MD Instructor in Clinical Medicine, Internal Medicine, BS VANDERBILT UNIVERSITY 79, MD WASHINGTON UNIV IN ST. LOUIS 83

Bradley A Evanoff, MD Professor of Occupational Therapy, Occupational Therapy, BA CORNELL UNIVERSITY 82, M PH UNIVERSITY OF WASHINGTON 93, MD WASHINGTON UNIV IN ST. LOUIS 86

Bradley A Evanoff, MD Richard A and Elizabeth Henby Sutter Professor of Occupational, Industrial, and Environmental Medicine in Medicine, Internal Medicine, BA CORNELL UNIVERSITY 82, M PH UNIVERSITY OF WASHINGTON 93, MD WASHINGTON UNIV IN ST. LOUIS 86

Ronald G Evens, MD Professor of Clinical Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 61, MD WASHINGTON UNIV IN ST. LOUIS 64

Alex S Evers, MD Head of the Department of Anesthesiology, Henry E Mallinckrodt Professor of Anesthesiology, Anesthesiology, BS YALE UNIVERSITY 74, MD NEW YORK UNIVERSITY 78

Alex S Evers, MD Professor of Developmental Biology, Developmental Biology, BA YALE UNIVERSITY 74, MD NEW YORK UNIVERSITY 78

Alex S Evers, MD Professor of Medicine, Internal Medicine, BS YALE UNIVERSITY 74, MD NEW YORK UNIVERSITY 78

Carol Jane Evers, MD Instructor in Clinical Medicine, Internal Medicine, BA BROWN UNIVERSITY 73, MD BROWN UNIVERSITY 77

Gregory A Ewald, MD Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 85, MD NORTHWESTERN UNIVERSITY 89

Renee D Ewing, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MO ST LOUIS 79, MD SOUTHERN ILLINOIS UNIVERSITY 84

Elisa Fabbrini, MD, PHD Research Assistant Professor of Medicine, Internal Medicine, MD LA SAPIENTA UNIVERSITY 98, PHD LA SAPIENTA UNIVERSITY 06

Roberta Faccio, PHD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, PHD UNIVERSITY OF BARI 00

Roberta Faccio, PHD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, PHD UNIVERSITY OF BARI 00
RAYMOND F FADA, JR, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MICHIGAN 84, OD UNIVERSITY OF MISSOURI 89

BRIAN T FADDIS, PHD Assistant Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS UNIVERSITY OF CALIFORNIA 82, MS UNIVERSITY OF CALIFORNIA 89, PHD UNIVERSITY OF CALIFORNIA 94

BRIAN T FADDIS, PHD Research Assistant Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF CALIFORNIA 82, MS UNIVERSITY OF CALIFORNIA 89, PHD UNIVERSITY OF CALIFORNIA 94

MITCH N FADDIS, MD, PHD Associate Professor of Medicine, Internal Medicine, BS KANSAS STATE UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 93, PHD WASHINGTON UNIV IN ST. LOUIS 93

RICHARD ELIOT FAGLEY, MD Assistant Professor of Anesthesiology, Anesthesiology, BS JUNIATA COLLEGE 88, MD TULANE UNIVERSITY 02

NANCY FAHIM, MD Assistant Professor of Pediatrics, Pediatrics, MS SCHOOL NOT LISTED 87, MD CARIO UNIVERSITY 93

ELISE M FALLUCCO, MD Instructor in Psychiatry (Child Psychiatry), Psychiatry, MD VANDERBILT UNIVERSITY 04

NURI BRADFORD FARBER, MD Associate Professor of Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 85, MD WASHINGTON UNIV IN ST. LOUIS 89

ELLIOIT H FARBERMAN, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF ROCHESTER 69, MD SAINT LOUIS UNIVERSITY 73

CATHLEEN RAE FARIS, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF KANSAS 77, MD UNIVERSITY OF KANSAS 82

ALBERT FARO, MD Associate Professor of Pediatrics, Pediatrics, BA COLUMBIA UNIVERSITY 84, MD UNIVERSITY OF PITTSBURGH 88

DIONE M FARRIA, MD Associate Professor of Radiology, Radiology, BS XAVIER UNIVERSITY LOUISANA 85, M PH UNIVERSITY OF CALIFORNIA 97, MD HARVARD UNIVERSITY 89

Dione M Faria Siteman Cancer Center, Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine, 1990-1994: Resident, diagnostic radiology, University of California, Los Angeles, 1994-1995: Fellow, breast imaging, University of California, Los Angeles, 1995-1997: Resident, preventive medicine, University of California, Los Angeles, 1989: MD, Harvard Medical School, Boston, 1997: MPH, University of California, Los Angeles, Primary Specialty: Diagnostic radiology and breast imaging, Board Certified: American Board of Radiology, Diagnostic Radiology; American Board of Preventive Medicine, Public Health and General Preventive Medicine

AKINRINOLA FATOMI Instructor in Clinical Medicine, Internal Medicine, BS SCHOOL NOT LISTED 82, MS SCHOOL NOT LISTED 89

JUSTIN C. FAY, PHD Assistant Professor of Genetics, Genetics, PHD UNIVERSITY OF CHICAGO 01

TODD A FEHNIKER, MD, PHD Assistant Professor of Medicine, Internal Medicine, BS STATE UNIF OF NY BUFFALO 94, MD OHIO STATE UNIVERSITY 02, PHD OHIO STATE UNIVERSITY 00

Todd A Fehniger Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Sections of Stem Cell Biology and Bone Marrow Transplantation, Washington University School of Medicine, 2002-2004: Intern and resident, internal medicine, Washington University, 2004-2008: Fellow, hematology and oncology, Washington University, 2000: PhD, immunology, Ohio State University, Columbus, 2002: MD, Ohio State University, Primary Specialty: Lymphoma, cellular therapy and bone marrow transplantation, Board Certified:; 2006: American Board of Internal Medicine, Internal Medicine

JAMES J FEHR, III, MD Associate Professor of Anesthesiology, Anesthesiology, BA DAVENPORT UNIVERSITY 84, MD DAVENPORT UNIVERSITY 88

JAMES J FEHR, III, MD Associate Professor of Pediatrics, Pediatrics, BA DAVENPORT UNIVERSITY 84, MD DAVENPORT UNIVERSITY 88

ROBERT M FEIBEL, MD Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA JOHNS HOPKINS UNIVERSITY 65, MD HARVARD UNIVERSITY 69

STEVEN EDWARD FEIT, MD Assistant Professor of Anesthesiology, Anesthesiology, BA INDIANA STATE UNIVERSITY 78, MD UNIVERSITY OF MO COLUMBIA 82

MARY F FEITOSA, PHD Research Assistant Professor of Genetics, Genetics, BA SAO PAULO UNIVERSITY 79, MA SAO PAULO UNIVERSITY 85, PHD SAO PAULO UNIVERSITY 90

DAVID FELKEL, JR Instructor Emeritus in Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 43

THOMAS A FERGUSON, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA KENT ST
THOMAS A FERGUSON, PHD  Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA KENT ST UNIVERSITY 74, MS KENT ST UNIVERSITY 76, PHD UNIVERSITY OF CINCINNATI 82

Thomas A Ferguson  Siteman Cancer Center, Associate Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine, 1982-1984: Postdoctoral fellow, pathology, Yale University, New Haven, Conn.; 1976: MS, microbiology, Kent State University, Kent, Ohio, 1982: PhD, microbiology/immunology, University of Cincinnati

THOMAS BRUCE FERGUSON, MD, BS  Professor Emeritus of Surgery (Cardiothoracic Surgery), Surgery, BS DUKE UNIVERSITY 47, MD DUKE UNIVERSITY 47

THOMAS W FERKOL, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA CASE WESTERN RESERVE UNIVERSITY 81, MD OHIO STATE UNIVERSITY 85

THOMAS W FERKOL, MD  Professor of Pediatrics, Pediatrics, BA CASE WESTERN RESERVE UNIVERSITY 81, MD OHIO STATE UNIVERSITY 85

ISABEL FERNANDEZ-HOLTZMAN  Instructor in Clinical Pediatrics, Pediatrics

JAMES A FERNANDEZ, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BS UNIVERSITY OF NOTRE DAME 77, MD SAINT LOUIS UNIVERSITY 81

HERMAN L FERRELL, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ARKANSAS 73, MD UNIVERSITY OF ARKANSAS 75

BEVERLY J. FIELD, PHD, BA  Assistant Professor of Anesthesiology, Anesthesiology, B MUS SOUTHERN ILLINOIS UNIVERSITY 72, M MUS SOUTHERN ILLINOIS UNIVERSITY 73, PHD WASHINGTON UNIV IN ST. LOUIS 93, BA UNIVERSITY OF MISSOURI 87

BEVERLY J. FIELD, PHD, BA  Assistant Professor of Psychiatry, Psychiatry, B MUS SOUTHERN ILLINOIS UNIVERSITY 72, M MUS SOUTHERN ILLINOIS UNIVERSITY 73, PHD WASHINGTON UNIV IN ST. LOUIS 93, BA UNIVERSITY OF MISSOURI 87

JOSHUA JEFFREY FIELD, MD  Instructor in Medicine, Internal Medicine, BS INDIANA STATE UNIVERSITY 96, MD UNIVERSITY OF IOWA 01

JEFFREY T FIERSTEIN, MD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, BA DARTMOUTH COLLEGE 68, MD SCHOOL NOT LISTED 71

DOROTHY J FIETE  Research Instructor in Pathology and Immunology, Pathology & Immunology, BS MARYMOUNT COLLEGE 66

ROBERT S FIGENSHAU, MD  Professor of Surgery (Urologic Surgery), Surgery, BS MACALESTER COLLEGE 81, MD UNIVERSITY OF MINNESOTA 87


BRIAN N. FINCK, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 94, MS UNIVERSITY OF ILLINOIS 96, PHD UNIVERSITY OF ILLINOIS 98

DEBRA FINK, DDENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA BARNARD COLLEGE 71, MS UNIVERSITY OF SCRANTON 81, DDENT WASHINGTON UNIV IN ST. LOUIS 88

KURT W FINKLANG, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MISSOURI 77, OD STATE UNIVERSITY OF NEW YORK 81

GREGORY K FINN, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA HENDRIX COLLEGE 85, MD WASHINGTON UNIV IN ST. LOUIS 92

JILL B FIRSZT, PHD  Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS UNIVERSITY OF ILLINOIS 78, MS UNIVERSITY OF ILLINOIS 82, PHD UNIVERSITY OF ILLINOIS 98

JILL B FIRSZT, PHD  Associate Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF ILLINOIS 78, MS UNIVERSITY OF ILLINOIS 82, PHD UNIVERSITY OF ILLINOIS 98

LEWIS CONRAD FISCHBEIN, MD  Associate Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF ROCHESTER 70, MD WASHINGTON UNIV IN ST. LOUIS 74

KEITH C FISCHER, MD  Associate Professor of Radiology, Radiology, BA OBERLIN COLLEGE 67, MD JOHNS HOPKINS UNIVERSITY MEDIC 71

PETER UWE FISCHER, D SC  Visiting Associate Professor of Medicine, Internal Medicine, MS FREE UNIVERSITY OF BERLIN
MARSHA NICOLE FISHER, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WASHINGTON UNIV IN ST. LOUIS 88, MD UNIVERSITY OF MISSOURI 92

SIMON FISHER, MD, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF TORONTO 89, MS UNIVERSITY OF TORONTO 91, MD UNIVERSITY OF TORONTO 97, PHD UNIVERSITY OF TORONTO 96

SIMON FISHER, MD, PHD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF TORONTO 89, MS UNIVERSITY OF TORONTO 91, MD UNIVERSITY OF TORONTO 97, PHD UNIVERSITY OF TORONTO 96

NORMAN FISHMAN, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA SCHOOL NOT LISTED 70, MD SCHOOL NOT LISTED 74

ANNA M FITZ-JAMES, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MASSACHUSETTS 75, M PH SCHOOL NOT LISTED 94, MD GEORGE WASHINGTON UNIVERSITY 81

SEAN C. FITZMAURICE, MD  Instructor in Emergency Medicine in Medicine, Internal Medicine, BS GEORGETOWN UNIVERSITY 89, MD SAINT LOUIS UNIVERSITY 95

SUSAN M FITZPATRICK, PHD  Adjunct Associate Professor of Neurobiology, Anatomy & Neurobiology, BS ST JOHNS UNIVERSITY 78, PHD CORNELL UNIVERSITY 84

ISRAEL JEROME FLANCE, MD  Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 31, MD WASHINGTON UNIV IN ST. LOUIS 35

JULIAN B FLEISCHMAN, PHD  Associate Professor Emeritus of Molecular Microbiology, Molecular Microbiology, BS YALE UNIVERSITY 55, PHD HARVARD UNIVERSITY 60

TIMOTHY PETER FLEMING, PHD  Research Professor of Surgery (General Surgery), Surgery, BA SAINT LOUIS UNIVERSITY 75, PHD UNIVERSITY OF MISSOURI 85


JAMES W FLESHMAN, JR, MD  Professor of Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 76, MD WASHINGTON UNIV IN ST. LOUIS 80

NORMA A FLETCHER, PHD  Research Associate Professor Emerita of Medicine, Internal Medicine, ME DENMARK TECH COLLEGE 49, PHD UNIVERSITY OF COPENHAGEN 65

EDWARD B FLIESHER, MD  Instructor in Clinical Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 74, MD SAINT LOUIS UNIVERSITY 78

JULIENNE MARIE FLORENCE, DPT  Research Associate Professor of Neurology, Neurology, BS WASHINGTON UNIV IN ST. LOUIS 75, MS WASHINGTON UNIV IN ST. LOUIS 83, DPT WASHINGTON UNIV IN ST. LOUIS 02

JULIENNE MARIE FLORENCE, DPT  Research Associate Professor of Physical Therapy, Physical Therapy, BS WASHINGTON UNIV IN ST. LOUIS 75, MS WASHINGTON UNIV IN ST. LOUIS 83, DPT WASHINGTON UNIV IN ST. LOUIS 02

PAMELA LORENA FLORES-SANCHEZ, MD  Instructor in Pediatrics, Pediatrics, MD UNIVERSIDAD CATOLICA DE SANTIA 03

CYNTHIA FLORIN, MD  Instructor in Clinical Psychiatry, Psychiatry, BS GRINNELL COLLEGE 76, MD COLUMBIA UNIVERSITY 84

M. WAYNE FLYE, MD, PHD, MA  Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF NORTH CAROLINA 84, MA DUKE UNIVERSITY 72, MD UNIVERSITY OF NORTH CAROLINA 67, PHD DUKE UNIVERSITY 80, MA YALE UNIVERSITY 85

M. WAYNE FLYE, MD, PHD, MA  Professor of Radiology, Radiology, BS UNIVERSITY OF NORTH CAROLINA 64, MA DUKE UNIVERSITY 72, MD UNIVERSITY OF NORTH CAROLINA 67, PHD DUKE UNIVERSITY 80, MA YALE UNIVERSITY 85

M. WAYNE FLYE, MD, PHD, MA  Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF NORTH CAROLINA 64, MA DUKE UNIVERSITY 72, MD UNIVERSITY OF NORTH CAROLINA 67, PHD DUKE UNIVERSITY 80, MA YALE UNIVERSITY 85

SUSAN R FOERSTER, MD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MANITOBA 92, MD UNIVERSITY OF MANITOBA 96

GREGORY DEWITT FOLKERT  Instructor in Emergency Medicine (Pending Dean's Approval), Internal Medicine
FRANK DONALD FONTANA, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD ILLINOIS COLLEGE OF OPTOMETRY 50

LUIGI FONTANA, MD, PHD Research Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY OF VERONA 94, PHD UNIVERSITY OF PADOVA 04

ANDRIA L FORD, MD Instructor in Neurology, Neurology, BS DUKE UNIVERSITY 98, MD UNIVERSITY OF OKLAHOMA 02

SHANON ALEX FORSETER Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

COREY G FOSTER, MD Instructor in Medicine, Internal Medicine, BS LOUISIANA ST UNIVERSITY 01, MD LOUISIANA ST UNIV HLTH SCI 06

ERIN R FOSTER Instructor in Neurology, Neurology, BS WASHINGTON UNIV IN ST. LOUIS 03

ERIN R FOSTER Instructor in Occupational Therapy, Occupational Therapy, BS WASHINGTON UNIV IN ST. LOUIS 03

IDA K FOX, MD Assistant Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS HAVERFORD COLLEGE 94, MD UNIVERSITY OF ROCHESTER 99


SEYMOUR FOX, PHD Instructor in Radiation Oncology, Radiation Oncology, BS MCGILL UNIVERSITY 71, MS UNIVERSITY OF OREGON 72, PHD UNIVERSITY OF OREGON 77

MYRTO FRANGOS, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 81, MD SAINT LOUIS UNIVERSITY 85

BENNETT DAVID FRANK, MD, PHD Instructor in Clinical Neurology, Neurology, BS HAVERFORD COLLEGE 94, MD UNIVERSITY OF ROCHESTER 99

BRUCE S FRANK, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS MASS INST OF TECHNOLOGY (MIT) 72, MD WASHINGTON UNIV IN ST. LOUIS 76

VICTORIA J FRASER, MD J William Campbell Professor of Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 78, MD UNIVERSITY OF MISSOURI 83

JOHN LAWRENCE FRATER, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF NOTRE DAME 92, MS MEDICAL COLLEGE OF OHIO 96

William A Frazier Siteman Cancer Center, Professor of Biochemistry and Molecular Biophysics, Washington University School of Medicine, 1973-1974: Postdoctoral fellow, biological chemistry, Washington University, 1974-1976: Postdoctoral fellow, psychiatry, University of California, 1973: PhD, biochemistry, Washington University, St. Louis

WILLIAM A FRAZIER, III, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA JOHNS HOPKINS UNIVERSITY 69, PHD WASHINGTON UNIV IN ST. LOUIS 73

WILLIAM A FRAZIER, III, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA JOHNS HOPKINS UNIVERSITY 69, PHD WASHINGTON UNIV IN ST. LOUIS 73

JOHN MURRAY FREDRICKSON, MD Professor Emeritus of Otolaryngology, Otolaryngology, BA UNIVERSITY OF BRITISH COLUMBIA 53, MD UNIVERSITY OF BRITISH COLUMBIA 57

KENNETH E FREEDLAND, PHD Professor of Psychiatry, Psychiatry, BS UNIVERSITY OF OREGON 75, MA UNIVERSITY OF HAWAII 79, PHD UNIVERSITY OF HAWAII 82

BRADLEY D. FREEMAN, MD Associate Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF CENTRAL FLORIDA 84, MD DUKE UNIVERSITY 88

JAMES MATTHEW FREER, MD Instructor in Medicine, Internal Medicine, BS TRUMAN STATE UNIVERSITY 98, MD UNIVERSITY OF MISSOURI COLUMBIA 02

SEYMOUR MICHAEL FREIMAN, MD Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA MONTANA STATE UNIVERSITY 51, MD WASHINGTON UNIV IN ST. LOUIS 55

DAVED H FREMONT, PHD Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIV OF WISCONSIN MADISON 86, PHD UNIVERSITY OF CA SAN DIEGO 93

DAVED H FREMONT, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BS UNIV OF WISCONSIN MADISON 86, PHD UNIVERSITY OF CA SAN DIEGO 93
ANTHONY RAYMOND FRENCH, MD, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF MINNESOTA 89, MS UNIVERSITY OF ILLINOIS 93, MD UNIVERSITY OF ILLINOIS 97, PHD UNIVERSITY OF ILLINOIS 95

ANTHONY RAYMOND FRENCH, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MINNESOTA 89, MS UNIVERSITY OF ILLINOIS 93, MD UNIVERSITY OF ILLINOIS 97, PHD UNIVERSITY OF ILLINOIS 95

DEBORAH FRENCHIE, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 84, MD WASHINGTON UNIV IN ST. LOUIS 93

CARL FRIEDEN, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA CARLETON COLLEGE 51, PHD UNIV OF WISCONSIN MADISON 55

IRA J FRIEDMAN, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ARKANSAS 55, MD UNIVERSITY OF ARKANSAS 60

ERNST R FRIEDRICH, MD  Professor Emeritus of Obstetrics and Gynecology, Obstetrics & Gynecology, MS SCHOOL NOT LISTED 51, MD HEIDELBERG UNIVERSITY 54

DARRIN FRIESEN, MD  Instructor in Clinical Psychiatry, Psychiatry, BA SCHOOL NOT LISTED 90, MD WASHINGTON UNIV IN ST. LOUIS 96

STEPHANIE ANN FRITZ, MD  Instructor in Pediatrics, Pediatrics, BS UNIV OF WISCONSIN MILWAUKEE 97, MS WASHINGTON UNIV IN ST. LOUIS 08, MD MEDICAL COLLEGE OF WISCONSIN 01

BRIAN R. FROELKE, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval), Internal Medicine, MD UNIVERSITY OF CINCINNATI 02

Q. John Fu  Siteman Cancer Center, Assistant Professor of Community Health, Division of Biostatistics, Saint Louis University School of Public Health, 1986-1989: Resident, internal medicine, Southern Hospital, Guangdong, China, 1989-1991: Fellow, endocrinology, Southern Hospital, 2000-2002: Postdoctoral fellow, genetic epidemiology, Washington University, St. Louis, 1986: MD, Southern Medical University, Guangzhou, China, 1995: MA, health education and health promotion, University of Alabama, Tuscaloosa, 1999: PhD, health education and health promotion, University of Alabama

ROBERT P. FUCETOLA, PHD  Associate Professor of Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 91, MA WASHINGTON UNIV IN ST. LOUIS 93, PHD WASHINGTON UNIV IN ST. LOUIS 97

BRIAN M FULLER, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval), Internal Medicine, BA UNIVERSITY OF ALABAMA 98, MD UNIVERSITY OF ALABAMA 03

MICHAEL PAUL FULLER, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA BRIGHAM YOUNG UNIVERSITY 90, MD UNIVERSITY OF UTAH 94

TERRY A FULLER, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BS UNIVERSITY OF NOTRE DAME 70, MD WASHINGTON UNIV IN ST. LOUIS 74

ROBERT S. FULTON  Research Instructor in Genetics, Genetics, BA SOUTHERN ILL UNIV EDWARDSVILLE 90, MS SOUTHERN ILL UNIV EDWARDSVILLE 97

SUZANNE FURESZ  Instructor in Clinical Medicine, Internal Medicine

MOKHTAR H GADO, MBBCH  Professor of Neurological Surgery, Neurological Surgery, MS CAIRO UNIVERSITY 60, MBBCH CAIRO UNIVERSITY 53

MOKHTAR H GADO, MBBCH  Professor of Radiology, Radiology, MS CAIRO UNIVERSITY 60, MBBCH CAIRO UNIVERSITY 53

BRIAN F GAGE, MD  Associate Professor of Medicine, Internal Medicine, BS STANFORD UNIVERSITY 84, MS STANFORD UNIVERSITY 95, MD UNIVERSITY OF CALIFORNIA 88

CARRIE S GAINES, OD  Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MISSOURI 84, OD UNIVERSITY OF MISSOURI 88

DANIEL GAITAN, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF AL BIRMINGHAM 80, MD UNIVERSITY OF MISSISSIPPI 86

ANDREW E GALAKATOS, MD  Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS ST LOUIS COLLEGE OF PHARMACY 60, MD UNIVERSITY OF MISSOURI 65

LEESA GALATZ, MD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF CALIFORNIA 88, MD GEORGE WASHINGTON UNIVERSITY 93

ERIC A GALBURT, PHD  Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, PHD UNIVERSITY OF WASHINGTON 02
ARTHUR H GALE, MD  Associate Professor of Clinical Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 55, MD UNIVERSITY OF MISSOURI 59

JOHN P GALGANI, JR, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BS MASSACHUSETTS COLLEGE OF PHAR 77, MD SAINT LOUIS UNIVERSITY 82

IRA CLYDE GALL, MD  Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF CINCINNATI 48, MD UNIVERSITY OF CINCINNATI 51

BRIAN JAMES GALLETTA, PHD  Research Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS PENNSYLVANIA STATE UNIVERSITY 96, PHD PENNSYLVANIA STATE UNIVERSITY 04

ROBERTO GALLETTO, PHD  Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, MS UNIVERSITY OF GENOA 96, PHD UNIVERSITY OF TEXAS GALVESTON 02

JAMES E. GALVIN, MD, MS  Associate Professor of Neurobiology, Anatomy & Neurobiology, BA NEW YORK UNIVERSITY 86, M PH SAINT LOUIS UNIVERSITY 04, MD U MEDICAL-DENTAL OF NEW JERSEY 92, MS RUTGERS UNIVERSITY 88

JAMES E. GALVIN, MD, MS  Associate Professor of Neurology, Neurology, BA NEW YORK UNIVERSITY 86, M PH SAINT LOUIS UNIVERSITY 04, MD U MEDICAL-DENTAL OF NEW JERSEY 92, MS RUTGERS UNIVERSITY 88

JAMES E. GALVIN, MD, MS  Associate Professor of Psychiatry, Psychiatry, BA NEW YORK UNIVERSITY 86, M PH SAINT LOUIS UNIVERSITY 04, MD U MEDICAL-DENTAL OF NEW JERSEY 92, MS RUTGERS UNIVERSITY 88

SANJIV K. GANDHI, MD  Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, BS DALHOUISIE UNIVERSITY 89, MD MCGILL UNIVERSITY 93

UMESH INDERLAL GANDHI, MBBS, MD  Instructor in Medicine, Internal Medicine, MBBS UNIVERSITY OF BARODA 99, MD UNIVERSITY OF BARODA 03

JACOB M GANDLMAYR, MD  Instructor in Medicine, Internal Medicine, MD UNIV. OF INNSBRUCK - MEDICAL 51

MARIA VIRGINIA GANNINGER  Instructor in Clinical Pediatrics, Pediatrics

LAWRENCE A GANS, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA COLUMBIA UNIVERSITY 72, MD CASE WESTERN RESERVE UNIV 77

FENG GAO, PHD  Research Assistant Professor of Biostatistics, Biostatistics, PHD EMORY UNIVERSITY 03

WEIQIANG GAO, MD, PHD  Research Instructor in Medicine, Internal Medicine, MD SUZHOU MEDICAL COLLEGE 96, PHD SOOCHOW UNIVERSITY 04

XIAOYI GAO, PHD  Instructor in Genetics, Genetics, PHD NORTH CAROLINA STATE UNIVERSITY 06

Joel R Garbow  Siteman Cancer Center, Research Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1983-1984: Postdoctoral fellow, Monsanto, St. Louis, 1985-1995: Staff scientist, Monsanto, 1995-1999: Science fellow, Monsanto, 1983: PhD, chemistry, University of California, Berkeley

JOEL RICHARD GARBOW, PHD  Research Associate Professor of Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 78, MD UNIVERSITY OF CA BERKELEY 83

JANE M. GARBUTT, MBCHB  Research Associate Professor of Medicine, Internal Medicine, MHS UNIVERSITY OF TORONTO 88, MBCHB BRISTOL UNIVERSITY 77

JANE M. GARBUTT, MBCHB  Research Associate Professor of Pediatrics, Pediatrics, MHS UNIVERSITY OF TORONTO 88, MBCHB BRISTOL UNIVERSITY 77

JOSE L GARCIA  Instructor in Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF PUERTO RICO 95, MS FINCH UNIV OF HEALTH SCIENCES 97

KATHLEEN M GARCIA, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF CALIFORNIA 76, MD HARVARD UNIVERSITY 90

KEITH S. GARCIA, MD, PHD  Assistant Professor of Psychiatry, Psychiatry, BA RICE UNIVERSITY 89, MD UNIVERSITY OF TEXAS HOUSTON 97, PHD UNIVERSITY OF TEXAS HOUSTON 98

MICHAEL J GARDNER, MD  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA WILLIAMS COLLEGE 96, MD DREXEL UNIVERSITY 01

TESSA D GARDNER, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS MASS INST OF TECHNOLOGY (MIT) 68, MD HARVARD UNIVERSITY 72
BERNARD T GARFINKEL, MD  Professor of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 48

NICK S. GARG  Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry

STEPHEN M GARNETT, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS INDIANA UNIVERSITY BLOOMINGTON 78, OD INDIANA UNIVERSITY BLOOMINGTON 80

HEATHER VALLHON GARRETT, MD  Instructor in Radiology, Radiology, BA UNIVERSITY OF VIRGINIA 96, MD WASHINGTON UNIV IN ST. LOUIS 02

JACQUELYN B GARRETT, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS HOWARD UNIVERSITY 83, MD HOWARD UNIVERSITY 85

CARYN GARRIGA  Instructor in Clinical Pediatrics, Pediatrics

FRANCISCO J GARRIGA, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF PUERTO RICO 66, MD WASHINGTON UNIV IN ST. LOUIS 70

CHARLES F GARVIN, MD  Instructor in Clinical Radiology, Radiology, BA UNIVERSITY OF MISSOURI 80, MD UNIVERSITY OF MISSOURI 82

SARAH KATHRYN GARWOOD, MD  Instructor in Pediatrics, Pediatrics, BS TRUMAN STATE UNIVERSITY 98, MD UNIVERSITY OF MO ST LOUIS 02

CARYN GARRIGA  Instructor in Clinical Pediatrics, Pediatrics

DAWN LEE GARZON  Adjunct Instructor in Psychiatry, Psychiatry

BEN M GASIROWSKI, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD SAINT LOUIS UNIVERSITY 85

FRED W GASKIN, MD  Associate Professor of Clinical Psychiatry, Psychiatry, BS UNIVERSITY OF MINNESOTA 64, MD UNIVERSITY OF MINNESOTA 68

FELICITAS Z GATACHALIAN, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF SANTO TOMAS 70, MD UNIVERSITY OF SANTO TOMAS 76

JOSEPH H GATEWOOD, MD  Instructor in Emergency Medicine in Medicine, Internal Medicine, BA SWARTHMORE COLLEGE 66, MD UNIVERSITY OF CHICAGO 70

NARASIMHAN GAUTAM, PHD  Professor of Anesthesiology, Anesthesiology, BS SCHOOL NOT LISTED 77, MS SCHOOL NOT LISTED 79, PHD UNIVERSITY OF BOMBAY 85

NARASIMHAN GAUTAM, PHD  Professor of Genetics, Genetics, BS SCHOOL NOT LISTED 77, MS SCHOOL NOT LISTED 79, PHD UNIVERSITY OF BOMBAY 85

HIKAM ALBERTO GAY, MD  Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval), Radiation Oncology, BS UNIVERSITY OF PUERTO RICO 96, MD UNIVERSITY OF PUERTO RICO 00

WILLIAM A GAY, MD  Professor of Surgery (Cardiothoracic Surgery), Surgery, BA VIRGINIA MILITARY INSTITUTE 57, MD DUKE UNIVERSITY 61

WILLIAM D GAY, DDS  Christy J. and Richard S. Hawes III Associate Professor of Otolaryngology, Otolaryngology, LLB LA SALLE UNIVERSITY 73, DDS UNIVERSITY OF TENNESSEE 66

W. Donald Gay  Siteman Cancer Center, Christy J. and Richard S. Hawes III Professor of Otolaryngology and Chief, Division of Maxillofacial Prosthetics, Washington University School of Medicine, 1975: Resident, prosthodontics, Walter Reed Army Medical Center, Washington, D.C., 1977: Resident, maxillofacial prosthetics, National Naval Medical Center, Bethesda, Md., 1966: DDS, University of Tennessee, Knoxville, Primary Specialty: Oral and facial prostheses for patients with congenital or acquired defects., Board Certified.: American Board of Prosthodontics

AVIHU GAZIT, MD  Assistant Professor of Pediatrics, Pediatrics, MD TECHNION - ISRAEL INST. OF TEC 97

ELAINE Y GEE, MD  Instructor in Medicine, Internal Medicine, BS NEW YORK UNIVERSITY 02, MD WASHINGTON UNIV IN ST. LOUIS 06

WILLIAM M GEE, MD  Instructor in Clinical Medicine, Internal Medicine, BA CORNELL COLLEGE 77, MD WASHINGTON UNIV IN ST. LOUIS 81

Sarah Gehlert  Siteman Cancer Center

JUDITH REBECCA GELBER, DPT  Instructor in Neurology, Neurology, BS CASE WESTERN RESERVE UNIV 04, DPT WASHINGTON UNIV IN ST. LOUIS 07

JUDITH REBECCA GELBER, DPT  Instructor in Physical Therapy, Physical Therapy, BS CASE WESTERN RESERVE UNIV 04, DPT WASHINGTON UNIV IN ST. LOUIS 07
RICHARD H GELBERMAN, MD  Fred C Reynolds Professor of Orthopaedic Surgery, Head of the Department of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF NORTH CAROLINA 65, MD UNIVERSITY OF TENNESSEE 69

ELLIOIT FIELD GELLMAN, MD  Professor of Pediatrics, Pediatrics, BA IOWA STATE UNIVERSITY 57, MD UNIVERSITY OF MO COLUMBIA 61

ANDREW E. GELMAN, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF CA LOS ANGELES 96, PHD UNIVERSITY OF PENNSYLVANIA 06

ANDREW E. GELMAN, PHD  Assistant Professor of Surgery (Cardiothoracic Surgery), Surgery, BS UNIVERSITY OF CA LOS ANGELES 96, PHD UNIVERSITY OF PENNSYLVANIA 06

EDWARD M GELTMAN, MD  Assistant Professor of Radiology, Radiology, BS MASS INST OF TECHNOLOGY (MIT) 67, MD NEW YORK UNIVERSITY 71

EDWARD M GELTMAN, MD  Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 67, MD NEW YORK UNIVERSITY 71

KENNETH W GENTSCH, MD  Instructor in Clinical Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 54, MD WASHINGTON UNIV IN ST. LOUIS 58

PATRICK J GERAGHTY, MD  Associate Professor of Surgery (General Surgery), Surgery, BS NORTHWESTERN UNIVERSITY 89, MD NORTHWESTERN UNIVERSITY 91

ROBERT W GEREAU, PHD  Professor of Anesthesiology, Anesthesiology, BS SOUTHWEST MISSOURI ST UNIVERSI 91, PHD EMORY UNIVERSITY 95

ROBERT W GEREAU, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BS SOUTHWEST MISSOURI ST UNIVERSI 91, PHD EMORY UNIVERSITY 95

JAMES A GERST, MD  Professor of Clinical Pediatrics, Pediatrics, BS BENEDICTINE COLLEGE 68, MD UNIVERSITY OF MISSOURI 72

ANNE ELIZABETH GETZ, MD  Assistant Professor of Otolaryngology, Otolaryngology, MD THOMAS JEFFERSON UNIVERSITY 02

N. REX GHORMLEY, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD SCHOOL NOT LISTED 64

NUPUR GHOSHAL, MD, PHD  Instructor in Neurology, Neurology, BA IOWA STATE UNIVERSITY 95, MD NORTHWESTERN UNIVERSITY MED 03, PHD NORTHWESTERN UNIVERSITY MED 01

CONNIE F GIBSTINE, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF ILLINOIS 76, MD UNIVERSITY OF MISSOURI 80

JEFFREY M. GIDDAY, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF MICHIGAN 79, PHD UNIVERSITY OF VIRGINIA 86

JEFFREY M. GIDDAY, PHD  Associate Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF MICHIGAN 79, PHD UNIVERSITY OF VIRGINIA 86

JEFFREY M. GIDDAY, PHD  Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MICHIGAN 79, PHD UNIVERSITY OF VIRGINIA 86

STEPHEN JAMES GIDDINGS, MD, PHD  Associate Professor of Medicine, Internal Medicine, BA DARTMOUTH COLLEGE 68, MD UNIVERSITY OF ROCHESTER 76, PHD DARTMOUTH COLLEGE 73

DAVID S GIERADA, MD  Professor of Radiology, Radiology, BS UNIVERSITY OF MICHIGAN 83, MD WAYNE STATE UNIVERSITY 88

David S Gierada  Siteman Cancer Center

RALPH V GIESELMAN, MD  Professor Emeritus of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 47

JEROME J GILDEN, MD  Professor Emeritus of Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52

SUSAN GILFILLAN, PHD  Research Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF DENVER 82, PHD STANFORD UNIVERSITY 90

WILLIAM EWALD GILLANDERS, MD  Associate Professor of Surgery (General Surgery), Surgery, BA WILLIAMS COLLEGE 87, MS MEDICAL UNIVERSITY OF STH CAR 06, MD DUKE UNIVERSITY 91

DANIEL PATRICK GILLEN, MD  Assistant Professor of Anesthesiology, Anesthesiology, BS NEBRASKA WESLEYAN
JOHN A. D. GIACCA, MD
Assistant Professor of Psychiatry, Psychiatry, BS GEORGETOWN UNIVERSITY 78, MD UNIVERSITY OF WASHINGTON 82

JENNIFER GIBB, MD
Professor of Gynecology, Gynecology, BS NOT LISTED 80, MD UNIVERSITY OF MARYLAND 85

JUDITH M. GIBBS, MD
Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF ILLINOIS 74, MD UNIVERSITY OF IOWA 78

JEROME M. GIBBS, MD
Professor of Medicine (Medicine), Medicine, BS GEORGETOWN UNIVERSITY 78, MD WASHINGTON UNIVERSITY 82

SUSAN L. GIBBS, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF IOWA 80, MD UNIVERSITY OF IOWA 84

SUE-LIN CHI-GIBBS, MD
Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF IOWA 80, MD UNIVERSITY OF IOWA 84

KARIN T. CHANG-GIBBS, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF WASHINGTON 82, MD UNIVERSITY OF IOWA 85

MOHAMMAD JINNAH GHAFFAR, MD
Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

HARRIET C. GHAFFAR, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

ASHOON GHAFFAR, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

SEPHIRA GHAFFAR, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

SETH GHAFFAR, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

SHERAA ZAHID GHAFFAR, MD
Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PAKISTAN 84, MD UNIVERSITY OF PAKISTAN 88

SCOTT M. GHEMM, MD
Assistant Professor of Surgery, Surgery, BS NOT LISTED 80, MD MIDDLEBURY COLLEGE 80

JENNIFER J. GHEZ, MD
Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

ASHLEY GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

AARON GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

BRYAN GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

JASON M. GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

JESSICA M. GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

KEVIN GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

LUCAS K. GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

MARIANNE GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

NANCY GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

ROBERT GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

SARAH GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

TREVOR GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

TULSA GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

WILLIAM GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

XAVIER GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

YVONNE GHEZ, MD
Assistant Professor of Obstetrics & Gynecology, Obstetrics & Gynecology, BS GEORGIA STATE UNIVERSITY 78, MD VAN ZANDT UNIVERSITY 82

ALISA M. GIBBS, MD
Assistant Professor of Pathology, Pathology, BS NOT LISTED 80, MD UNIVERSITY OF WASHINGTON 84

BEV GIBBS, MD
Assistant Professor of Pathology, Pathology, BS NOT LISTED 80, MD UNIVERSITY OF WASHINGTON 84

JOEL GIBBS, MD
Assistant Professor of Pathology, Pathology, BS NOT LISTED 80, MD UNIVERSITY OF WASHINGTON 84

KATHY GIBBS, MD
Assistant Professor of Pathology, Pathology, BS NOT LISTED 80, MD UNIVERSITY OF WASHINGTON 84

LIZ GIBBS, MD
Assistant Professor of Pathology, Pathology, BS NOT LISTED 80, MD UNIVERSITY OF WASHINGTON 84

丽莎·吉布斯

丽莎·吉布斯
GREGORY I GOLDBERG, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, MA MOSCOW STATE UNIVERSITY 69, PHD WEIZMANN INSTITUTE OF SCIENCE 77

GREGORY I GOLDBERG, PHD  Professor of Medicine (Dermatology), Internal Medicine, MA MOSCOW STATE UNIVERSITY 69, PHD WEIZMANN INSTITUTE OF SCIENCE 77

MARK PAUL GOLDBERG, MD  Professor of Neurobiology, Anatomy & Neurobiology, BA HARVARD UNIVERSITY 80, MD COLUMBIA UNIVERSITY 84

MARK PAUL GOLDBERG, MD  Professor of Neurology, Neurology, BA HARVARD UNIVERSITY 80, MD COLUMBIA UNIVERSITY 84

RICHARD I GOLDBERG, DENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 81, DENT WASHINGTON UNIV IN ST. LOUIS 88

SETH GOLDBERG, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF SOUTH FLORIDA 99, MD UNIVERSITY OF SOUTH FLORIDA 03

JUDITH P GOLDEN, PHD  Research Assistant Professor of Anesthesiology, Anesthesiology, BS HOFSTRA UNIVERSITY 84, MA HOFSTRA UNIVERSITY 86, PHD SAINT LOUIS UNIVERSITY 94

BARRY STEVEN GOLDBERG, DENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA FAIRLEIGH DICKINSON UNIVERSITY 75, MS UNIVERSITY OF MISSOURI 87, DENT WASHINGTON UNIV IN ST. LOUIS 82

JOSEPH K GOLDBERG, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MO KANSAS CITY 80, MD UNIVERSITY OF MO KANSAS CITY 80

CHARLES A GOLDFARB, MD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA WILLIAMS COLLEGE 92, MD UNIVERSITY OF ALABAMA 96

JASON S GOLDFEDER, MD  Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF PENNSYLVANIA 91, MD JOHNS HOPKINS UNIVERSITY MEDIC 95

ARNOLD M GOLDMAN, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 55, MD WASHINGTON UNIV IN ST. LOUIS 59

GORDON GOLDMAN, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF TOLEDO 62, MD SAINT LOUIS UNIVERSITY 66

DAVID GOLDMEIER, MD  Instructor in Clinical Psychiatry, Psychiatry, BA DARTMOUTH COLLEGE 78, MD WASHINGTON UNIV IN ST. LOUIS 82

JAMES M GOLDRING, MD, PHD  Instructor in Clinical Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 71, MD WASHINGTON UNIV IN ST. LOUIS 86, PHD WASHINGTON UNIV IN ST. LOUIS 77

MATTHEW I GOLDSMITH, MD  Assistant Professor of Genetics, Genetics, BS UNIVERSITY OF TORONTO 87, MS UNIVERSITY OF TORONTO 90, MD UNIVERSITY OF TORONTO 95

MATTHEW I GOLDSMITH, MD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF TORONTO 87, MS UNIVERSITY OF TORONTO 90, MD UNIVERSITY OF TORONTO 95

BENJAMIN M GOLDSTEIN, MD  Associate Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 60, MD WASHINGTON UNIV IN ST. LOUIS 64

PAUL T GOLUMBEK, MD, PHD  Assistant Professor of Neurology, Neurology, BA UNIVERSITY OF MARYLAND 85, MD JOHNS HOPKINS UNIVERSITY MEDIC 95, PHD JOHNS HOPKINS UNIVERSITY 95

PAUL T GOLUMBEK, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF MARYLAND 84, MS UNIVERSITY OF MARYLAND 85, JOHNS HOPKINS UNIVERSITY MEDIC 95, PHD JOHNS HOPKINS UNIVERSITY 95

SUSANA GONZALO HERVAS, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS COMPLUTENSE UNIVERSITY 88, PHD WASHINGTON UNIV IN ST. LOUIS 99

SUSANA GONZALO HERVAS, PHD  Assistant Professor of Radiation Oncology, Radiation Oncology, BS COMPLUTENSE UNIVERSITY 88, PHD WASHINGTON UNIV IN ST. LOUIS 99

URSULA W. GOODENOUGH, PHD  Associate Professor of Anatomy, Anatomy & Neurobiology, BA BARNARD COLLEGE 63, MA COLUMBIA UNIVERSITY 65, PHD HARVARD UNIVERSITY 69

PAUL JOSEPH GOODFELLOW, PHD  Professor of Genetics, Genetics, BA QUEEN'S UNIVERSITY 78, MS UNIVERSITY OF TENNESSEE 80, PHD QUEEN'S UNIVERSITY 85

PAUL JOSEPH GOODFELLOW, PHD  Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA QUEEN'S UNIVERSITY 78, MS UNIVERSITY OF TENNESSEE 80, PHD QUEEN'S UNIVERSITY 85
PAUL JOSEPH GOODFELLOW, PHD  Professor of Surgery (General Surgery), Surgery, BA QUEEN'S UNIVERSITY 78, MS UNIVERSITY OF TENNESSEE 80, PHD QUEEN'S UNIVERSITY 85

BOONE WILDER GOODGAME, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF TEXAS AUSTIN 97, MD BAYLOR COLLEGE OF MEDICINE 02

GARY M GOODMAN, MD  Instructor in Clinical Pediatrics, Pediatrics, BS WAYNE STATE UNIVERSITY 77, MD UNIVERSITY OF MICHIGAN 81

DAVID ALAN GORAN, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MICHIGAN 72, MD WASHINGTON UNIV IN ST. LOUIS 76

JAMES M GORDON, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MINNESOTA 62, MD UNIVERSITY OF MINNESOTA 66

JEFFREY I GORDON, MD  Director of the Center for Genome Sciences, Developmental Biology, BA OBERLIN COLLEGE 69, MD UNIVERSITY OF CHICAGO 73

JEFFREY I GORDON, MD  Professor of Developmental Biology, Developmental Biology, BA OBERLIN COLLEGE 69, MD UNIVERSITY OF CHICAGO 73

JEFFREY I GORDON, MD  Professor of Medicine, Internal Medicine, BA OBERLIN COLLEGE 69, MD UNIVERSITY OF CHICAGO 73

JEFFREY I GORDON, MD  Professor of Pathology and Immunology, Dr Robert J Glaser Distinguished University Professor, Pathology & Immunology, BA OBERLIN COLLEGE 69, MD UNIVERSITY OF CHICAGO 73

J. ERIC GORDON, MD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF CALIFORNIA 83, MD UNIVERSITY OF CALIFORNIA 88

MAE ETSUKO GORDON, PHD  Professor of Biostatistics, Biostatistics, BA PORTLAND ST UNIVERSITY 67, MS UNIV OF WISCONSIN MADISON 70, PHD UNIV OF WISCONSIN MADISON 79

MAE ETSUKO GORDON, PHD  Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA PORTLAND ST UNIVERSITY 67, MS UNIV OF WISCONSIN MADISON 70, PHD UNIV OF WISCONSIN MADISON 79

MARY JO GORMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 81, MBA WASHINGTON UNIV IN ST. LOUIS 96, MD SOUTHERN ILLINOIS UNIVERSITY 84

CHARLENE CHANG GOTTLIEB, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA SCHOOL NOT LISTED 66, MS WASHINGTON UNIV IN ST. LOUIS 72

DAVID I GOTTLIEB, PHD  Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA HARPUR COLLEGE 64, MA UNIV OF WISCONSIN MADISON 69, PHD WASHINGTON UNIV IN ST. LOUIS 71

DAVID I GOTTLIEB, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA HARPUR COLLEGE 64, MA UNIV OF WISCONSIN MADISON 69, PHD WASHINGTON UNIV IN ST. LOUIS 71

JAMES DEAN GOULD, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BA UNIVERSITY OF VIRGINIA 89, MD UNIVERSITY OF VIRGINIA 93

JENNIFER E GOULD, MD  Assistant Professor of Radiology, Radiology, BA CORNELL UNIVERSITY 93, MD WASHINGTON UNIV IN ST. LOUIS 97

RAMASWAMY GOVINDAN, MD  Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY OF MADRAS 86

SIDDHESH GOWDA, MD  Associate Professor of Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 70

RONALD M GRADY, MD  Assistant Professor of Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 84, MA WASHINGTON UNIV IN ST. LOUIS 89, MD WASHINGTON UNIV IN ST. LOUIS 89

BARRY A GRAFF, MD  Assistant Professor of Anesthesiology, Anesthesiology, BA MACMURRAY COLLEGE 73, MD SAINT LOUIS UNIVERSITY 76

LAQUITA A GRAHAM, MD  Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 91, MD SAINT LOUIS UNIVERSITY 96

MARK GILBERT GRAND, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS TUFTS UNIVERSITY 64, MD YALE UNIVERSITY 68

DOROTHY K. GRANGE, MD  Professor of Pediatrics, Pediatrics, BA MOUNT HOLYOKE COLLEGE 76, MD UNIVERSITY OF FLORIDA 81

ALICE B GRANOFF, MD  Instructor in Clinical Pediatrics, Pediatrics, MD UNIVERSITY OF TEXAS SOUTHWEST 63

GREGORY ALAN GRANT, PHD  Professor of Biochemistry in Medicine (Dermatology), Internal Medicine, BS IOWA STATE
GREGORY ALAN GRANT, PHD Professor of Developmental Biology, Developmental Biology, BS IOWA STATE UNIVERSITY 71, PHD UNIV OF WISCONSIN MADISON 75

JULIA D. GRANT, PHD Research Assistant Professor of Psychiatry, Psychiatry, BA DAVIDSON COLLEGE 89, MA WAKE FOREST UNIVERSITY 93, PHD PENNSYLVANIA STATE UNIVERSITY 97

Timothy A Graubert Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University School of Medicine, 1988-1991: Resident, Internal medicine, Yale-New Haven Hospital, New Haven, Conn., 1991-1993: Research fellow, hematology, Yale University, New Haven, Conn., 1993-1997: Fellow, hematology and oncology, Washington University, St. Louis, 1988: MD, Harvard Medical School, Boston, Primary Specialty: Bone marrow transplantation, Board Certified; 1991, 2002: American Board of Internal Medicine, Internal Medicine

1997: American Board of Internal Medicine, Medical Oncology

TIMOTHY A. GRAUBERT, MD, BA Associate Professor of Medicine, Internal Medicine, BA DARTMOUTH COLLEGE 84, MD HARVARD UNIVERSITY 88, BA DARTMOUTH COLLEGE 84

MARGARET ROSANN GRAY-SWAIN Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

DAVID B GRAY, PHD Associate Professor of Neurology, Neurology, BA LAWRENCE UNIVERSITY 66, MS WESTERN MICHIGAN UNIVERSITY 70, PHD UNIVERSITY OF MINNESOTA 74

DAVID B GRAY, PHD Associate Professor of Occupational Therapy, Occupational Therapy, BA LAWRENCE UNIVERSITY 66, MS WESTERN MICHIGAN UNIVERSITY 70, PHD UNIVERSITY OF MINNESOTA 74

DIANA LEE GRAY, MD Associate Dean for Faculty Affairs, Assoc Dean Faculty Affairs, BS UNIVERSITY OF ILLINOIS 77, MD UNIVERSITY OF ILLINOIS 81

DIANA LEE GRAY, MD Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 77, MD UNIVERSITY OF ILLINOIS 81

DIANA LEE GRAY, MD Professor of Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 77, MD UNIVERSITY OF ILLINOIS 81

PAUL A. GRAY, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF CA LOS ANGELES 94, PHD UNIVERSITY OF CA LOS ANGELES 01

JONATHAN M GREEN, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF MICHIGAN 82, MD WAYNE STATE UNIVERSITY 86

JONATHAN M GREEN, MD Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 82, MD WAYNE STATE UNIVERSITY 86

KENNETH O GREEN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SAINT LOUIS UNIVERSITY 56, MD UNIVERSITY OF MISSOURI 60

REBECCA P GREEN, MD, PHD Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF IOWA 83, MD WASHINGTON UNIV IN ST. LOUIS 93, PHD WASHINGTON UNIV IN ST. LOUIS 93

MARSHALL B GREENMAN, MD Associate Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 46, MD UNIVERSITY OF ILLINOIS 48

AARON GREENSPAN Instructor in Clinical Medicine, Internal Medicine

BENNETT S GREENSPAN, MD Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF IOWA 72, MS UNIVERSITY OF CA LOS ANGELES 84, MD UNIVERSITY OF ILLINOIS 76

MARK H GREGORY, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF VERMONT 82, MD UNIVERSITY OF VERMONT 86

WALTER T GREGORY Instructor in Medicine, Internal Medicine, BS SAINT LOUIS UNIVERSITY 60

KEVIN WILLIAM GREULOCH, MD Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF NOTRE DAME 95, MD UNIVERSITY OF MICHIGAN 99

RICHARD T GRIFFEY, JR, MD Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD NORFOLK GENERAL HOSPITAL 77

PERRY W GRIGSBY, MD, MS Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF KENTUCKY 74, MBA WASHINGTON UNIV IN ST. LOUIS 90, MD UNIVERSITY OF KENTUCKY 82, MS UNIVERSITY OF KENTUCKY 78
PERRY W GRIGSBY, MD, MS  Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF KENTUCKY 74, MBA WASHINGTON UNIV IN ST. LOUIS 90, MD UNIVERSITY OF KENTUCKY 82, MS UNIVERSITY OF KENTUCKY 78

PERRY W GRIGSBY, MD, MS  Professor of Radiology, Radiology, BS UNIVERSITY OF KENTUCKY 74, MBA WASHINGTON UNIV IN ST. LOUIS 90, MD UNIVERSITY OF KENTUCKY 82, MS UNIVERSITY OF KENTUCKY 78

RUSSELL J.L. GROENER, MBCHB  Assistant Professor of Anesthesiology, Anesthesiology, MBCHB UNIVERSITY OF CAPE TOWN 83

SCOTT D. GROESCH, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 90, MD WASHINGTON UNIV IN ST. LOUIS 94

EDUARDO GROISMAN, PHD  Howard Hughes Medical Institute Investigator in Molecular Microbiology, Professor of Molecular Microbiology, Molecular Microbiology, MS UNIVERSIDAD DEF BUENOS AIRES 80, PhD UNIVERSITY OF CHICAGO 86

JOHN R GROLL, MD  Instructor in Clinical Medicine, Internal Medicine, BA ILLINOIS WESLEYAN UNIVERSITY 84, MD UNIVERSITY OF ILLINOIS 88

STEVEN J GRONDALSKI, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA SAINT LOUIS UNIVERSITY 83, OD PENN COLLEGE OF OPTOMETRY 87

ANN MARIE GRONOWSKI, PHD  Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 85, MS IOWA STATE UNIVERSITY 88, PHD UNIV OF WISCONSIN MADISON 92

ANN MARIE GRONOWSKI, PHD  Associate Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF ILLINOIS 85, MS IOWA STATE UNIVERSITY 88, PHD UNIV OF WISCONSIN MADISON 92

ROBERT JOHN GROPILER, MD  Associate Professor of Medicine, Internal Medicine, BS ALLEGHENY COLLEGE 77, MD UNIVERSITY OF CINCINNATI 81

ROBERT JOHN GROPILER, MD  Professor of Radiology, Radiology, BS ALLEGHENY COLLEGE 77, MD UNIVERSITY OF CINCINNATI 81

GILAD A GROSS, MD  Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA WASHINGTON UNIV IN ST. LOUIS 88, MS SAINT LOUIS UNIVERSITY 92

MICHAEL L GROSS, PHD  Professor of Medicine, Internal Medicine, BA ST JOHNS UNIVERSITY 62, PHD UNIVERSITY OF MINNESOTA 66

MICHAEL L GROSS, PHD  Professor of Pathology and Immunology, Pathology & Immunology, BA ST JOHNS UNIVERSITY 62, PHD UNIVERSITY OF MINNESOTA 66

RICHARD WARREN GROSS, MD, PHD  Professor of Developmental Biology, Developmental Biology, MD NEW YORK UNIVERSITY 76, PhD WASHINGTON UNIV IN ST. LOUIS 82

RICHARD WARREN GROSS, MD, PHD  Professor of Medicine, Internal Medicine, MD NEW YORK UNIVERSITY 76, PHD WASHINGTON UNIV IN ST. LOUIS 82

BRENDA JEAN GROSSMAN, MD  Associate Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology & Immunology, BS OHIO UNIVERSITY 76, MS SAINT LOUIS UNIVERSITY 03, MD MEDICAL COLLEGE GEORGIA 80

ROBERT LEE GRUBB III, MD  Assistant Professor of Surgery (Urologic Surgery), Surgery, BS DAVIDSON COLLEGE 92, MD EMORY UNIVERSITY 96

JESSICA ROSENBA GRUBB, MD  Instructor in Medicine, Internal Medicine, BA JOHN HOPKINS UNIVERSITY 92, MD UNIVERSITY OF MARYLAND 96


ROBERT L GRUBB, JR, MD  Professor of Neurological Surgery, Neurological Surgery, BA UNIVERSITY OF NORTH CAROLINA 61, MD UNIVERSITY OF NORTH CAROLINA 65

ROBERT L GRUBB, JR, MD  Professor of Radiology, Radiology, BA UNIVERSITY OF NORTH CAROLINA 61, MD UNIVERSITY OF NORTH CAROLINA 65


RICHARD GRUCZA, PHD  Research Assistant Professor of Psychiatry, Psychiatry, BS ROCHESTER INSTITUTE OF TECHNO

...
ROYAL GENE GRUENEICH, PHD  Assistant Professor of Clinical Neurology, Neurology, BA SCHOOL NOT LISTED 73, PHD UNIVERSITY OF MINNESOTA 79

BRIAN ANTHONY GRUS, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF PITTSBURGH 88, MD UNIVERSITY OF PENNSYLVANIA 92

CHI GU, PHD  Associate Professor of Biostatistics, Biostatistics, BS NANJING MEDICAL UNIVERSITY 82, MS NANJING MEDICAL UNIVERSITY 85, PHD WASHINGTON UNIV IN ST. LOUIS 92

CHI GU, PHD  Associate Professor of Genetics, Genetics, BS NANJING MEDICAL UNIVERSITY 82, MS NANJING MEDICAL UNIVERSITY 85, PHD WASHINGTON UNIV IN ST. LOUIS 92

ANTHONY HERBERT GUARINO, MD  Assistant Professor of Anesthesiology, Anesthesiology, BA YALE UNIVERSITY 86, MA YALE UNIVERSITY 88, MD UNIVERSITY OF MARYLAND 92

NANCY Z GUGGENHEIM, MD  Instructor in Clinical Medicine, Internal Medicine, BS BROWN UNIVERSITY 76, MD BROWN UNIVERSITY 80

ROBIN KELLY GUILLORY, MD  Assistant Professor of Anesthesiology, Anesthesiology, BS TULANE UNIVERSITY 98, MD WASHINGTON UNIV IN ST. LOUIS 02

C. RICHARD GULICK, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WESTMINSTER COLLEGE 86, MD UNIVERSITY OF ROCHESTER 71

GUNER B GULMEN, MD, PHD  Assistant Professor of Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 69, PHD UNIVERSITY OF MINNESOTA 74

VYJANTHANATH R. GUNASINGHAM, MD  Instructor in Clinical Medicine, Internal Medicine, BS SCHOOL NOT LISTED 75, MD SCHOOL NOT LISTED 82

JOSEPH DONALD GUNN, MD  Assistant Professor of Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 85, MD UNIVERSITY OF VIRGINIA 89

JUN GUO, PHS  Research Assistant Professor of Surgery (Pediatric Surgery), Surgery, BS NANJING UNIVERSITY 91, MS DALIAN MEDICAL UNIVERSITY 97, PHS SHANGHAI MEDICAL UNIVERSITY 00

JITENDRA K GUPTA  Instructor Emeritus in Clinical Medicine, Internal Medicine, MS SCHOOL NOT LISTED 63

PUNITA GUPTA, MD  Instructor in Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 95, MPH SAINT LOUIS UNIVERSITY 96, MD UNIVERSITY OF ILLINOIS 00

SANTOSH K GUPTA, DC  Assistant Professor of Clinical Pediatrics, Pediatrics, DC UNIVERSITY OF LONDON 66

CHRISTINA A. GURNETT, MD, PHD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF NOTRE DAME 91, MD UNIVERSITY OF IOWA 98, PHD UNIVERSITY OF IOWA 98

CHRISTINA A. GURNETT, MD, PHD  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF NOTRE DAME 91, MD UNIVERSITY OF IOWA 98, PHD UNIVERSITY OF IOWA 98

CHRISTINA A. GURNETT, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF NOTRE DAME 91, MD UNIVERSITY OF IOWA 98, PHD UNIVERSITY OF IOWA 98

MARIA GURRIERI, MD  Instructor in Clinical Medicine, Internal Medicine, MD CATHOLIC UNIVERSITY 89

DEBRA A. GUSNARD, MD  Assistant Professor of Psychiatry, Psychiatry, BA UNIVERSITY OF CHICAGO 75, MA UNIVERSITY OF CHICAGO 82

DEBRA A. GUSNARD, MD  Assistant Professor of Radiology, Radiology, BA UNIVERSITY OF CHICAGO 75, MA UNIVERSITY OF CHICAGO 82

CHRISTINE HILLE GUSTUS  Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science

FERNANDO R GUTIERREZ  Professor of Radiology, Radiology, MD VALLADOLID UNIV 74

CHRISTOPHER J GUTJahr, MD  Assistant Professor of Medicine, Internal Medicine, BS SOUTHERN ILL UNIV EDWARDSVILLE 93, MD UNIVERSITY OF CHICAGO 97

DAVID H GUTMANN, MD, PHD  Donald O. Schnuck Family Professor of Neurology, Neurology, BS UNIVERSITY OF MICHIGAN 79, MS UNIVERSITY OF MICHIGAN 80, MD UNIVERSITY OF MICHIGAN 86, PHD UNIVERSITY OF MICHIGAN 84

DAVID H GUTMANN, MD, PHD  Professor of Genetics, Genetics, BS UNIVERSITY OF MICHIGAN 79, MS UNIVERSITY OF MICHIGAN 80, MD UNIVERSITY OF MICHIGAN 86, PHD UNIVERSITY OF MICHIGAN 84

DAVID H GUTMANN, MD, PHD  Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF MICHIGAN 79,
ROMAN E HAMMES, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF IOWA 50, MD UNIVERSITY OF IOWA 54

MELANIE G HAMPTON, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS GEORGETOWN COLLEGE 76, MD UNIVERSITY OF LOUISVILLE 81

AARON HAMVAS, MD  James P. Keating, M.D. Professor of Pediatrics, Pediatrics, BS RENSSELAER POLYTECHNIC INSTIT 77, MD WASHINGTON UNIV IN ST. LOUIS 81

BYUNG HEE HAN, PHD  Research Assistant Professor of Neurological Surgery (Pending Executive Faculty Approval), Neurological Surgery, PHD UNIVERSITY OF MISSOURI COLUMBI 97

DONG-HO HAN, PHD  Research Associate Professor of Medicine, Internal Medicine, BA SCHOOL NOT LISTED 79, MS UNIVERSITY OF DENVER 83, PHD BRIGHAM YOUNG UNIVERSITY 93

DONG HYUN HAN  Visiting Instructor in Psychiatry, Psychiatry

XIANLIN HAN, PHD, MS  Associate Professor of Medicine, Internal Medicine, BS ZHEJIANG MEDICAL UNIVERSITY 82, MA WASHINGTON UNIV IN ST. LOUIS 87, PHD WASHINGTON UNIV IN ST. LOUIS 90, MS ZHEJIANG MEDICAL UNIVERSITY 85

JOSEPH HANAWAY, MD  Assistant Professor of Clinical Neurology, Neurology, BA MCGILL UNIVERSITY 56, MD MCGILL UNIVERSITY 60

ELINOR F HANCOCK, MD  Instructor in Clinical Pediatrics, Pediatrics, BA FISK UNIVERSITY 75, MD MEHARRY MED COLLEGE 82

THOMAS JOSEPH HANNAN, DVM, BA  Research Instructor in Pathology and Immunology, Pathology & Immunology, BA GEORGETOWN UNIVERSITY 89, DVM TUFTS UNIVERSITY 95, BA GEORGETOWN UNIVERSITY 89

TED H HANSEN, PHD  Professor of Genetics, Genetics, BS MICHIGAN STATE UNIVERSITY 70, MS UNIVERSITY OF MICHIGAN 72, PhD UNIVERSITY OF MICHIGAN 75

TED H HANSEN, PHD  Professor of Pathology and Immunology, Pathology & Immunology, BS MICHIGAN STATE UNIVERSITY 70, MS UNIVERSITY OF MICHIGAN 72, PhD UNIVERSITY OF MICHIGAN 75

JENNIFER LYNN HANSlick, MD, BS  Instructor in Pediatrics, Pediatrics, BA UNIVERSITY OF MO COLUMBIA 95, MD NORTHWESTERN UNIVERSITY 02, BS UNIVERSITY OF MO COLUMBIA 95

JASON M. HANSON, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BA JOHNS HOPKINS UNIVERSITY 88, MD NORTHWESTERN UNIVERSITY 92

PHYLLIS I HANSON, MD, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA YALE UNIVERSITY 85, MD STANFORD UNIVERSITY 93, PhD STANFORD UNIVERSITY 93

ROBIN D HANSON, MD, PHD  Instructor in Clinical Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 93, PHD WASHINGTON UNIV IN ST. LOUIS 93

SUZANNE M HANSON, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 89, MD NORTHWESTERN UNIVERSITY 93

CHARLES B HANTLER, MD  Professor of Anesthesiology, Anesthesiology, BS DAVENPORT UNIVERSITY 71, MA DAVENPORT UNIVERSITY 73, MD DAVENPORT UNIVERSITY 77

HOOSNA HAQUE, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF TEXAS ARLINGTON 92, MD BEAUFORT TECHNICAL COLLEGE 96

MELISSA A. HARBIT, MD  Assistant Professor of Psychiatry, Psychiatry, BS UNIVERSITY OF IOWA 93, MD UNIVERSITY OF IOWA 97

JAMES WILLIAM HARBOUR, MD  Paul A. Cibis Distinguished Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS TEXAS A&M UNIVERSITY 85, MD JOHNS HOPKINS UNIVERSITY 90

JAMES WILLIAM HARBOUR, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS TEXAS A&M UNIVERSITY 85, MD JOHNS HOPKINS UNIVERSITY 90

JAMES WILLIAM HARBOUR, MD  Professor of Medicine, Internal Medicine, BS TEXAS A&M UNIVERSITY 85, MD JOHNS HOPKINS UNIVERSITY 90

GARY WILLIAM HARDING  Retiree-Research Associate Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF WASHINGTON 67, MS UNIVERSITY OF WASHINGTON 84

WILLIAM B HARDIN, JR, MD, BA  Assistant Professor Emeritus of Clinical Neurology, Neurology, BA RICE UNIVERSITY 53, MD UNIVERSITY OF TEXAS AUSTIN 57, BA RICE UNIVERSITY 53

DAVID A. HARDY, MD  Instructor in Surgery (Urologic Surgery), Surgery, BS BROWN UNIVERSITY 60, MD WASHINGTON
MATTHEW B HARM, MD Assistant Professor of Neurology, Neurology, MD UNIVERSITY OF CALIFORNIA 03

GEORGE J HAROCOPOS, MD Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA HARVARD UNIVERSITY 95, MD UNIVERSITY OF VIRGINIA 00

GEORGE J HAROCOPOS, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA HARVARD UNIVERSITY 95, MD UNIVERSITY OF VIRGINIA 00

ALEXANDER D HARRIS, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF EVANSVILLE 69, OD WASHINGTON UNIV IN ST. LOUIS 72, OD UNIVERSITY OF MISSOURI 86

CHARLES R HARRIS Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MISSOURI 70

MICHAEL AVRAM HARRIS, PHD Adjunct Research Instructor in Pediatrics, Pediatrics, BS COLORADO ST UNIVERSITY 84, MS MEMPHIS ST UNIVERSITY 86, PHD ALLIANT UNIVERSITY 91

MICHAEL RAYMOND HARRIS, MD, PHD Assistant Professor of Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 73, MS SAINT LOUIS UNIVERSITY 76, MD SAINT LOUIS UNIVERSITY 81

THOMAS J. HARRISON, JR, MD Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 70, MD UNIVERSITY OF MISSOURI 79

DAVID E HARTENBACH, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 83, MD UNIVERSITY OF MISSOURI 87

RICHARD ALAN HARTMAN, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS MASS INST OF TECHNOLOGY (MIT) 74, MD UNIVERSITY OF MISSOURI 78

ANNA E HARTNETT, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BS LOYOLA UNIVERSITY CHICAGO 56, MD UNIVERSITY OF OTTAWA 60

THOMAS D HARTNETT, MD Assistant Professor Emeritus of Clinical Psychiatry, Psychiatry, BS LOYOLA UNIVERSITY 55, MD UNIVERSITY OF OTTAWA 59

JACK HARTSTEIN, MD Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 53, MD UNIVERSITY OF CINCINNATI 55

JOHN EDWARD HARTWEGER Instructor in Clinical Pediatrics, Pediatrics

STEVEN ARTHUR HARVEY, MD Instructor in Clinical Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 88, MD WASHINGTON UNIV IN ST. LOUIS 92

JAMES LARRY HARWELL, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 58, MD UNIVERSITY OF MISSOURI 61

DAVID B HASLAM, MD Associate Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF CALGARY 84, MD UNIVERSITY OF CALGARY 87

DAVID B HASLAM, MD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF CALGARY 84, MD UNIVERSITY OF CALGARY 87

ANJUM HASSAN, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD AGA KHAN UNIVERSITY 89, MD SCHOOL NOT LISTED 89

Anjum Hassan Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine, 1990: Intern, medicine and surgery, Aga Khan University Hospital, Karachi, Pakistan, 1991-1994: Resident, anatomic and clinical pathology, Westchester Medical Center-New York Medical College, Valhalla, 1994-1996: Resident, anatomic and clinical pathology, 1999: Aga Khan University, Karachi, Pakistan, Primary Specialty: General surgical pathology and hematopathology, Board Certified., 1996: American Board of Pathology, Anatomic and Clinical Pathology

MARY KENT HASTINGS, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF ILLINOIS 90, MS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 02

MARY KENT HASTINGS, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF ILLINOIS 90, MS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 02

THOMAS F HASTINGS, MD Instructor in Clinical Medicine, Internal Medicine, BA ROCKHURST COLLEGE 81, MD UNIVERSITY OF MISSOURI 86

J MICHAEL HATLELID, MD Associate Professor of Clinical Neurology, Neurology, BA ST JOHNS UNIVERSITY 70, MD WASHINGTON UNIV IN ST. LOUIS 77

SHERRIE M HAUFF, MD Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF TEXAS AUSTIN 77, MD UNIVERSITY OF
TEXAS AUSTIN 84

BRUCE H HAUGHEY, MBCHB Joseph B Kimbrough Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF AUCKLAND 74, MS UNIVERSITY OF IOWA 84, MBCHB UNIVERSITY OF AUCKLAND 77


1985: New Zealand Society of Otolaryngology, Head and Neck Surgery

DAN W. HAUPT, MD Assistant Professor of Psychiatry, Psychiatry, BS LEWIS & CLARK COLLEGE 91, MD UNIVERSITY OF VERMONT 97

JAY FREDRICK HAUSER, DDENT Instructor in Clinical Otolaryngology, Otolaryngology, BA UNIVERSITY OF TULSA 83, DDENT UNIVERSITY OF IOWA 88

JAMES J HAVRANEK, PHD Assistant Professor of Genetics, Genetics, PHD STANFORD UNIVERSITY 08

WILLIAM G. HAWKINS, MD Associate Professor of Surgery (General Surgery), Surgery, BA NEW YORK UNIVERSITY 91, MD STATE UNIV OF NY STONYBROOK 95


ROBERT J HAYASHI, MD Associate Professor of Pediatrics, Pediatrics, BS STANFORD UNIVERSITY 82, MD WASHINGTON UNIV IN ST. LOUIS 86


MICHAEL E HAYEK, MD Instructor in Clinical Surgery (General Surgery), Surgery, BA SAINT LOUIS UNIVERSITY 76, MS SAINT LOUIS UNIVERSITY 78, MD UNIVERSITY OF MISSOURI 82

ERICKA V. HAYES, MD Assistant Professor of Pediatrics, Pediatrics, BS WASHINGTON UNIV IN ST. LOUIS 94, MD WASHINGTON UNIV IN ST. LOUIS 98

HEATHER HAYES, MA Assistant Professor of Otolaryngology, Otolaryngology, BA EMORY UNIVERSITY 95, M ED SMITH COLLEGE 05, MA SMITH COLLEGE 98

HEATHER HAYES, MA Director of Deaf Education Studies in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA EMORY UNIVERSITY 95, M ED SMITH COLLEGE 05, MA SMITH COLLEGE 98

MARCIE HARRIS HAYES, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS SOUTHWEST MISSOURI ST UNIVERSI 94, MS NORTHWESTERN UNIVERSITY 96, DPT WASHINGTON UNIV IN ST. LOUIS 03

MARCIE HARRIS HAYES, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS SOUTHWEST MISSOURI ST UNIVERSI 94, MS NORTHWESTERN UNIVERSITY 96, DPT WASHINGTON UNIV IN ST. LOUIS 03

XIANG HE, PHD Instructor in Radiology, Radiology, BS PEKING UNIVERSITY 92, MS UNIVERSITY OF WATERLOO 97, PHD UNIVERSITY OF WATERLOO 02

DENISE P. HEAD, PHD Research Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF NEW ORLEANS 93, PHD UNIVERSITY OF TENN MEMPHIS 01

ANDREW C HEATH, PHD Associate Professor of Genetics, Genetics, BA OXFORD UNIVERSITY 79, PHD OXFORD UNIVERSITY 83

ANDREW C HEATH, PHD Spencer T. Olin Professor of Psychology in Psychiatry, Psychiatry, BA OXFORD UNIVERSITY 79, PHD OXFORD UNIVERSITY 83

Andrew C Heath Siteman Cancer Center, Spencer T. Olin Professor of Psychology in Psychiatry, Department of Psychiatry,
Jay P Heiken  Siteman Cancer Center, Professor of Radiology and Chief, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1978-1982; Resident, radiology, Columbia-Presbyterian Medical Center, New York, 1982-1983; Postdoctoral fellow, abdominal radiology, Washington University, St. Louis, 1978: MD, Columbia University, New York, Primary Specialty: Abdominal imaging, body computed tomography, Board Certified., American Board of Radiology

JAY PAUL HEIKEN, MD Professor of Radiology, Radiology, BA WILLIAMS COLLEGE 74, MD COLUMBIA UNIVERSITY 78

JAMES N HEINS, MD Adjunct Professor of Medicine, Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF LOUISVILLE 57, MD UNIVERSITY OF LOUISVILLE 61

DANIEL LUKE HELSTEN, MD Assistant Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF KENTUCKY 97, MD UNIVERSITY OF KENTUCKY 01

JEFFREY P. HENDERSON, MD Assistant Professor of Medicine, Internal Medicine, BS UNIV OF WISCONSIN MADISON 94, MD WASHINGTON UNIV IN ST. LOUIS 02

JEFFREY P. HENDERSON, MD Assistant Professor of Molecular Microbiology, Molecular Microbiology, BS UNIV OF WISCONSIN MADISON 94, MD WASHINGTON UNIV IN ST. LOUIS 02

KATHERINE EILEE HENDERSON, MD Assistant Professor of Medicine, Internal Medicine, BS UNIV OF WISCONSIN MADISON 93, MD UNIVERSITY OF MINNESOTA 98

KRISTINA LOUISE HENDERSON, MD Instructor in Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 82, MD SAINT LOUIS UNIVERSITY 91

NATHAN HENNINGER  Instructor in Clinical Pediatrics, Pediatrics

JAMES O HEPNER, PhD Professor Emeritus of Health Administration, Health Admin Program, BA UNIVERSITY OF IOWA 55, MHS WASHINGTON UNIV IN ST. LOUIS 59, PHD UNIVERSITY OF IOWA 64

GEETHA G HERATH, MD Instructor in Pediatrics, Pediatrics, BA UNIVERSITY OF MO KANSAS CITY 94, MD UNIVERSITY OF MO KANSAS CITY 94

WILLIAM L HERBOLD, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SCHOOL NOT LISTED 67, OD SCHOOL NOT LISTED 67

THOMAS MARTIN HERING  Visiting Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery

CHERYL R HERMAN, MD Instructor in Radiology, Radiology, BS LOMA LINDA UNIVERSITY 86, MD MEHARRY MED COLLEGE 90


THOMAS EUGENE HERMAN, MD Associate Professor of Radiology, Radiology, BA DARTMOUTH COLLEGE 71, MD JOHNS HOPKINS UNIVERSITY MEDIC 75

MARY JO HERNANDEZ-ZIPFEL, MD Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF NORTH CAROLINA 96, MD UNIVERSITY OF FLORIDA 01

ROBERT E HEROLD, MD Assistant Professor of Anesthesiology, Anesthesiology, BA WABASH COLLEGE 70, MD WASHINGTON UNIV IN ST. LOUIS 74

PILAR HERRERO, MS Research Associate Professor of Radiology, Radiology, BS LOYOLA UNIVERSITY CHICAGO 81, ME WASHINGTON UNIV IN ST. LOUIS 97, MS VANDERBILT UNIVERSITY 84

TAMARA G HERSHEY, PHD Associate Professor of Neurology, Neurology, BA EARLHAM COLLEGE 88, PHD WASHINGTON UNIV IN ST. LOUIS 96

TAMARA G HERSHEY, PHD Associate Professor of Psychiatry, Psychiatry, BA EARLHAM COLLEGE 88, PHD WASHINGTON UNIV IN ST. LOUIS 96

TAMARA G HERSHEY, PHD Associate Professor of Radiology, Radiology, BA EARLHAM COLLEGE 88, PHD WASHINGTON UNIV IN ST. LOUIS 96

JOHN C HERWEG, MD Associate Dean Emeritus, Student Support Services, BS DRURY COLLEGE 43, MD WASHINGTON UNIV IN ST. LOUIS 45

JOHN C HERWEG, MD Professor Emeritus of Pediatrics, Pediatrics, BS DRURY COLLEGE 43, MD WASHINGTON UNIV IN...
GODOFREDO M HERZOG, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS LOUISIANA ST UNIVERSITY 53, MD WASHINGTON UNIV IN ST. LOUIS 57

JACQUES A HERZOG, MD Assistant Professor of Clinical Otolaryngology, Otolaryngology, BA UNIVERSITY OF MISSOURI 80, MD UNIVERSITY OF MO KANSAS CITY 80

ALBERT E HESKER, MD Assistant Professor of Clinical Radiology, Radiology, BA UNIVERSITY OF MISSOURI 61, MD UNIVERSITY OF MISSOURI 64

ROBERT O HEUCKEROTH, MD, PHD Associate Professor of Developmental Biology, Developmental Biology, BS UNIVERSITY OF MARYLAND 83, MD WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 90

ROBERT O HEUCKEROTH, MD, PHD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MARYLAND 83, MD WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 90

JOHN E HEUSER, MD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS HARVARD UNIVERSITY 64, MD HARVARD UNIVERSITY 69

GITY HEYDEBRAND, PHD Assistant Professor of Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 86, PHD UNIVERSITY OF MO ST LOUIS 94

SCOT G HICKMAN, MD Professor of Medicine, Internal Medicine, BA DUKE UNIVERSITY 66, MD WASHINGTON UNIV IN ST. LOUIS 70

ROBERT JEROME HICKOK Assistant Professor Emeritus of Physical Therapy, Physical Therapy

FREDERICK G HICKS, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BA CARLETON COLLEGE 77, MD UNIVERSITY OF MINNESOTA 81

ROBERT S HICKS, MD Associate Professor of Clinical Psychiatry, Psychiatry, BA HENDRIX COLLEGE 54, MD UNIVERSITY OF ARKANSAS 58

RYUJI HIGASHIKUBO, PHD Research Associate Professor of Radiation Oncology, Radiation Oncology, BS RIKKYO UNIVERSITY 69, MA BOWLING GREEN STATE UNIVERSITY 72, PHD BOWLING GREEN STATE UNIVERSITY 78

CHARLES F HILDEBOLT, DDENT, PHD Professor of Radiology, Radiology, BS OHIO STATE UNIVERSITY 66, MA WASHINGTON UNIV IN ST. LOUIS 85, DDENT OHIO STATE UNIVERSITY 87, PHD WASHINGTON UNIV IN ST. LOUIS 87

MARY W HILDEBRAND Instructor in Occupational Therapy, Occupational Therapy

LAUREEN L HILL, MD Associate Professor of Anesthesiology, Anesthesiology, BS CALIFORNIA LUTHERAN UNIVERSIT 83, MD UNIVERSITY OF CALIFORNIA 92

LAUREEN L HILL, MD Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, BS CALIFORNIA LUTHERAN UNIVERSIT 83, MD UNIVERSITY OF CALIFORNIA 92

THOMAS C HILL Instructor in Emergency Medicine in Medicine (Pending Dean's Approval), Internal Medicine

ELIZABETH HILLIKER, MD Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 65, MA WASHINGTON UNIV IN ST. LOUIS 70, MD WASHINGTON UNIV IN ST. LOUIS 70

ELIZABETH HILLIKER, MD Assistant Professor of Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 65, MA WASHINGTON UNIV IN ST. LOUIS 70, MD WASHINGTON UNIV IN ST. LOUIS 70

RACHEL D HINDIN, MD Instructor in Medicine, Internal Medicine, MD GEORGE WASHINGTON UNIVERSITY 03

ANTHONY L HINRICHs, PHD Research Assistant Professor of Psychiatry, Psychiatry, BS ROSE HULMAN INSTITUTE 93, MA WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

JENNIFER M HINTON Instructor in Clinical Pediatrics, Pediatrics

PAUL FLACK HINTZE, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS BRIGHAM YOUNG UNIVERSITY 74, MD UNIVERSITY OF UTAH 78

KEIKO HIROSE, MD Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, MD HARVARD UNIVERSITY 93

KEIKO HIROSE, MD Associate Professor of Otolaryngology, Vice Chairman of Otolaryngology, Otolaryngology, MD HARVARD UNIVERSITY 93

KEIKO HIROSE, MD Associate Professor of Pediatrics, Pediatrics, MD HARVARD UNIVERSITY 93
IRA J. HIRSH, PHD, MA  Research Professor of Audiology in Otolaryngology, Otolaryngology, BA SCHOOL NOT LISTED 42, MA NORTHWESTERN UNIVERSITY 43, PHD HARVARD UNIVERSITY 48, MA HARVARD UNIVERSITY 47

GARY E HIRSHBERG, MD  Professor of Anesthesiology, Anesthesiology, BA PRINCETON UNIVERSITY 68, MD HAHNEMANN UNIVERSITY 72

GARY E HIRSHBERG, MD  Professor of Anesthesiology in Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 68, MD HAHNEMANN UNIVERSITY 72

BARBARA B HIXON  Assistant Professor Emerita of Biostatistics, Biostatistics, BS UNIVERSITY OF ILLINOIS 41

STANLEY P HMIEL, MD, PHD  Associate Professor of Pediatrics, Pediatrics, BS CASE WESTERN RESERVE UNIV 80, M PHIL CAMBRIDGE UNIVERSITY 81, MD CASE WESTERN RESERVE UNIV 89, PHD CASE WESTERN RESERVE UNIV 87

SHARON HO, MD  Instructor in Clinical Pediatrics, Pediatrics, BA STANFORD UNIVERSITY 95, MD SCHOOL NOT LISTED 99

DEE HODGE, III, MD  Associate Professor of Pediatrics, Pediatrics, BA OCCIDENTAL COLLEGE 74, MD UNIVERSITY OF CA SAN FRANCISCO 78

DIDIER HODZIC, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS SCHOOL NOT LISTED 91, PhD SCHOOL NOT LISTED 98

DIDIER HODZIC, PHD  Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SCHOOL NOT LISTED 91, PhD SCHOOL NOT LISTED 98

CHRISTINE MICHE HOEHNER, PHS  Assistant Professor of Surgery (General Surgery), Surgery, BS CONCORDIA UNIVERSITY 98, MS EMORY UNIVERSITY 00, PHS SAINT LOUIS UNIVERSITY 04

Christine M. Hoehner  Siteman Cancer Center, Assistant Professor of Surgery, Division of General Surgery, Washington University in St. Louis, 2000-2001: Fellow, Phoenix Epidemiology and Clinical Research Branch, National Institute of Diabetes and Digestive and Kidney Diseases, 2000: MSPH, epidemiology, Emory University, Atlanta, 2004: PhD, epidemiology, Saint Louis University

AMY L. HOERR, MD  Instructor in Clinical Medicine, Internal Medicine, MD LOYOLA UNIVERSITY 99

J. LANGSTON HOFFMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIV OF WISCONSIN MADISON 94, MD WASHINGTON UNIV IN ST. LOUIS 99

LAWRENCE M HOFFMAN, DMDENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA INDIANA UNIVERSITY BLOOMINGTON 72, DDENT WASHINGTON UNIV IN ST. LOUIS 76

ROBERT J HOFFMAN, MD  Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 72, MD SAINT LOUIS UNIVERSITY 76

RUSSELL G. HOFFMANN, PHD  Instructor in Clinical Pediatrics, Pediatrics, PhD UNIVERSITY OF FLORIDA 95

SANDRA S HOFFMANN, MD  Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF KANSAS 72, MD UNIVERSITY OF KANSAS 76

KATHLEEN M HOGAN, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WESTMINSTER COLLEGE 85, MD UNIVERSITY OF MISSOURI 89

ROBERT EDWARD HOGAN, III, MD  Associate Professor of Neurology, Neurology, BA AUGUSTANA COLLEGE 85, MD UNIVERSITY OF MO COLUMBIA 89

NANCY MELBERG HOLEKAMP, MD  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WELLESLEY COLLEGE 85, MD JOHNS HOPKINS UNIVERSITY 89

NICHOLAS ALAN HOLEKAMP, MD  Instructor in Clinical Pediatrics, Pediatrics, BA DARTMOUTH COLLEGE 82, MD SAINT LOUIS UNIVERSITY 87

MARY ANN HOLLMAN, MD  Instructor in Clinical Pediatrics, Pediatrics, BS BIRMINGHAM SOUTHERN COLLEGE 82, MD UNIVERSITY OF AL BIRMINGHAM 88
JOHN OTTO HOLLOSZY, MD  Professor of Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 57

ROBERT FRANKLYN HOLLOWAY, JR  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

NANCY E HOLMES, MD  Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF KANSAS 72, MD UNIVERSITY OF MISSOURI 76

WILLIAM F HOLMES, PHD  Associate Professor Emeritus of Biological Chemistry, Biochem & Molec Biophysics, BA PRINCETON UNIVERSITY 53, PHD UNIVERSITY OF PENNSYLVANIA 60

SHELDON G HOLSTAD, PHD, PHS  Assistant Professor of Clinical Pharmacy in Psychiatry (On Staff at Jewish Hospital and St Louis College of Pharmacy), Psychiatry, BS UNIVERSITY OF IOWA 84, PHD UNIVERSITY OF IOWA 86, PHS UNIVERSITY OF IOWA 86

CHRISTOPHER VIN HOLTHAUS  Instructor in Emergency Medicine in Medicine, Internal Medicine

BARBEL HOLTMANN, MD, BS  Associate Professor of Anesthesiology, Anesthesiology, BA UNIVERSITY OF MO COLUMBIA 64, MD UNIVERSITY OF MO COLUMBIA 68, BS UNIVERSITY OF MO COLUMBIA 63

SUMNER HOLTZ, MD  Associate Professor of Clinical Radiology, Radiology, MD SAINT LOUIS UNIVERSITY 48

DAVID MICHAEL HOLTZMAN, MD  Head of the Department of Neurology, Andrew B. and Gretchen P. Jones Professor of Neurology, Neurology, BS NORTHWESTERN UNIVERSITY 83, MD NORTHWESTERN UNIVERSITY 85

DAVID MICHAEL HOLTZMAN, MD  Professor of Developmental Biology, Developmental Biology, BS NORTHWESTERN UNIVERSITY 83, MD NORTHWESTERN UNIVERSITY 85

GREGORY WILLIAM HOLTZMAN, DPT  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA EMORY UNIVERSITY 95, MS WASHINGTON UNIV IN ST. LOUIS 01, DPT WASHINGTON UNIV IN ST. LOUIS 07

GREGORY WILLIAM HOLTZMAN, DPT  Assistant Professor of Physical Therapy, Physical Therapy, BA EMORY UNIVERSITY 95, MS WASHINGTON UNIV IN ST. LOUIS 01, DPT WASHINGTON UNIV IN ST. LOUIS 07

MICHAEL J HOLTZMAN, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA NORTHWESTERN UNIVERSITY 71, MD NORTHWESTERN UNIVERSITY 75

MICHAEL J HOLTZMAN, MD  Selma and Herman Seldin Professor of Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 71, MD NORTHWESTERN UNIVERSITY 75

TIMOTHY E. HOLY, PHD  Associate Professor of Neurobiology, Anatomy & Neurobiology, BA RICE UNIVERSITY 91, MA PRINCETON UNIVERSITY 92, PHD PRINCETON UNIVERSITY 97

NEAL HOLZUM  Instructor in Clinical Medicine, Internal Medicine

BARRY ALLEN HONG, PHD  Professor of Medicine, Internal Medicine, BA CONCORDIA UNIVERSITY 69, MD CONCORDIA UNIVERSITY 72, PHD SAINT LOUIS UNIVERSITY 78

BARRY ALLEN HONG, PHD  Vice Chairman for Clinical Affairs, Department of Psychiatry, Professor of Psychiatry, Psychiatry, BA CONCORDIA UNIVERSITY 69, MD CONCORDIA UNIVERSITY 72, PHD SAINT LOUIS UNIVERSITY 78

JOSHUA L. HOOD, MD  Research Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF KENTUCKY 06

BRUCE JAY HOOKERMAN, MD  Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BA DARTMOUTH COLLEGE 64, MD SAINT LOUIS UNIVERSITY 68

J. JOSEPH HORAN, MD  Instructor in Clinical Pediatrics, Pediatrics, BA WESLEYAN UNIVERSITY 67, MD SAINT LOUIS UNIVERSITY 71

BARBRA A HORN, MD  Instructor in Clinical Medicine, Internal Medicine, BA CLARK UNIVERSITY 75, MD WASHINGTON UNIV IN ST. LOUIS 82

LINDA S HORNE, MD  Instructor in Clinical Psychiatry, Psychiatry, MD OHIO STATE UNIVERSITY 86

CAROLINE CLARE HORNER, MD  Assistant Professor of Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 93, MD SAINT LOUIS UNIVERSITY 00

IAN KERST HORNSTRA, MD, PHD  Assistant Professor of Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 85, MD UNIVERSITY OF MO KANSAS CITY 86, PHD UNIVERSITY OF FLORIDA 93

HELEN HORNFECK HOST  Research Instructor in Physical Therapy (Pending Dean Approval), Physical Therapy

TERRI L HOSTO  Research Instructor in Neurology, Neurology, BSW UNIVERSITY OF ILLINOIS 81

RICHARD S HOTCHKISS, MD  Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF VIRGINIA 76

RICHARD S HOTCHKISS, MD  Professor of Developmental Biology, Developmental Biology, MD UNIVERSITY OF VIRGINIA
RICHARD S HOTCHKISS, MD Professor of Medicine, Internal Medicine, MD UNIVERSITY OF VIRGINIA 76
RICHARD S HOTCHKISS, MD Professor of Surgery (General Surgery), Surgery, MD UNIVERSITY OF VIRGINIA 76
JIANGHUI HOU, PHD Assistant Professor of Medicine, Internal Medicine, BS NANJING UNIVERSITY 99, MS EDINBURGH UNIVERSITY 00, PHD EDINBURGH UNIVERSITY 03
WILLIAM EDWARD HOUCK, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS BROWN UNIVERSITY 77, MD UNIVERSITY OF CINCINNATI 81
DENNIS EMIL HOURCADE, PHD Research Associate Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 71, MA HARVARD UNIVERSITY 74, PHD HARVARD UNIVERSITY 78
JACQUELINE HOWARD Instructor in Clinical Medicine, Internal Medicine
MATTHEW A HOWARD Adjunct Assistant Professor of Neurological Surgery, Neurological Surgery
RANDALL A HOWELL, MD Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BS KANSAS STATE UNIVERSITY 74, MD KANSAS STATE UNIVERSITY 78
CHRISTINE M HRACH, MD Instructor in Pediatrics, Pediatrics, BSW SAINT LOUIS UNIVERSITY 98, MD SAINT LOUIS UNIVERSITY 02
KEITH A HRUSKA, MD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS CREIGHTON UNIVERSITY 65, MD CREIGHTON UNIVERSITY 69
KEITH A HRUSKA, MD Professor of Medicine, Internal Medicine, BS CREIGHTON UNIVERSITY 65, MD CREIGHTON UNIVERSITY 69
KEITH A HRUSKA, MD Professor of Pediatrics, Pediatrics, BS CREIGHTON UNIVERSITY 65, MD CREIGHTON UNIVERSITY 69
PAUL W. HRUZ, MD, PHD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS MARQUETTE UNIVERSITY 87, MD MEDICAL COLLEGE OF WISCONSIN 94, PHD MEDICAL COLLEGE OF WISCONSIN 93
PAUL W. HRUZ, MD, PHD Assistant Professor of Pediatrics, Pediatrics, BS MARQUETTE UNIVERSITY 87, MD MEDICAL COLLEGE OF WISCONSIN 94, PHD MEDICAL COLLEGE OF WISCONSIN 93
CHYI-SONG HSIEH, MD, PHD Assistant Professor of Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 96, PhD WASHINGTON UNIV IN ST. LOUIS 96
CHYI-SONG HSIEH, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD WASHINGTON UNIV IN ST. LOUIS 96, PhD WASHINGTON UNIV IN ST. LOUIS 96
Chyi-Song Hsieh Siteman Cancer Center, Assistant Professor of Medicine, Division of Rheumatology, Washington University School of Medicine, 1996-1999: Resident, internal medicine, University of Washington, Seattle, 1999-2001: Fellow, rheumatology, University of Washington, 2001-2005: Postdoctoral fellow, immunology, University of Washington, 1990: BA/MS, biochemistry, University of Chicago, 1996: MD/PhD, immunology, Washington University, St. Louis, Board Certified:, 1999: American Board of Internal Medicine, Internal Medicine
2002: American Board of Internal Medicine, Rheumatology
James Hsieh Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine, 1996-1997: Postdoctoral fellow, Johns Hopkins University, Baltimore, 1997-1999: Resident, Washington University, St. Louis, 1999-2000: Fellow, medical oncology, Washington University, 2000-2003: Fellow, medical oncology, Dana-Farber Cancer Institute, Bost, 1990: MD, Taipei Medical University, Taipei, Taiwan, 1996: PhD, pharmacology and molecular sciences, Johns Hopkins University, Baltimore, Primary Specialty: Genitourinary cancers, Board Certified:, 2000: American Board of Internal Medicine, Internal Medicine
2003: American Board of Internal Medicine, Medical Oncology
JAMES J HSIEH, MD, PHD Assistant Professor of Developmental Biology, Developmental Biology, MD TAIPEI MEDICAL UNIVERSITY 90, PHD JOHN HOPKINS UNIVERSITY 95
JAMES J HSIEH, MD, PHD Assistant Professor of Medicine, Internal Medicine, MD TAIPEI MEDICAL UNIVERSITY 90, PHD JOHN HOPKINS UNIVERSITY 95
CHUNG HSU, MD, PHD Adjunct Professor of Neurology, Neurology, MD NATIONAL TAIWAN UNIVERSITY 70, PHD UNIVERSITY OF VIRGINIA 75
FONG FU HSU, PHD Research Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 70, MS TSINGHUA UNIVERSITY, CHINA 75, PHD UNIVERSITY OF UTAH 86
HAWPENG STEPHEN HSU, MD Assistant Professor of Anesthesiology, Anesthesiology, BA GEORGIA ST UNIVERSITY 91,
SCOTT JAMES HULTGREN, PHD  Helen L Stoever Professor of Molecular Microbiology, Molecular Microbiology, BS INDIANA UNIVERSITY BLOOMINGTON 81, PHD NORTHWESTERN UNIVERSITY 87

PETER A HUMPHREY, MD, PHD  Ladenson Professor of Pathology in Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF KANSAS 78, MD UNIVERSITY OF KANSAS 84, PHD UNIVERSITY OF KANSAS 84

PETER A HUMPHREY, MD, PHD  Professor of Surgery (Urologic Surgery), Surgery, BA UNIVERSITY OF KANSAS 78, MD UNIVERSITY OF KANSAS 84, PHD UNIVERSITY OF KANSAS 84

Peter A Humphrey  Siteman Cancer Center, Ladenson Professor of Pathology and Chief, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1984-1988: Resident, pathology, Duke University, Durham, N.C., 1985-1987: Postdoctoral fellow, immunology, Duke University, 1984: MD/PhD, biochemistry, University of Kansas Medical Center, Kansas City, Primary Specialty: Urological pathology, Board Certified., 1988: American Board of Pathology, Anatomic Pathology

ROCCO HUNEKE, MD  Instructor in Anesthesiology, Anesthesiology, MD MARTIN-LUTHER-UNIVERSITY 96

DAVID A HUNSTAD, MD  Assistant Professor of Molecular Microbiology, Molecular Microbiology, BA CARLETON COLLEGE 91, MD WASHINGTON UNIV IN ST. LOUIS 95

DAVID A HUNSTAD, MD  Assistant Professor of Pediatrics, Pediatrics, BA CARLETON COLLEGE 91, MD WASHINGTON UNIV IN ST. LOUIS 95

DEVYANI M. HUNT, MD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF TEXAS AUSTIN 95, MD UNIVERSITY OF TEXAS HOUSTON 00

DEVYANI M. HUNT, MD  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF TEXAS AUSTIN 95, MD UNIVERSITY OF TEXAS HOUSTON 00

STEVEN R HUNT, MD  Assistant Professor of Surgery (General Surgery), Surgery, BA DARTMOUTH COLLEGE 92, MD STANFORD UNIVERSITY 97

F. EDMUND HUNTER, JR, PHD  Professor Emeritus of Molecular Biology and Pharmacology, Developmental Biology, BS MOUNT UNION COLLEGE 38, PHD UNIVERSITY OF ROCHESTER 41

EVA A HURST, MD  Assistant Professor of Medicine (Dermatology), Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 02

Eva A. Hurst  Siteman Cancer Center, Assistant Professor of Medicine, Division of Dermatology, Washington University School of Medicine, 2002-2003: Resident, internal medicine, St. Mary's Health Center, St. Louis, 2003-2006: Resident and chief resident, dermatology, University of California, San Francisco, 2006-2007: Fellow, procedural dermatology/Mohs micrographic surgery, University of C, 2002: MD, Washington University, St. Louis, Primary Specialty: Dermatology, skin cancer, dermatologic surgery, Mohs micrographic surgery, Board Certified., 2006: American Board of Dermatology, Dermatology

MARK ALBERT HURT, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS SOUTHEAST MISSOURI ST UNIV 78, MD UNIVERSITY OF MISSOURI 82

THY N HUSKEY, MD  Assistant Professor of Neurology, Neurology, BS NORTHWESTERN UNIVERSITY 93, MD NORTHWESTERN UNIVERSITY MED 96

KRZYSZTOF L HYRC, PHD  Research Assistant Professor of Neurology, Neurology, BS JAGIELLONIAN UNIVERSITY 81, PHD JAGIELLONIAN UNIVERSITY 87

CATHERINE IFUNE, MD, PHD  Associate Professor of Anesthesiology, Anesthesiology, BS CALIFORNIA INSTITUTE TECHNOLO 85, MD WASHINGTON UNIV IN ST. LOUIS 97, PHD WASHINGTON UNIV IN ST. LOUIS 90

DENISE KUNG IHNAT, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 86, MD YALE UNIVERSITY 91

RICHARD G. IHNAT, MD  Instructor in Clinical Medicine, Internal Medicine, BS RUTGERS UNIVERSITY 87, MD YALE UNIVERSITY 91

MAXENIA GARCIA ILAGAN, PHD  Instructor in Developmental Biology, Developmental Biology, BS SCHOOL NOT LISTED 92, PHD UNIVERSITY OF MISSOURI 00

SHIN-ICHIRO IMAI, MD, PHD  Associate Professor of Developmental Biology, Developmental Biology, MD KEIO UNIVERSITY 89, PHD KEIO UNIVERSITY 95

SHIN-ICHIRO IMAI, MD, PHD  Associate Professor of Medicine, Internal Medicine, MD KEIO UNIVERSITY 89, PHD KEIO UNIVERSITY 95

medicine, Keio University

TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Neurology, Neurology, MBBS UNIVERSITY OF OTAGO 88, MD UNIVERSITY OF OTAGO 97

TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Pediatrics, Pediatrics, MBBS UNIVERSITY OF OTAGO 88, MD UNIVERSITY OF OTAGO 97

TERRIE ELEANOR INDER, MBBS, MD Associate Professor of Radiology, Radiology, MBBS UNIVERSITY OF OTAGO 88, MD UNIVERSITY OF OTAGO 97

CARL S INGBER, MD Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF ROCHESTER 68, MD BOSTON UNIVERSITY 72

CHRISTINA LYNN INGRAM, MD Instructor in Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 90

DONALD R INGRAM, MD Assistant Professor Emeritus of Clinical Otolaryngology, Otolaryngology, BS UNIVERSITY OF ILLINOIS 54, MD UNIVERSITY OF ILLINOIS 56

AIDAN W IP, MD Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF CHICAGO 75, MD UNIVERSITY OF CHICAGO 79

WARREN ISAKOW, MD Assistant Professor of Medicine, Internal Medicine, MD UNIVERSITY OF THE WITWATERSRA 98

KEITH E ISENBERG, MD Professor Emeritus of Psychiatry, Psychiatry, BA WABASH COLLEGE 74, MD INDIANA UNIVERSITY BLOOMINGTON 78

SELMA E.H.O. ISHAG, MD, PHD Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF KHARTOUM 87, PHD UNIVERSITY OF KHARTOUM 96

MICHAEL J ISSERMAN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA HARVARD UNIVERSITY 71, MD WASHINGTON UNIV IN ST. LOUIS 75

Jennifer L Ivanovich Siteman Cancer Center, Research Instructor, Department of Surgery, Washington University School of Medicine, 1992: MS, biology, University of Cincinnati, 2000: MBA, University of Missouri-St. Louis, Primary Specialty: Medical genetics, Board Certified:, 1993: Americal Board of Genetic Counseling

JENNIFER LYNN IVANOVICH, MS Research Instructor in Surgery (General Surgery), Surgery, BS UNIVERSITY OF CINCINNATI 92, MBA UNIVERSITY OF MISSOURI 00, MS UNIVERSITY OF CINCINNATI 92

RENEE A. IVENS, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS MARYVILLE UNIVERSITY 84, MHS WASHINGTON UNIV IN ST. LOUIS 96, DPT WASHINGTON UNIV IN ST. LOUIS 06

RENEE A. IVENS, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS MARYVILLE UNIVERSITY 84, MHS WASHINGTON UNIV IN ST. LOUIS 96, DPT WASHINGTON UNIV IN ST. LOUIS 06

ENRIQUE WILMAR IZAGUIRRE, PHD Instructor in Radiation Oncology, Radiation Oncology, BS UNIVERSIDAD DEL BUENOS AIRES 89, MS DREXEL UNIVERSITY 92, PHD DREXEL UNIVERSITY 97

YUKITOSHI IZUMI, MD, PHD Research Professor of Psychiatry, Psychiatry, MD SCHOOL NOT LISTED 85, PHD SCHOOL NOT LISTED 89

DANISH A. JABBAR, MBBS Instructor in Medicine, Internal Medicine, MBBS UNIVERSITY OF KARACHI 97

CAROLYN M JACHNA Instructor in Clinical Medicine, Internal Medicine

PAMELA C. JACKSON Research Instructor in Neurology, Neurology, BN WEBSTER UNIVERSITY 94, MA WEBSTER UNIVERSITY 96

JEFFREY H JACOB, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 75, OD SO CAL COLLEGE OF OPTOMETRY 80, BS SO CAL COLLEGE OF OPTOMETRY 78

SAJI JACOB, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MS KERALA UNIVERSITY 89, MD SCHOOL NOT LISTED 93

SINDHU SAJI JACOB Assistant Professor of Neurology (Pending Executive Faculty Approval), Neurology

DARYL JACOBS, MD Instructor in Clinical Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 77, ME CARNEGIE MELLON UNIVERSITY 79, MD WASHINGTON UNIV IN ST. LOUIS 83

MYRON H JACOBS, MD Instructor in Clinical Medicine, Internal Medicine, BA VANDERBILT UNIVERSITY 65, MD LOUISIANA ST UNIV HLTH SCI 69

ARNOLD SCOTT JACOBSON, DDENT Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA UNIVERSITY OF MISSOURI 70, MS UNIVERSITY OF MISSOURI 77, DDENT WASHINGTON UNIV IN ST. LOUIS 76
STEVEN JACOBSON, MD  Instructor in Clinical Medicine, Internal Medicine, BS RHODES COLLEGE 81, MD SAINT LOUIS UNIVERSITY 85

MARK F JACQUIN, PHD  Professor of Neurology, Neurology, BS BRANDEIS UNIVERSITY 75, PHD CITY UNIVERSITY OF NEW YORK 80

DAVID M JAFFE, MD  Dana Brown Professor of Pediatrics, Pediatrics, BA STANFORD UNIVERSITY 72, MD UNIVERSITY OF CHICAGO 78

SUE E JAGLER  Instructor in Clinical Pediatrics, Pediatrics

SANJAY JAIN, MD, PHD  Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 90, MD NORTHWESTERN UNIVERSITY 99, PHD NORTHWESTERN UNIVERSITY 98

SANJAY JAIN, MD, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF CALIFORNIA 90, MD NORTHWESTERN UNIVERSITY 99, PHD NORTHWESTERN UNIVERSITY 98

SUDHIR KUMAR JAIN, MBBS  Associate Professor of Medicine, Internal Medicine, MBBS MAULANA AZAD MEDICAL COLLEGE 86

PATRICIA A JAMERSON  Instructor in Clinical Pediatrics, Pediatrics

AIMEE S. JAMES, PHD, MA  Assistant Professor of Surgery (General Surgery), Surgery, BA GOUCHER COLLEGE 95, M PH UNIVERSITY OF TEXAS HOUSTON 00, PHD UNIVERSITY OF HOUSTON 99, MA UNIVERSITY OF HOUSTON 98

WILLIAM P JAMES, MD  Assistant Professor of Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 89, MD UNIVERSITY OF MISSOURI 93

TATIANA JAMROZ, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD CHARLES UNIVERSITY 91

PARISA JAMSHIDI  Instructor in Clinical Pediatrics, Pediatrics

ALEKSANDAR JANCA, MD  Adjunct Professor of Psychiatry, Psychiatry, MD SCHOOL NOT LISTED

JAMES W JANETKA, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, PHD UNIV OF WISCONSIN MADISON 86

TIMOTHY BOCK JANG, MD  Instructor in Emergency Medicine in Medicine, Internal Medicine, BS PEPPERDINE UNIVERSITY 95, MD UNIVERSITY OF CA SAN DIEGO 00

DAVID P. JAQUES  Professor of Surgery (General Surgery), Surgery

GEORGE JARAD, MD  Instructor in Medicine, Internal Medicine, MD DAMASCUS U. MEDICAL SCHOOL 93

MICHAEL R JARVIS, MD, PHD  Professor of Psychiatry, Vice Chairman for Clinical Affairs, Department of Psychiatry, Psychiatry, BS UNIVERSITY OF MINNESOTA 77, MS UNIVERSITY OF ILLINOIS 80, MD WASHINGTON UNIV IN ST. LOUIS 85, PHD UNIVERSITY OF ILLINOIS 82

DANIEL RAGIN JASPER, MD  Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF TEXAS AUSTIN 90, MD SAINT LOUIS UNIVERSITY 94

CYLENE JAVIDAN-NEJAD, MD  Assistant Professor of Radiology, Radiology, MD IRAN UNIV OF MEDICAL SCIENCES 94

PATRICK Y JAY, MD, PHD  Assistant Professor of Genetics, Genetics, BS STANFORD UNIVERSITY 87, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

PATRICK Y JAY, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BS STANFORD UNIVERSITY 87, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

YASANGI MAINA JAYASIH, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF CA LOS ANGELES 95, MD UNIVERSITY OF CA SAN FRANCISCO 04

DONNA BETH JEFFE, PHD  Research Associate Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 72, MA WASHINGTON UNIV IN ST. LOUIS 90, PHD WASHINGTON UNIV IN ST. LOUIS 93

RACHEL BROWN JEFFERSON  Instructor in Emergency Medicine in Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 99

MARTIN DAVID JENDRISAK, MD  Assistant Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF AKRON 75, MD OHIO STATE UNIVERSITY 78

CHRISTOPHER M. JENKINS, PHD  Research Instructor in Medicine, Internal Medicine, BS MICHIGAN STATE UNIVERSITY 91, PHD VANDERBILT UNIVERSITY 97

JACK W JENNINGS, MD, PHD  Instructor in Radiology, Radiology, BS WHEATON COLLEGE 92, MS OHIO STATE UNIVERSITY 95, MD UNIVERSITY OF SOUTH FLORIDA 02, PHD UNIVERSITY OF SOUTH FLORIDA 99
SUSAN JERGER  Adjunct Research Professor of Otolaryngology, Otolaryngology

DAOJUN JIANG, PHD  Research Instructor in Medicine, Internal Medicine, BS ANHUI UNIVERSITY 96, MS CHINESE ACADEMY OF SCIENCES 99, PHD FUDAN UNIVERSITY 04

XUNTIAN JIANG, PHD  Research Instructor in Medicine (Pending Dean's Approval), Internal Medicine, PHD CHINA PHARMACEUTICAL UNIV 92

DAVID JICK, MD  Instructor in Clinical Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 82, MD WASHINGTON UNIV IN ST. LOUIS 87

SHARON LESLIE JICK  Instructor in Clinical Otolaryngology and Visual Sciences, Otolaryngology & Visual Sci

SIDNEY JICK, MD  Associate Professor of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 49

WILLIAM STEVEN JOFFE, MD  Assistant Professor Emeritus of Clinical Otolaryngology and Visual Sciences, Otolaryngology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 59, MD WASHINGTON UNIV IN ST. LOUIS 63

MORRIS JOFTUS, MD  Assistant Professor of Clinical Medicine, Internal Medicine, MD UNIVERSITY OF ILLINOIS 67

DENISE R JOHNSON, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA OAKWOOD COLLEGE 79, MD LOMA LINDA UNIVERSITY 84

GEORGE BROOKS JOHNSON, PHD  Professor of Genetics, Genetics, BA DARTMOUTH COLLEGE 64, MA DARTMOUTH COLLEGE 66, PHD STANFORD UNIVERSITY 72

JEFFREY E JOHNSON, MD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA DUKE UNIVERSITY 76, MD GEORGETOWN UNIVERSITY 80

JOYCE D JOHNSON, MD  Instructor in Clinical Pediatrics, Pediatrics, BS OBERLIN COLLEGE 77, MD CASE WESTERN RESERVE UNIV 82

MARK C JOHNSON, MD  Associate Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF ROCHESTER 78, MD JOHNS HOPKINS UNIVERSITY 82

MARK C. JOHNSON, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA ECKERD COLLEGE 72, MD UNIVERSITY OF KENTUCKY 80

MICHAEL K JOHNSON, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS OHIO STATE UNIVERSITY 70, MD SAINT LOUIS UNIVERSITY 75

PHILIP J JOHNSON  Assistant Professor of Surgery (Plastic and Reconstructive Surgery) (Pending Executive Faculty Approval), Surgery

STACI R. JOHNSON, MD  Instructor in Clinical Pediatrics, Pediatrics, BS TRUMAN STATE UNIVERSITY 97, MD SOUTHERN ILLINOIS UNIVERSITY 02

STEPHEN L JOHNSON, PHD  Associate Professor of Genetics, Genetics, BA VANDERBILT UNIVERSITY 83, PHD UNIVERSITY OF WASHINGTON 91

Stephen L Johnson  Siteman Cancer Center, Associate Professor of Genetics, Washington University School of Medicine, 1991-1996: Postdoctoral associate, developmental psychology, University of Oregon, Eugene, 1990: PhD, genetics, University of Washington, Seattle

WILLIAM LEE JOHNSON, MD  Adjunct Associate Professor of Pediatrics, Associate Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF MISSOURI 77, MD UNIVERSITY OF MISSOURI 81

EUGENE MALCOLM JOHNSON, JR, PHD  Professor of Molecular Biology and Pharmacology, Developmental Biology, BS UNIVERSITY OF MARYLAND 66, PHD UNIVERSITY OF MARYLAND 70

EUGENE MALCOLM JOHNSON, JR, PHD  Professor of Neurology, Neurology, BS UNIVERSITY OF MARYLAND 66, PHD UNIVERSITY OF MARYLAND 70

GLEN P JOHNSTON, MD  Associate Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 53, MD WASHINGTON UNIV IN ST. LOUIS 56

H. MARK JOHNSTON, PHD  Professor of Genetics, Mc Donnell Professor of Molecular Genetics, Genetics, PHD UNIVERSITY OF CALIFORNIA 80

ANGELA MARIE JONES, MD  Instructor in Clinical Pediatrics, Pediatrics, MD UNIVERSIDAD NACIONAL DE COLUMB 89

LA RHONDA JONES  Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry

LARRY A JONES, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 72, MBA WASHINGTON UNIV IN ST. LOUIS 99, MD JOHNS HOPKINS UNIVERSITY MEDIC 76
MATTHEW B JONES, MD Assistant Professor of Anesthesiology, Anesthesiology, BA BRIGHAM YOUNG UNIVERSITY 83, MD U MEDICAL-DENTAL OF NEW JERSEY 87

JONATHAN JONISCH, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD ALBERT EINSTEIN COLLEGE OF MED 04

SREENIVASA JONNALAGADDA, MD Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 84, MD SCHOOL NOT LISTED 88

SHIRLEY SERAN JOO, MD Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF CHICAGO 95, MD LOYOLA UNIVERSITY 99

AMY M JOSEPH, MD Associate Professor of Medicine, Internal Medicine, BA JOHNSTON COMMUNITY COLLEGE 77, MD VANDERBILT UNIVERSITY 86

DANIEL PAUL JOSEPH, MD, PHD Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS CORNELL UNIVERSITY 81, MD WAYNE STATE UNIVERSITY 92, PHD UNIVERSITY OF CA BERKELEY 88

SUSAN M. JOSEPH, MD Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 97, MD UNIVERSITY OF MICHIGAN 02

R. GILBERT JOST, MD Elizabeth E Mallinckrodt Professor of Radiology, Head of The Department of Radiology, Director of The Edward Mallinckrodt Institute of Radiology, Radiology, BA HARVARD UNIVERSITY 64, MD YALE UNIVERSITY 69

SANDY LYNN JOST Adjunct Instructor in Obstetrics and Gynecology, Obstetrics & Gynecology

MARK J JOSTES, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS ROCKHURST COLLEGE 76, MD UNIVERSITY OF MISSOURI 81

BHAGAVAN V. JOSYULA, MD Instructor in Clinical Medicine, Internal Medicine, BS ANDHRA UNIVERSITY 74, MD SCHOOL NOT LISTED 86

RANDALL S JOTTE Associate Professor of Emergency Medicine in Medicine, Internal Medicine

WILLIAM G JUERGENS, JR, MD Associate Professor Emeritus of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 61

NERINGA JUKNIS, MD Assistant Professor of Neurology, Neurology, BA SCHOOL NOT LISTED 85, MD KAUNAS MEDICAL INSTITUTE 89

ERZSEBET JUNG, MD Instructor in Clinical Pediatrics, Pediatrics, MD SCHOOL NOT LISTED 87

EMILY SUSAN JUNGHEIM, MD Instructor in Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 97, MD LOYOLA UNIVERSITY CHICAGO 01


JAMES A JUNKER, MD Instructor in Clinical Radiology, Radiology, BA SAINT LOUIS UNIVERSITY 75, MD SAINT LOUIS UNIVERSITY 79

LESLIE E KAHL, MD Associate Dean for Student Affairs, Student Support Services, BA STANFORD UNIVERSITY 73, MD ALBANY MEDICAL COLLEGE 78

LESLIE E KAHL, MD Professor of Medicine, Internal Medicine, BA STANFORD UNIVERSITY 73, MD ALBANY MEDICAL COLLEGE 78

JOSEPH A KAHN, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 73, MD UNIVERSITY OF MISSOURI 77

LAWRENCE I KAHN, MD Professor Emeritus of Pediatrics, Pediatrics, BA UNIVERSITY OF ALABAMA 41, MD LOUISIANA ST UNIV HLTH SCI 45

TIMOTHY N KAISER, MD Assistant Professor of Clinical Otolaryngology, Otolaryngology, BS UNIVERSITY OF OKLAHOMA 78, MD HARVARD UNIVERSITY 82

STEPHEN A KAMENETZKY, MD Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WASHINGTON UNIV IN ST. LOUIS 67, MD WASHINGTON UNIV IN ST. LOUIS 70, MD SCHOOL NOT LISTED 70

DAYAKAR KANCHERLA, MBBS Instructor in Medicine, Internal Medicine, MBBS ANDHRA UNIVERSITY 02

MADHAVI KANDULA, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF AKRON 83,
ALEX A KANE, MD  Joseph B. Kimbrough Associate Professor of Pediatric Dentistry in Surgery (Plastic and Reconstructive Surgery), Surgery, BA DARTMOUTH COLLEGE 84, MD DARTMOUTH COLLEGE 91

DANIEL THOMAS KANE, MD  Assistant Professor of Anesthesiology (Pending Executive Faculty Approval), Anesthesiology, MD WASHINGTON UNIV IN ST. LOUIS 89

PAMELA B KANE, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MICHIGAN 86, MD UNIVERSITY OF ILLINOIS 90

IVAN M KANGRGA, MD, PHD  Associate Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF BELGRADE 82, PHD IOWA STATE UNIVERSITY 91

KIMBERLY ANNE KAPHINGST, PHD, MA  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval), Surgery, BS WELLESLEY COLLEGE 92, M PH HARVARD UNIVERSITY 97, PHD HARVARD UNIVERSITY 02, MA HARVARD UNIVERSITY 95

Kimberly A. Kaphingst Siteman Cancer Center

HUMEYRA KARACAL, MD  Instructor in Ophthalmology & Visual Sciences, Ophthalmology & Visual Sci, MD HACETTEPE UNIVERSITY 94

MENELAOS KARANIKOLAS, MD  Instructor in Anesthesiology, Anesthesiology, MD ATHENS UNIVERSITY MED SCHOOL 88, MD SCHOOL NOT LISTED 98

EUGENIA KARDARIS  Instructor in Clinical Otolaryngology (DDS), Otolaryngology

MORVARID KARIMI, MD  Instructor in Neurology, Neurology, MD NORTHRHEIN WESTFALEN MEDICAL 99

ROBERT S KARSH, MD  Adjunct Professor of Medicine, Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 51, MD WASHINGTON UNIV IN ST. LOUIS 92

VICTORIA KASKUTAS  Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 80, MHS WASHINGTON UNIV IN ST. LOUIS

VICTORIA KASKUTAS  Instructor in Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF ILLINOIS 80, MHS WASHINGTON UNIV IN ST. LOUIS

THOMAS J KASPER  Instructor in Clinical Pediatrics, Pediatrics

MICHAEL A KASS, MD  Head of the Department of Ophthalmology and Visual Sciences, Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS NORTHWESTERN UNIVERSITY 63, MS NORTHWESTERN UNIVERSITY MED 66, MD NORTHWESTERN UNIVERSITY 66

KEITH A KASTELIC, MD  Instructor in Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 85, MS NORTHWESTERN UNIVERSITY 87, MD UNIVERSITY OF ILLINOIS 93

ANDREW M. KATES, MD  Associate Professor of Medicine, Internal Medicine, BS TUFTS UNIVERSITY 90, MD TUFTS UNIVERSITY 94

RYOTARO KATO, MD, JD  Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF TOKYO 99, JD WASHINGTON UNIV IN ST. LOUIS 07

DEMETRIOS KATSIKAS, MD  Instructor in Clinical Surgery (Urological Surgery), Surgery, BS UNIVERSITY OF MICHIGAN 85, MD WAYNE STATE UNIVERSITY 89

RICHARD T. KATZ, MD  Professor of Clinical Neurology, Neurology, BA UNIVERSITY OF ROCHESTER 77, MA CLEVELAND INSTITUTE OF MUSIC 79, MD CASE WESTERN RESERVE UNIV 81

DAVID A KATZMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BA BROWN UNIVERSITY 86, MD SAINT LOUIS UNIVERSITY 91

ROBERT L KAUFMAN, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 59, MD WASHINGTON UNIV IN ST. LOUIS 63

JACK KAYES, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA YALE UNIVERSITY 53, MD WASHINGTON UNIV IN ST. LOUIS 57

JAMES P KEATING, MD  W. Mckim O. Marriott Professor of Pediatrics, Pediatrics, BA HARVARD UNIVERSITY 59, MS UNIVERSITY OF LONDON 83, MD HARVARD UNIVERSITY 63

ROBERT S KEBLER, MD  Instructor in Clinical Pediatrics, Pediatrics, BS MUHLENBERG COLLEGE 80, MD SAINT LOUIS UNIVERSITY 84

KATHRYN A. KEELER, MD  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS JAMES MADISON
JAY DONOVAN KEENER, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS WEST VIRGINIA UNIVERSITY 91, MD WEST VIRGINIA UNIVERSITY 98

VLADIMIR JIVKOV KEFALOV, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, PHD BOSTON UNIVERSITY 99

VLADIMIR JIVKOV KEFALOV, PHD Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, PHD BOSTON UNIVERSITY 99

MARTIN S KELLER, MD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF PENNSYLVANIA 85, MD UNIVERSITY OF VERMONT 90

MARTIN S KELLER, MD Associate Professor of Surgery (Pediatric Surgery), Surgery, BS UNIVERSITY OF PENNSYLVANIA 85, MD UNIVERSITY OF VERMONT 90

SARAH LYNN KELLER, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF NOTRE DAME 85, MD SOUTHERN ILLINOIS UNIVERSITY 89

ROBERT V KELLOWS Instructor in Clinical Pediatrics, Pediatrics

BRIAN J KELLY, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS SCHOOL NOT LISTED 64, MD SCHOOL NOT LISTED 72

Cynthia Z. Kenneally, MD Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 76, MA UNIVERSITY OF MISSOURI 78, MD UNIVERSITY OF MISSOURI 82

CHARLOTTE J KENNEDY, MD, PHD Assistant Professor of Clinical Medicine, Internal Medicine, BA AGNES SCOTT COLLEGE 84, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

ROBERT M KENNEDY, MD Professor of Pediatrics, Pediatrics, BS CREIGHTON UNIVERSITY 72, MD CREIGHTON UNIVERSITY 76

MICHELE E KEMP, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 77, MD WASHINGTON UNIV IN ST. LOUIS 81

CYNTHIA Z KENNEALLY, MD Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 76, MA UNIVERSITY OF MISSOURI 78, MD UNIVERSITY OF MISSOURI 82

CHARLOTTE J KENNEDY, MD, PHD Assistant Professor of Clinical Medicine, Internal Medicine, BA AGNES SCOTT COLLEGE 84, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

ROBERT M KENNEDY, MD Professor of Pediatrics, Pediatrics, BS GEORGIA TECH 75, MD MEDICAL COLLEGE GEORGIA 80

DAVID E KENNELL, PHD Professor Emeritus of Molecular Microbiology, Molecular Microbiology, BA UNIVERSITY OF CALIFORNIA 54, PHD UNIVERSITY OF CALIFORNIA 59

RAINER KENTNER, MD Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF TUEBINGEN 87

JOSEPH L KENZORA, MD Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY OF NEW MEXICO 75

DEBORAH LYNN KERBER, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SOUTHEAST MISSOURI ST UNIVERS 86, OD UNIVERSITY OF MISSOURI 92

THOMAS ARCHIBAL KERR Instructor in Medicine, Internal Medicine

DANIEL KERSCHENSTEINER, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, PHD GEORG AUGUST UNIVERSITY 04

DANIEL KERSCHENSTEINER, PHD Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, PHD GEORG AUGUST UNIVERSITY 04

MIKLOS DAVID KERTAI, MD, PHD, MS Instructor in Anesthesiology, Anesthesiology, MS LONDON SCHOOL OF HYGIENE & MED 98, MD SEMMELWEIS UNIVERSITY OF MED 95, PHD ERASMUS UNIVERSITY ROTTERDAM 04, MS ERASMUS UNIVERSITY ROTTERDAM 00

SHELDON KESSLER, MD Instructor in Clinical Pediatrics, Pediatrics, MD SAINT LOUIS UNIVERSITY 51
SYED AHMED KHADER, MD Instructor in Clinical Neurology, Neurology, BS SCHOOL NOT LISTED 89, MD UNIVERSITY OF MADRAS 93

GEETIKA KHANNA, MBBS Assistant Professor of Radiology, Radiology, MS UNIVERSITY OF IOWA 06, MBBS ALL-INDIA INST OF MEDICAL SCI 97

EVAN DAVID KHRASCH, MD, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, MD NORTHWESTERN UNIVERSITY MED 84, PHD NORTHWESTERN UNIVERSITY MED 83

EVAN DAVID KHRASCH, MD, PHD Russell and Mary Shelden Professor of Anesthesiology, Anesthesiology, MD NORTHWESTERN UNIVERSITY MED 84, PHD NORTHWESTERN UNIVERSITY MED 83

Evan D. Kharasch Siteman Cancer Center, Russell D. and Mary B. Shelden Professor of Anesthesiology and Chief, Division of Clinical and Translational Research, Washington University School of Medicine, 1984-1987: Intern and resident, University of Washington, Seattle, 1987-1988 Research fellow, anesthesiology, University of Washington, 1979: MD, Northwestern University, Chicago, 1983: PhD, pharmacology, Northwestern University, Primary Specialty: Anesthesiology, Board Certified.: 1989: American Board of Anesthesiology, Anesthesiology

SHAHRDAD KHODAMORADI, MD Assistant Professor of Anesthesiology, Anesthesiology, BA VANDERBILT UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 90

SAAID KHOJASTEH, MD Assistant Professor of Clinical Psychiatry, Psychiatry, MD SCHOOL NOT LISTED 81

LYNNETTE C KHOO-SUMMERS, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA COLORADO ST UNIVERSITY 90, MS WASHINGTON UNIV IN ST. LOUIS 98, DPT WASHINGTON UNIV IN ST. LOUIS 08

LYNNETTE C KHOO-SUMMERS, DPT Assistant Professor of Physical Therapy, Physical Therapy, BA COLORADO ST UNIVERSITY 90, MS WASHINGTON UNIV IN ST. LOUIS 98, DPT WASHINGTON UNIV IN ST. LOUIS 08

ADAM S KIBEL, MD Professor of Genetics, Genetics, BA CORNELL UNIVERSITY 87, MD CORNELL UNIVERSITY 91

ADAM S KIBEL, MD Professor of Surgery (Urologic Surgery), Surgery, BA CORNELL UNIVERSITY 87, MD CORNELL UNIVERSITY 91

WILLIAM F KIEFER, JR, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA PRINCETON UNIVERSITY 67, OD ILLINOIS COLLEGE OF OPTOMETRY 75, BS ILLINOIS COLLEGE OF OPTOMETRY 73

MARY KIEHL, MD, AS Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 85, MD UNIVERSITY OF CALIFORNIA 90, AS LONG BEACH CITY COLLEGE 76

ALICIA NICOLE KIENINGER, MD Assistant Professor of Surgery (General Surgery), Surgery, BS NORTHWESTERN UNIVERSITY 97, MD NORTHWESTERN UNIVERSITY MED 01

KENT LEON KILLIAN, MD Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 86, MD SAINT LOUIS UNIVERSITY 90

CHARLES KILO, MD Professor of Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 59

CHARLES KILO, MD Professor of Pathology and Immunology, Pathology & Immunology, MD WASHINGTON UNIV IN ST. LOUIS 59

CHARLES JOHN KILO, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF KANSAS 87, MD WASHINGTON UNIV IN ST. LOUIS 91

HELEN YOUNG KIM-JAMES, MD Instructor in Clinical Medicine, Internal Medicine, BA SOUTHERN METHODIST UNIVERSITY 97, MD WASHINGTON UNIV IN ST. LOUIS 01

ANDREW M KIM, DDENT Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BA CALIFORNIA STATE UNIVERSITY 78, MS OHIO STATE UNIVERSITY 87, DDENT WASHINGTON UNIV IN ST. LOUIS 84

ANDREW M KIM, DDENT Instructor in Clinical Otolaryngology, Otolaryngology, BA CALIFORNIA STATE UNIVERSITY 78, MS OHIO STATE UNIVERSITY 87, DDENT WASHINGTON UNIV IN ST. LOUIS 84

JOONG HEE KIM Instructor in Radiology, Radiology, BS SCHOOL NOT LISTED 96, MS SCHOOL NOT LISTED 00

SEUNG KWON KIM, MD Assistant Professor of Radiology (Pending Executive Faculty Approval), Radiology, MD KYUNG HEE UNIVERSITY 95

Seung K. Kim Siteman Cancer Center, Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1995-1996: Intern, Sungkyunkwan University, Seoul, South Korea, 1996-2000: Resident, diagnostic radiology, Sungkyunkwan University, 2001-2002: Fellow, abdominal imaging, Sungkyunkwan University, 2007-2008: Fellow, vascular and interventional radiology, Ha, 1998: MD, Kyung Hee University, Seoul, South Korea, Primary Specialty: Chemoembolization, radiofrequency ablation, cryoaablation, portal interventions
ROSA ANNE KINCAID, MD Instructor in Clinical Medicine, Internal Medicine, BA CITY COLLEGE 70, MD TEMPLE UNIVERSITY 84

ALLISON A KING, MD Assistant Professor of Occupational Therapy, Occupational Therapy, BS WASHINGTON UNIV IN ST. LOUIS 92, MD UNIVERSITY OF MO COLUMBIA 96

ALLISON A KING, MD Assistant Professor of Pediatrics, Pediatrics, BS WASHINGTON UNIV IN ST. LOUIS 92, MD UNIVERSITY OF MO COLUMBIA 96

DONALD KEVIN KING, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA FAIRFIELD UNIVERSITY 66, MD JOHNS HOPKINS UNIVERSITY MEDIC 70

TESSA MARIE KING, MD Assistant Professor of Anesthesiology, Anesthesiology, BA SCHOOL NOT LISTED 93, MD UNIVERSITY OF KANSAS 97, MD UNIVERSITY OF KANSAS 97

TINNA P KING Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 88

DAVID M KIPNIS, MD Distinguished University Professor Emeritus of Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY MEDIC 45, MA JOHNS HOPKINS UNIVERSITY MEDIC 49, MD UNIVERSITY OF MARYLAND 51

JOHN P. KIRBY, MD Assistant Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF ILLINOIS 88, MS UNIVERSITY OF ILLINOIS 99, MD UNIVERSITY OF ILLINOIS 93

NIGAR KIRMANI, MD Professor of Medicine, Internal Medicine, MD KING EDWARD MEDICAL COLLEGE 73

ZULFIA KISRIEVA-WARE, MD, PHD Research Instructor in Radiology, Radiology, MD DAGESTAN STATE MED. INSTITUTE 82, PHD MOSCOW STATE UNIVERSITY 91

JOHN M KISSANE, MD Retiree - Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF ROCHESTER 48, MD WASHINGTON UNIV IN ST. LOUIS 52

JOHN H KISSEL, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS GEORGETOWN UNIVERSITY 67, MD HARVARD UNIVERSITY 71

MARINA K KISSELEVA, PHD Research Instructor in Medicine, Internal Medicine, MS MOSCOW STATE UNIVERSITY 88, PHD WASHINGTON UNIV IN ST. LOUIS 01

ASKO I KIVIKOSKI, MD, D SC Associate Professor Emeritus of Obstetrics and Gynecology, Obstetrics & Gynecology, BA SCHOOL NOT LISTED 54, MD SCHOOL NOT LISTED 58, D SC SCHOOL NOT LISTED 67

LAURIE KLABI, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MISSOURI 87, MD UNIVERSITY OF MISSOURI 91

JOSEPH W. KLAESNER, PHD, BS Research Associate Professor of Physical Therapy, Physical Therapy, BS MARQUETTE UNIVERSITY 87, MS MARQUETTE UNIVERSITY 93, PHD MARQUETTE UNIVERSITY 95, BS MARQUETTE UNIVERSITY 87

JOSEPH W. KLAESNER, PHD, BS Research Associate Professor of Radiology, Radiology, BS MARQUETTE UNIVERSITY 87, MS MARQUETTE UNIVERSITY 93, PHD MARQUETTE UNIVERSITY 95, BS MARQUETTE UNIVERSITY 87

MICKI KLEARMAN, MD Associate Professor of Clinical Medicine, Internal Medicine, BS STANFORD UNIVERSITY 77, MD WASHINGTON UNIV IN ST. LOUIS 81

MICHAEL K KLEBERT, PHD, BN Research Instructor in Medicine, Internal Medicine, BA SOUTHERN ILLINOIS UNIVERSITY 79, MSN UNIVERSITY OF TEXAS AUSTIN 87, PHD UNIVERSITY OF MO ST LOUIS 08, BN SOUTHERN ILLINOIS UNIVERSITY 81

ROBERT E KLEIGER, MD Professor of Medicine, Internal Medicine, BA YALE UNIVERSITY 56, MD HARVARD UNIVERSITY 60

CHRISTINA L KLEIN Assistant Professor of Medicine, Internal Medicine

ERIC E. KLEIN, PHD Professor of Radiation Oncology, Radiation Oncology, BS BRIDGEWATER STATE COLLEGE 80, MS UNIVERSITY OF MASSACHUSETTS 87, PHD ROSALIND FRANKLIN UNIVERSITY 06

JACOB KLEIN, MD Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS MUHLENBERG COLLEGE 64, MD SCHOOL NOT LISTED 68

ROBYN SUE KLEIN, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA BARNARD COLLEGE 85, MS ALBERT EINSTEIN COLLEGE OF MED 90, MD ALBERT EINSTEIN COLLEGE OF MED 93, PHD ALBERT EINSTEIN COLLEGE OF MED 93

ROBYN SUE KLEIN, MD, PHD Associate Professor of Medicine, Internal Medicine, BA BARNARD COLLEGE 85, MS ALBERT EINSTEIN COLLEGE OF MED 90, MD ALBERT EINSTEIN COLLEGE OF MED 93, PHD ALBERT EINSTEIN COLLEGE OF MED 93
ROBYN SUE KLEIN, MD, PHD  Associate Professor of Neurobiology, Anatomy & Neurobiology, BA BARNARD COLLEGE 85, MS ALBERT EINSTEIN COLLEGE OF MED 90, MD ALBERT EINSTEIN COLLEGE OF MED 93, PHD ALBERT EINSTEIN COLLEGE OF MED 93

SAMUEL KLEIN, MD  Danforth Professor of Medicine, Internal Medicine, BA BRANDEIS UNIVERSITY 74, MS MASS INST OF TECHNOLOGY (MIT) 84, MD TEMPLE UNIVERSITY 79

SAMUEL KLEIN, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA BRANDEIS UNIVERSITY 74, MS MASS INST OF TECHNOLOGY (MIT) 84, MD TEMPLE UNIVERSITY 79

SANDRA E. KLEIN, MD  Assistant Professor of Orthopaedic Surgery (Pending Executive Faculty Approval), Orthopaedic Surgery, BE UNIVERSITY OF MISSOURI 94, MD WASHINGTON UNIV IN ST. LOUIS 01

SAUL KLEIN, MD  Instructor in Clinical Surgery (Urologic Surgery), Surgery, MD SYRACUSE UNIVERSITY 59

MARK ALAN KLEINDORFER, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS INDIANA UNIVERSITY BLOOMINGTON 77, OD INDIANA UNIVERSITY BLOOMINGTON 79

JUNE LESLIE KLEINFELD, DDENT  Instructor in Clinical Otolaryngology (DMD), Otolaryngology, DDENT WASHINGTON UNIV IN ST. LOUIS 85

GEORGE R KLETZKER, MD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, BA UNIVERSITY OF MISSOURI 80, MD UNIVERSITY OF MISSOURI 84

MARY E KLINGENSMITH, MD  Professor of Surgery (General Surgery), Surgery, BA WELLESLEY COLLEGE 88, MD DUKE UNIVERSITY 92

ALLEN P KLIPPEL, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BA AMHERST COLLEGE 44, MD SAINT LOUIS UNIVERSITY 46

ALLEN P KLIPPEL, MD  Assistant Professor Emeritus of Medicine, Internal Medicine, BA AMHERST COLLEGE 44, MD SAINT LOUIS UNIVERSITY 46

VIVIAN MARIE KLOKE, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS MCKENDREE COLLEGE 86, OD UNIVERSITY OF MISSOURI 90

LINDA MARIE KLUTHO, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 80, MD UNIVERSITY OF MISSOURI 84

CARL G KLUTKE, MD  Professor of Surgery (Urologic Surgery), Surgery, BA WAYNE STATE UNIVERSITY 79, MD UNIVERSITY OF MICHIGAN 83

VITALY A KLYACHKO, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS MOSCOW STATE UNIVERSITY 97, MS MOSCOW STATE UNIVERSITY 98, PHD UNIV OF WISCONSIN MADISON 02

KATHLEEN MARIE KNIEPMANN, DED, BS  Instructor in Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 74, M PH HARVARD UNIVERSITY 81, DED HARVARD UNIVERSITY 80, BS WASHINGTON UNIV IN ST. LOUIS 74

KATHLEEN MARIE KNIEPMANN, DED, BS  Instructor in Occupational Therapy, Occupational Therapy, BA WASHINGTON UNIV IN ST. LOUIS 74, M PH HARVARD UNIVERSITY 81, DED HARVARD UNIVERSITY 80, BS WASHINGTON UNIV IN ST. LOUIS 74

RICHARD D KNIGHT  Instructor in Clinical Pediatrics, Pediatrics

SHIRLEY M KNIGHT, MD  Professor of Clinical Pediatrics, Pediatrics, BA DILLARD UNIVERSITY 76, MD WASHINGTON UNIV IN ST. LOUIS 80

ERIC KNOCHE, MD  Instructor in Medicine, Internal Medicine, BS DAVIDSON COLLEGE 01, MD WASHINGTON UNIV IN ST. LOUIS 06

HENRY L KNOCK, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 49, MD JOHNS HOPKINS UNIVERSITY 53

HARRY L KNOPF, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA HARVARD UNIVERSITY 63, MD HARVARD UNIVERSITY 67

NORMAN P KNOWLTON, JR, MD  Professor Emeritus of Clinical Medicine, Internal Medicine, BS HARVARD UNIVERSITY 42, MD HARVARD UNIVERSITY 45

RONALD JOSEPH KNOX, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD SCHOOL NOT LISTED 56

DALE K KOBAYASHI  Research Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 84, MBA UNIVERSITY OF MISSOURI 93
Ira J Kodner  Siteman Cancer Center, Solon and Bettie Gershman Professor of Surgery, Division of General Surgery, Section of Colon and Rectal Surgery, Washington University School of Medicine, 1967-1974: Resident, surgery, Washington University, St. Louis, 1974-1975: Fellow, colon and rectal surgery, The Cleveland Clinic, Cleveland, Ohio, 1967: MD, Washington University, St. Louis, Primary Specialty: Colon and rectal cancer, Board Certified:, 1975: American Board of Surgery, General Surgery

IRA JOE KODNER, MD Solon and Bettie Gershman Professor of Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 63, MD WASHINGTON UNIV IN ST. LOUIS 67

JOEL S KOENIG, MD Professor of Clinical Pediatrics, Pediatrics, BS YALE UNIVERSITY 78, MD VANDERBILT UNIVERSITY 82

KENNETH A KOERNER, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 35, MD WASHINGTON UNIV IN ST. LOUIS 41

ISMAIL KOLA, PHD Adjunct Professor of Medicine, Internal Medicine, BS RHODES COLLEGE 82, PHD SCHOOL NOT LISTED 85

MARIN H KOLLEF, MD Professor of Medicine, Internal Medicine, BS US MILITARY ACADEMY 79, MD UNIVERSITY OF ROCHESTER 83

HERMANN M KOLLER, MD Instructor in Emergency Medicine in Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 78

NIKOLETA S. KOLONOS, MD Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF PITTSBURGH 91, MD UNIVERSITY OF PITTSBURGH 96

MARY E. KOLY, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 95, MD UNIVERSITY OF MO KANSAS CITY 95

KATHERINE L KOMENDOWSKI, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS MARYMOUNT COLLEGE 80, MD SCHOOL NOT LISTED 84

KEVIN L KONZEN, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF NOTRE DAME 80, MD UNIVERSITY OF ILLINOIS 84

RAPHAEL COPAN, PHD Professor of Developmental Biology, Developmental Biology, BS TEL AVIV UNIVERSITY 81, MS TEL AVIV UNIVERSITY 84, PHD UNIVERSITY OF CHICAGO 89

RAPHAEL COPAN, PHD Professor of Medicine (Dermatology), Internal Medicine, BS TEL AVIV UNIVERSITY 81, MS TEL AVIV UNIVERSITY 84, PHD UNIVERSITY OF CHICAGO 89

KEVIN MARC KORENBLAT, MD Associate Professor of Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 96

PHILLIP E KORENBLAT, MD Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF ARKANSAS 57, MD UNIVERSITY OF ARKANSAS 60

MICHAEL S KORENFELD, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthamology & Visual Sci, BS UNIVERSITY OF ARIZONA 81, MD WASHINGTON UNIV IN ST. LOUIS 86

Kerry Kornfeld Siteman Cancer Center, Associate Professor of Developmental Biology, Washington University School of Medicine, 1991-1995: Postdoctoral fellow, biology, Massachusetts Institute of Technology, Cambridge, Mass., 1991: MD/PhD, biochemistry, Stanford University, Stanford, Calif.

STEPHEN K KORNFELD, MD, PHD Professor of Developmental Biology, Developmental Biology, BA YALE UNIVERSITY 84, MD STANFORD UNIVERSITY 91, PhD STANFORD UNIVERSITY 91

STUART A KORNFELD, MD David C and Betty Farrell Professor of Medicine, Internal Medicine, BA DARTMOUTH COLLEGE 58, MD WASHINGTON UNIV IN ST. LOUIS 62

STUART A KORNFELD, MD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA DARTMOUTH COLLEGE 58, MD WASHINGTON UNIV IN ST. LOUIS 62

ALEX H KOSLOFF, MD Instructor in Clinical Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 75, MD SAINT LOUIS UNIVERSITY 80

JOSEPH C KOSTER, PHD Research Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA COLORADO COLLEGE 87, PHD WASHINGTON UNIV IN ST. LOUIS 96

LAWRENCE M KOTNER, MD Associate Professor of Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 65, MD WASHINGTON UNIV IN ST. LOUIS 68

JOHN JAY KOTYK, PHD Research Associate Professor of Radiology, Radiology, BS SOUTHEAST MISSOURI ST UNIVERS
81, MA WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 86

PAUL THOMAS KOTZBAUER, MD, PHD Assistant Professor of Developmental Biology, Developmental Biology, BS NORTHWESTERN UNIVERSITY 89, MD WASHINGTON UNIV IN ST. LOUIS 97, PHD WASHINGTON UNIV IN ST. LOUIS 97

PAUL THOMAS KOTZBAUER, MD, PHD Assistant Professor of Neurology, Neurology, BS NORTHWESTERN UNIVERSITY 89, MD WASHINGTON UNIV IN ST. LOUIS 97, PHD WASHINGTON UNIV IN ST. LOUIS 97

ATTILA KOVACS, MD Associate Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 81, MD SEMMELWEIS UNIVERSITY OF MED 85

MARIANNE KOVACS Visiting Professor of Psychiatry, Psychiatry

SANDOR J KOVACS, MD, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS CORNELL UNIVERSITY 69, MS CALIFORNIA INSTITUTE TECHNOLO 72, MD UNIVERSITY OF MIAMI 79, PHD CALIFORNIA INSTITUTE TECHNOLO 77

SANDOR J KOVACS, MD, PHD Professor of Medicine, Internal Medicine, BS CORNELL UNIVERSITY 69, MS CALIFORNIA INSTITUTE TECHNOLO 72, MD UNIVERSITY OF MIAMI 79, PHD CALIFORNIA INSTITUTE TECHNOLO 77

RACHEL HANNAH KOWALSKY, MD Instructor in Pediatrics, Pediatrics, BA BROWN UNIVERSITY 97, MPH TUFTS UNIVERSITY 03, MD TUFTS UNIVERSITY 03

EDWARD H. KOWERT Associate Professor Emeritus of Clinical Psychiatry, Psychiatry

ALEXANDER KOZLOV, PHD Research Instructor in Biochemistry and Molecular Biophysics., Biochem & Molec Biophysics, MS MOSCOW STATE UNIVERSITY 83, PHD MOSCOW STATE UNIVERSITY 94

THOMAS ERROL KRAEMER, OD, BS Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA MILLIKIN UNIVERSITY 68, OD INDIANA UNIVERSITY BLOOMINGTON 72, BS INDIANA UNIVERSITY BLOOMINGTON 70

JAMES M KRAFCKI Instructor in Clinical Pediatrics, Pediatrics

ALDI T KRAJA, PHD Research Assistant Professor of Genetics, Genetics, PHD SCHOOL NOT LISTED 93, PHD UNIVERSITY OF ILLINOIS 99

DAVID PAUL KRAJCIC, MD Instructor in Clinical Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 65, MD WASHINGTON UNIV IN ST. LOUIS 69

KENNETH E KRAM, DDENT Instructor in Clinical Otolaryngology (DMD), Otolaryngology, DDENT WASHINGTON UNIV IN ST. LOUIS 81

ROBERT S KRAMER, MD Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA HARVARD UNIVERSITY 79, MD WASHINGTON UNIV IN ST. LOUIS 83

JOSEPH F KRAZ, DDENT, MD Associate Professor of Anesthesiology, Anesthesiology, BS LOYOLA UNIVERSITY CHICAGO 77, DDENT LOYOLA UNIVERSITY CHICAGO 82, MD HAHNEMANN UNIVERSITY 91

CLAUDIA KRASNOFF, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA GOUCHER COLLEGE 86, MA JOHNS HOPKINS UNIVERSITY 90, MD UNIVERSITY OF MARYLAND 94

MARK S KRASNOFF, MD Instructor in Clinical Medicine, Internal Medicine, BA AMHERST COLLEGE 87, MD JOHNS HOPKINS UNIVERSITY MEDIC 91

FREDERICK THIER KRAUS, MD Adjunct Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS COLLEGE OF WILLIAM AND MARY 51, MD WASHINGTON UNIV IN ST. LOUIS 55

RICHARD A KRAUS, MD Assistant Professor of Radiology, Radiology, MD UNIVERSITY OF TORONTO 73

LILY TADAYYON KREGENOW Instructor in Clinical Pediatrics, Pediatrics

DANIEL KREISEL, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD MOUNT SINAI SCHOOL OF MEDICINE 95

DANIEL KREISEL, MD Assistant Professor of Surgery (Cardiothoracic Surgery), Surgery, MD MOUNT SINAI SCHOOL OF MEDICINE 95


FRIEDERIKE H. KREISEL, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD GOETHE UNIVERSITY 95
KATHERINE L KREUSSER, MD Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF PENNSYLVANIA 73, MD INDIANA UNIVERSITY BLOOMINGTON 78


HANNAH RACHEL KRIGMAN, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA AMHERST COLLEGE 83, MD UNIVERSITY OF NORTH CAROLINA 88

SEAN D. KRISTJANSSON, PHD Research Instructor in Psychiatry, Psychiatry, BS UNIVERSITY OF UTAH 94, MS UNIVERSITY OF UTAH 03, PHD UNIVERSITY OF UTAH 05

KRISTEN LOUISE KROLL, PHD Associate Professor of Developmental Biology, Developmental Biology, BA NORTHWESTERN UNIVERSITY 88, PHD UNIVERSITY OF CA BERKELEY 94

RONALD J KRONE, MD John E Simon Scholar in Medicine, Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 62, MD UNIVERSITY OF CHICAGO 66

NORTON S KRONEMER, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 58, MD UNIVERSITY OF MISSOURI 62

CATHERINE P KRUCYLAK, MD Assistant Professor of Anesthesiology, Anesthesiology, BA RUTGERS UNIVERSITY 82, MD SCHOOL NOT LISTED 86

ROBERT F KRUEGER, PSYD Professor of Psychiatry, Psychiatry, BS UNIV OF WISCONSIN MADISON 91, PSYD UNIV OF WISCONSIN MADISON 96

ELAINE SUSAN KRUL, PHD Adjunct Associate Professor of Medicine, Internal Medicine, BS MCGILL UNIVERSITY 77, PHD MCGILL UNIVERSITY 82

ALEXANDER S. KRUPNICK, MD Assistant Professor of Surgery (Cardiothoracic Surgery), Surgery, BS UNIVERSITY OF MICHIGAN 92, MD UNIVERSITY OF MICHIGAN 96

JENNIFER L KRUPP, MD Assistant Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF MICHIGAN 82, MS UNIVERSITY OF TEXAS SOUTHWEST 85, MD SAINT LOUIS UNIVERSITY 92

THOMAS KUCIEJCZYK-KERNAN, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 82, MD SAINT LOUIS UNIVERSITY 86

RALPH F KUHLMAN, MD Assistant Professor of Clinical Medicine, Internal Medicine, MD UNIVERSITY OF ILLINOIS 64

ROBERT E KUHLMAN, MD Assistant Professor Emeritus of Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 53, MD WASHINGTON UNIV IN ST. LOUIS 56


ANTHONY KULCZYCKI, JR, MD Associate Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 66, MD HARVARD UNIVERSITY 70

ANTHONY KULCZYCKI, JR, MD Associate Professor of Molecular Microbiology, Molecular Microbiology, BA PRINCETON UNIVERSITY 66, MD HARVARD UNIVERSITY 70

SHASHIKANT KULKARNI, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS GOVERNMENT MEDICAL COLLEGE 88, MS SMS MEDICAL COLLEGE 92, PHD INSTITUTE OF MEDICAL SCIENCE 98

SHASHIKANT KULKARNI, PHD Assistant Professor of Pediatrics, Pediatrics, BS GOVERNMENT MEDICAL COLLEGE 88, MS SMS MEDICAL COLLEGE 92, PHD INSTITUTE OF MEDICAL SCIENCE 98

Shashikant Kulkarni Siteman Cancer Center

ASHOK KUMAR, MD Assistant Professor of Clinical Neurology, Neurology, MD DOW MEDICAL COLLEGE KARACHI 85

ROBIN A. KUNDRA, MD, PHD, BS Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF GEORGIA 92, MD WASHINGTON UNIV IN ST. LOUIS 00, PHD WASHINGTON UNIV IN ST. LOUIS 00, BS UNIVERSITY OF GEORGIA 92

GHADA M KUNTER, MD Instructor in Pediatrics, Pediatrics, MD U MEDICAL-DENTAL OF NEW JERSEY 88

CELESTE M KUO, MD Instructor in Pediatrics, Pediatrics, BA POMONA COLLEGE 00, MD WASHINGTON UNIV IN ST. LOUIS 04
David I Kuperman  Siteman Cancer Center, Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 2001-2002: Intern, medicine, Johns Hopkins University, Baltimore, 2002-2004: Resident, medicine, Johns Hopkins University, 2004-2007: Fellow, hematology and oncology, Washington University, St. Louis, 2001: MD, University of Arkansas for Medical Sciences, Little Rock, Primary Specialty: Head and neck cancer, Board Certified., 2004: American Board of Internal Medicine, Internal Medicine

DAVID I. KUPERMAN, MD  Instructor in Medicine, Internal Medicine, BA HENDRIX COLLEGE 97, MD UNIVERSITY OF ARKANSAS 01

HOWARD I. KURZ, MD, BS  Associate Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 79, MEE PRINCETON UNIVERSITY 80, MD NEW YORK MEDICAL COLLEGE 84, BS MASS INST OF TECHNOLOGY (MIT) 79

LINDA C KURZ, PHD  Research Associate Professor Emeritus of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA WASHINGTON UNIV IN ST. LOUIS 68, MA WASHINGTON UNIV IN ST. LOUIS 70, PHD WASHINGTON UNIV IN ST. LOUIS 73

ABBY KUSHNIR, MD  Instructor in Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 02, MD OHIO STATE UNIVERSITY 06

STEVEN M KYMES, PHD  Research Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, PhD SAINT LOUIS UNIVERSITY 01

MICHAEL KYRIAKOS, MD  Professor of Pathology and Immunology, Pathology & Immunology, BS CITY COLLEGE 58, MD ALBERT EINSTEIN COLLEGE OF MED 62

SUZANNE NICOLE L'ECUYER  Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry

GENE M. LABARGE  Instructor in Clinical Pediatrics, Pediatrics

ADAM J. LABORE, MD  Assistant Professor of Neurology, Neurology, BS LOUISIANA COLLEGE 94, MD LOYOLA UNIVERSITY CHICAGO 98

ADAM J. LABORE, MD  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS LOUISIANA COLLEGE 94, MD LOYOLA UNIVERSITY CHICAGO 98


JENNIFER S LADAGE, MD  Instructor in Clinical Pediatrics, Pediatrics, BS VALPARAISO UNIVERSITY 87, MD SAINT LOUIS UNIVERSITY 91

CHRISTINE MARIE LADD, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA SAINT LOUIS UNIVERSITY 86, MD UNIVERSITY OF MISSOURI 90

JACK H LADENSON, PHD  Oree M Carroll and Lillian B Ladenson Professor of Clinical Chemistry in Pathology and Immunology, Pathology & Immunology, BS PENNSYLVANIA STATE UNIVERSITY 64, PHD UNIVERSITY OF MARYLAND 71

JACK H LADENSON, PHD  Professor of Clinical Chemistry in Medicine, Internal Medicine, BS PENNSYLVANIA STATE UNIVERSITY 64, PHD UNIVERSITY OF MARYLAND 71

STACIE SHARON LAFF, MD, BA  Instructor in Clinical Pediatrics, Pediatrics, B MUS LAWRENCE UNIVERSITY 89, MD SCHOOL NOT LISTED 93, BA LAWRENCE UNIVERSITY 89

RICHARD LAFOREST, PHD  Associate Professor of Radiology, Radiology, BA UNIVERSITY OF LAVAL 89, MS UNIVERSITY OF LAVAL 94, PHD UNIVERSITY OF LAVAL 94


HING HUNG H LAI, MD  Assistant Professor of Surgery (Urologic Surgery), Surgery, BS RICE UNIVERSITY 94, MD CORNELL UNIVERSITY 99

LI-LING LAI  Instructor in Clinical Pediatrics, Pediatrics

ANAND LAKSHMINARASIMHACHAR, MBBS  Assistant Professor of Anesthesiology, Anesthesiology, MBBS BANGALORE UNIVERSITY 94

ROOP LAL  Instructor in Clinical Medicine, Internal Medicine, MS OSMANIA MEDICAL COLLEGE 71

TONY C LAM, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 83

WANDA M LAMM, MD  Associate Professor of Clinical Psychiatry, Psychiatry, BS UNIVERSITY OF MISSOURI 46, MD WASHINGTON UNIV IN ST. LOUIS 48
ROBERT LOUIS LAMBERG, MD  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MO ST LOUIS 72, MD WASHINGTON UNIV IN ST. LOUIS 76

JACK A LAND, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BS MISSISSIPPI COLLEGE 73, MD UNIVERSITY OF MISSISSIPPI 77

WILLIAM M LANDAU, MD  Professor of Neurology, Neurology, MD WASHINGTON UNIV IN ST. LOUIS 47

ROBERT CRAIG LANDER, MD  Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF MICHIGAN 68, MD UNIVERSITY OF ILLINOIS 72

DANIEL K LANE, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA PRINCETON UNIVERSITY 55, MD WASHINGTON UNIV IN ST. LOUIS 59

BARBARA A LANFER  Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science

CATHERINE ECKEL LANG, PHD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF VERMONT 93, MS UNIVERSITY OF VERMONT 97, PHD WASHINGTON UNIV IN ST. LOUIS 01

CATHERINE ECKEL LANG, PHD  Assistant Professor of Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF VERMONT 93, MS UNIVERSITY OF VERMONT 97, PHD WASHINGTON UNIV IN ST. LOUIS 01

CATHERINE ECKEL LANG, PHD  Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF VERMONT 93, MS UNIVERSITY OF VERMONT 97, PHD WASHINGTON UNIV IN ST. LOUIS 01

SUSAN M LANGHORST, PHD  Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF MO ROLLA 76, ME UNIVERSITY OF MISSOURI 79, PHD UNIVERSITY OF MISSOURI 82

PAUL J LANGLOIS, MD  Instructor in Surgery (Urologic Surgery), Surgery, BS XAVIER UNIVERSITY 59, MD SAINT LOUIS UNIVERSITY 63

W. EDWARD LANSCHE, MD  Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52

Gregory M Lanza  Siteman Cancer Center, Professor of Medicine, Division of Cardiovascular Diseases, Washington University School of Medicine, 1992-1994: Intern and resident, internal medicine, Washington University, St. Louis, 1994-1999: Clinical and research fellow, Washington University, 1981: PhD, poultry genetics, University of Georgia, Athens, 1992: MD, Northwestern University, Chicago

GREGORY MARK LANZA, MD, PHD  Professor of Medicine, Internal Medicine, BA COLBY COLLEGE 75, MS UNIVERSITY OF GEORGIA 78, MD NORTHEASTERN UNIVERSITY 92, PHD UNIVERSITY OF GEORGIA 81

SUSAN ELIZABETH LANZENDORF, PHD, AS, AA  Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS VIRGINIA COMM UNIVERSITY 81, PHD OSMANIA MEDICAL COLLEGE 87, AA CHOWAN COLLEGE 78, AS CHOWAN COLLEGE 79

SUZANNE ELIZABE LAPI, PHD  Assistant Professor of Radiology (Pending Executive Faculty Approval), Radiology, BS SIMON FRASER UNIVERSITY 01, MS SIMON FRASER UNIVERSITY 03, PHD SIMON FRASER UNIVERSITY 07

Suzanne Lapi  Siteman Cancer Center

PAUL ARTHUR LAPOINT, OD, AA  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SCHOOL NOT LISTED 63, OD SCHOOL NOT LISTED 63, AA HARRIS STOWE ST COLLEGE 59

DEMETRIOS G LAPPAS, MD, PHD  Professor Emeritus of Anesthesiology, Anesthesiology, BS ABET SCHOOL 54, MD ARISTOTLE UNIVERSITY 61, PHD ARISTOTLE UNIVERSITY 86

DOUGLAS P. LARSEN, MD  Instructor in Neurology, Neurology, BA BRIGHAM YOUNG UNIVERSITY 99, MD UNIVERSITY OF UTAH 03

LINDA J LARSON-PRIOR, PHD  Research Associate Professor of Radiology, Radiology, BA OHIO STATE UNIVERSITY 72, MA CASE WESTERN RESERVE UNIV 78, PHD KENT ST UNIVERSITY 86

JOHN M LASALA, MD, PHD  Professor of Medicine, Internal Medicine, BA DREW UNIVERSITY 75, MD UNIVERSITY OF CONNECTICUT 83, PHD SAINT LOUIS UNIVERSITY 79

ANDREI LASZLO, PHD  Associate Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF CHICAGO 70, MS UNIVERSITY OF CALIFORNIA 72, PHD UNIVERSITY OF CALIFORNIA 79

CHAKRAPOL LATTANAND, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD HAHNEMANN UNIVERSITY 00

STEVEN A LAUTER, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BS WAYNE STATE UNIVERSITY 67, MD WAYNE STATE UNIVERSITY 71

STEVEN J LAWRENCE, MD  Assistant Professor of Medicine, Internal Medicine, BS ROSE HULMAN INSTITUTE 92, MD
AMY LYNN LAWSON, MD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF NEBRASKA 99, MD WASHINGTON UNIV IN ST. LOUIS 03

JENNIFER S LAWTON, MD  Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, BS ALLEGHENY COLLEGE 88, MD HAHNEMANN UNIVERSITY 92

LELAND M LAYCOB, MD  Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 64, MD UNIVERSITY OF MISSOURI 68

PATRICIA LAZAROFF  Adjunct Instructor in Obstetrics and Gynecology, Obstetrics & Gynecology, BN SCHOOL NOT LISTED 72, MSN SAINT LOUIS UNIVERSITY 74

RICHARD LEE LAZAROFF, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA BROWN UNIVERSITY 74, MD SAINT LOUIS UNIVERSITY 78

DANIEL JOSEPH LEARY, JR, MD  Assistant Professor of Clinical Radiology, Radiology, BS SAINT LOUIS UNIVERSITY 62, MD WASHINGTON UNIV IN ST. LOUIS 66

JAKE THOMAS LEBEAU, MD  Instructor in Medicine, Internal Medicine, BS TEXAS A&M UNIVERSITY 01, MD BAYLOR COLLEGE OF MEDICINE 06

CAROLINE KIM LEE, MD  Assistant Professor of Pediatrics, Pediatrics, BA WELLESLEY COLLEGE 95, MD UNIVERSITY OF VIRGINIA 99

CHRIS CHENG-FU LEE, MD, PHD  Assistant Professor of Anesthesiology, Anesthesiology, MD HUBEI MEDICAL UNIVERSITY 85, PHD BEIJING MEDICAL UNIVERSITY 91

EILEEN MAY LEE, MD  Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF IOWA 02, MD UNIVERSITY OF IOWA 06

GARY G LEE, DOST  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS SCHOOL NOT LISTED 70, DOST SCHOOL NOT LISTED 76

HYERAN LEE, PHD  Instructor in Radiology, Radiology, BS CHONNAN NATIONAL UNIVERSITY 99, PHD GEORGIA ST UNIVERSITY 99

JIN-MOO LEE, MD, PHD  Associate Professor of Neurology, Neurology, BA YALE UNIVERSITY 89, MD CORNELL UNIVERSITY 93, PHD CORNELL UNIVERSITY 92

KIM LYNETTE LEE, MD  Instructor in Clinical Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 79, MD SAINT LOUIS UNIVERSITY 83

KIRSTIN LEE ABE LEE, MD  Instructor in Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 02, MD WASHINGTON UNIV IN ST. LOUIS 06

Michelle Lee  Siteman Cancer Center, Clinical Instructor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine, 2001-2002: Research fellow, Washington University, St. Louis, 2002-2003: Intern, medicine, MetroHealth Medical Center, Cleveland, 2003-2007: Resident, radiology, Washington University, 2007-2008: Fellow, breast imaging, Washington University, 2001: MD, Northwestern University, Chicago, Primary Specialty: Diagnostic radiology and breast imaging, Board Certified; 2006: American Board of Radiology, Diagnostic Radiology

STEVEN F LEE, MD  Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MARYLAND 83, MD UNIVERSITY OF MARYLAND 87

WANG SIK LEE, PHD  Research Instructor in Medicine, Internal Medicine, BA KOREA UNIVERSITY MEDICAL COLL 78, MA KOREA UNIVERSITY MEDICAL COLL 82, PHD KOREA UNIVERSITY MEDICAL COLL 90

STEPHEN S LEFRAK, MD  Assistant Dean for the Humanities Program in Medicine, Assoc Dean Curriculum, BA COLGATE UNIVERSITY 60, MD STATE UNIVERSITY OF NEW YORK 65

ROBERT B LEHMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BA TEXAS TECH UNIVERSITY 77, MD TEXAS TECH UNIVERSITY 82

JOHN J. LEHMAN, JR, MD  Assistant Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 91, MD WASHINGTON UNIV IN ST. LOUIS 95

BARBARA L. LEIGHTON, MD  Professor of Anesthesiology, Anesthesiology, BA PRINCETON UNIVERSITY 77, MD JOHNS HOPKINS UNIVERSITY MEDIC 81
FANEE J LEKKAS, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 85, MS UNIVERSITY OF ILLINOIS 87, MD SAINT LOUIS UNIVERSITY 91

WALTER LEMANN, III, MD  Associate Professor of Clinical Neurology, Neurology, BS YALE UNIVERSITY 75, MD TULANE UNIVERSITY 79

LAWRENCE G LENKE, MD  Jerome J. Gilden M.D. Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF NOTRE DAME 82, MD NORTHWESTERN UNIVERSITY 86

LAWRENCE G LENKE, MD  Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF NOTRE DAME 82, MD NORTHWESTERN UNIVERSITY 86

DEBORAH J. LENSCHOW, MD, PHD  Assistant Professor of Medicine, Internal Medicine, BA WITTENBERG UNIVERSITY 90, MD UNIVERSITY OF CHICAGO 98, PHD UNIVERSITY OF CHICAGO 95, MD UNIVERSITY OF CHICAGO 98, PHD UNIVERSITY OF CHICAGO 95

DEBORAH J. LENSCHOW, MD, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA WITTENBERG UNIVERSITY 90, MD UNIVERSITY OF CHICAGO 98, PHD UNIVERSITY OF CHICAGO 95, MD UNIVERSITY OF CHICAGO 98, PHD UNIVERSITY OF CHICAGO 95

Deborah J. Lenschow  Siteman Cancer Center, Assistant Professor of Medicine, Division of Rheumatology, Washington University School of Medicine, 1998-2000: Intern and resident, internal medicine, Washington University, St. Louis, 2000-2002: Fellow, rheumatology, Washington University, 2002-2004: Research fellow, rheumatology, Washington University, 1995: PhD, immunology, University of Chicago, 1998: MD, University of Chicago

ERIC J LENZE, MD  Associate Professor of Psychiatry, Psychiatry, MD WASHINGTON UNIV IN ST. LOUIS 84

JEFFREY R. LEONARD, MD, BS  Associate Professor of Neurological Surgery, Neurological Surgery, BA UNIVERSITY OF WASHINGTON 90, MD UNIVERSITY OF WASHINGTON 95, BS UNIVERSITY OF WASHINGTON 90

JEFFREY R. LEONARD, MD, BS  Associate Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF WASHINGTON 90, MD UNIVERSITY OF WASHINGTON 95, BS UNIVERSITY OF WASHINGTON 90


JULIE C. LEONARD, MD, BS  Assistant Professor of Pediatrics, Pediatrics, BBA UNIVERSITY OF WASHINGTON 92, MPH SAINT LOUIS UNIVERSITY 04, MD WASHINGTON UNIV IN ST. LOUIS 97, BS UNIVERSITY OF WASHINGTON 92

F. TIMOTHY LEONBERGER, PHD  Instructor in Clinical Medical Psychology in Psychiatry (On Staff at Malcolm Bliss Mental Health Center), Psychiatry, BA UNIVERSITY OF ILLINOIS 77, MS LOUISIANA ST UNIVERSITY 83, PHD UNIV OF SOUTHERN MISSISSIPPI 86

CHRISTINA LESSOV-SCHLAGGAR, PHD  Research Instructor in Psychiatry, Psychiatry, PHD OREGON HEALTH SCIENCE UNIVERS 00

Christina N. Lessov-Schlaggar  Siteman Cancer Center, Research Instructor of Psychiatry, Washington University School of Medicine, 2000-2002: Postdoctoral fellow, behavioral genetics, Washington University, St. Louis, 2000: PhD, behavioral neuroscience, Oregan Health and Science University, Portland

ALISON M LESTON, MD, PhD  Assistant Professor of Clinical Neurology, Neurology, BS UNIVERSITY OF ILLINOIS 90, MD WASHINGTON UNIV IN ST. LOUIS 01, PHD UNIVERSITY OF CHICAGO 00

ERIC CLAUDE LEUTHARDT, MD  Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS SAINT LOUIS UNIVERSITY 95, MD UNIVERSITY OF PENNSYLVANIA 99

ERIC CLAUDE LEUTHARDT, MD  Assistant Professor of Neurological Surgery, Neurological Surgery, BS SAINT LOUIS UNIVERSITY 95, MD UNIVERSITY OF PENNSYLVANIA 99


MARC STEPHEN LEVIN, MD  Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 77, MD COLUMBIA UNIVERSITY 81

MARVIN E LEVIN, MD  Professor of Clinical Medicine, Adjunct Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 47, MD WASHINGTON UNIV IN ST. LOUIS 51

LAURENCE A LEVINE, DDENT, MD  Associate Professor of Clinical Otolaryngology, Otolaryngology, BA HOFSTRA
STEVE MING-CHE LIAO, MD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF CA LOS ANGELES 99, MD SAINT LOUIS UNIVERSITY 03

HELEN LIAPIS, MD  Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY LAVERNE ATHENS 74

HELEN LIAPIS, MD  Professor of Pathology and Immunology, Pathology & Immunology, MD UNIVERSITY LAVERNE ATHENS 74

JAMES WALTER LIEBER, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS WAYNE STATE UNIVERSITY 76, OD ILLINOIS COLLEGE OF OPTOMETRY 81

DAVID M LIEBERMAN, MD  Associate Professor Emeritus of Clinical Medicine, Internal Medicine, MD VANDERBILT UNIVERSITY 49

HARVEY LIEBHABER, MD  Associate Professor of Clinical Medicine, Internal Medicine, BA NEW YORK UNIVERSITY 53, MD NEW YORK UNIVERSITY 57

JUDITH E LIEU, MD  Assistant Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF CA DAVIS 88, MD WASHINGTON UNIV IN ST. LOUIS 92

BARRY LIGHT, MD, PHD  Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 73, MD UNIVERSITY OF MISSOURI 80, PHD UNIVERSITY OF MISSOURI 77

ANNA LIJOWSKA, MD  Assistant Professor of Pediatrics, Pediatrics, MD JAGIELLONIAN UNIVERSITY 88

MICHAEL LILLMARS, DDS  Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA DRURY COLLEGE 79, DDENT NORTHWESTERN UNIVERSITY 84

DAVID D LIMBRICK, JR, MD, PHD  Assistant Professor of Neurological Surgery, Neurological Surgery, BS COLLEGE OF WILLIAM AND MARY 95, MD VIRGINIA COMM UNIVERSITY 01, PHD VIRGINIA COMM UNIVERSITY 01

ADA TINA LIN, MD  Instructor in Pediatrics, Pediatrics, BA HARVARD UNIVERSITY 94, MD UNIVERSITY OF CINCINNATI 98

ANNE Y. LIN, MD  Assistant Professor of Surgery (General Surgery), Surgery, BS BROWN UNIVERSITY 95, MD TUFTS UNIVERSITY 00

MICHAEL FU-YEN LIN, MD  Instructor in Radiology, Radiology, BS NORTHWESTERN UNIVERSITY 95, MS NORTHWESTERN UNIVERSITY 96, MD RUSH UNIVERSITY 01

MICHAEL YUN LIN, MD  Assistant Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 90, MD UNIVERSITY OF IOWA 94

NAN LIN, PhD, MA  Assistant Professor of Biostatistics, Biostatistics, BA UNIVERSITY OF SCIENCE & TECH 99, MA UNIVERSITY OF ILLINOIS 00, PHD UNIVERSITY OF ILLINOIS 03, MA UNIVERSITY OF ILLINOIS 03

TAMMY LIN, MD  Adjunct Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 94, MD UNIVERSITY OF MICHIGAN 97

TIEN-SUNG TOM LIN, PhD  Professor of Neurology, Neurology, BS SCHOOL NOT LISTED 60, MS SYRACUSE UNIVERSITY 66, PHD UNIVERSITY OF PENNSYLVANIA 69

ANNE C LIND, MD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA GUSTAVUS ADOLPHUS COLLEGE 74, MD CREIGHTON UNIVERSITY 89

ANNE C LIND, MD  Instructor in Medicine (Dermatology), Internal Medicine, BA GUSTAVUS ADOLPHUS COLLEGE 74, MD CREIGHTON UNIVERSITY 89

BRIAN RICHARD LINDMAN, MD  Instructor in Medicine, Internal Medicine, BS DUKE UNIVERSITY 97, MA REFORMED THEOLOGICAL SEMINARY 01, MD VANDERBILT UNIVERSITY 03

DAVID C LINEHAN, MD  Associate Professor of Surgery (General Surgery), Surgery, BA DARTMOUTH COLLEGE 86, MD UNIVERSITY OF MASSACHUSETTS 90

GERALD P LINETTE, MD, PHD  Assistant Professor of Medicine, Internal Medicine, BS SAINT JOSEPHS UNIVERSITY 80, MD GEORGETOWN UNIVERSITY 90, PHD GEORGETOWN UNIVERSITY 90

CHRISTOPHER J LINGLE, PHD  Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF OREGON 72, PHD UNIVERSITY OF OREGON 79

CHRISTOPHER J LINGLE, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF OREGON 72, PHD UNIVERSITY OF OREGON 79

DANIEL C LINK, MD  Professor of Medicine, Internal Medicine, BS UNIV OF WISCONSIN MILWAUKEE 81, MD UNIV OF WISCONSIN MILWAUKEE 85

DANIEL C LINK, MD  Professor of Pathology and Immunology, Pathology & Immunology, BS UNIV OF WISCONSIN MILWAUKEE 85
ROBERT D LINS, MD  Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 65, MD UNIVERSITY OF MISSOURI 69

MICHAEL BRAYER LIPPMANN, MD  Associate Professor of Medicine, Internal Medicine, BA STATE UNIVERSITY OF NEW YORK 73, MD STATE UNIVERSITY OF NEW YORK 77

ERVIN LIPSCITZ, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BS WASHINGTON UNIV IN ST. LOUIS 49, MD WASHINGTON UNIV IN ST. LOUIS 49

MAURICIO LISKER-MELMAN, MD  Professor of Medicine, Internal Medicine, MD SCHOOL NOT LISTED 80

Mauricio Lisker-Melman  Siteman Cancer Center, Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine, 1980-1983: Intern and resident, internal medicine, Instituto Nacional de la Nutricion Salvador Zubiran, Mexico City, 1983-1985: Fellow, gastroenterology and endoscopy, Instituto Nacional de la Nutricion Salvador Zubiran, 1986-1989: Medical Staff Fellow, L, 1980: MD, Universidad Nacional Autonoma de Mexico, Mexico City, Primary Specialty: Gastroenterology, Board Certified:, 1978: Educational Commission for Foreign Medical Graduates (ECFMG)

1983: Mexican Board of Internal Medicine, recertified 1990, 1999
1985: Foreign Medical Graduates Examination in Medical Sciences (FMGEMS)
1988: Federal Licensing Examination (FLEX)

JAY L LISS, MD  Associate Professor of Clinical Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 63, MD WASHINGTON UNIV IN ST. LOUIS 66

MARY KATHRYN LISZEWSKI  Research Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF MO ST LOUIS 71

HOWARD S LITE, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 77, MA UNIVERSITY OF MISSOURI 79, MD UNIVERSITY OF MISSOURI 83

BLAKE ALLEN LITTLE, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MO KANSAS CITY 84, MD UNIVERSITY OF MO KANSAS CITY 86

JOHN RUSSELL LITTLE, JR, MD  Professor Emeritus of Medicine, Internal Medicine, BA CORNELL UNIVERSITY 52, MD UNIVERSITY OF ROCHESTER 56

JOHN RUSSELL LITTLE, JR, MD  Professor Emeritus of Molecular Microbiology, Molecular Microbiology, BA CORNELL UNIVERSITY 52, MD UNIVERSITY OF ROCHESTER 56

JINGLAN LIU, PHD  Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology & Immunology, BS BEIJING MEDICAL UNIVERSITY 09, MS BEIJING MEDICAL UNIVERSITY 94, PHD TEMPLE UNIVERSITY 04

PENGYUAN LIU, PHD  Research Assistant Professor of Surgery (General Surgery), Surgery, BS ZHEJIANG MEDICAL UNIVERSITY 96, PHD ZHEJIANG MEDICAL UNIVERSITY 02

QIANJIN LIU, MD, PHD  Assistant Professor of Anesthesiology, Anesthesiology, MD NANJING MEDICAL UNIVERSITY 83, PHD SAINT LOUIS UNIVERSITY 97

ALBERT C LOCKHART, MD  Associate Professor of Medicine, Internal Medicine, BA RICE UNIVERSITY 89, MHS DUKE UNIVERSITY 01, MD UNIVERSITY OF TEXAS DALLAS 93

A. Craig Lockhart  Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1993-1996: Intern and resident, internal medicine, Washington University, St. Louis, 1997-2001: Fellow, hematology/oncology, Duke University, Durham, N.C., 1993: MD, University of Texas Southwestern Medical School, Dallas, 2001: MHS, Duke University, Durham, N.C., Primary Specialty: Gastrointestinal cancer (anus, bile duct, colon, esophagus, gallbladder, liver, pancreas, rectum, small intestine), phase I clinical trials, Board Certified:, 1996, 2006: American Board of Internal Medicine, Internal Medicine

2000: American Board of Internal Medicine, Medical Oncology

ELLEN M LOCKHART, MD  Associate Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF TEXAS SOUTHWEST 93

JENNIFER K LODGE, PHD  Associate Dean for Research, Assoc. Dean for Research, BS OBERLIN COLLEGE 79, PHD WASHINGTON UNIV IN ST. LOUIS 88

JENNIFER K LODGE, PHD  Professor of Molecular Microbiology, Molecular Microbiology, BS OBERLIN COLLEGE 79, PHD WASHINGTON UNIV IN ST. LOUIS 88

ARTHUR D LOEWY, PHD  Professor of Anatomy and Neurobiology, Anatomy & Neurobiology, BA LAWRENCE UNIVERSITY 64, PHD UNIV OF WISCONSIN MADISON 69
BEVERLY A LOGAN-MORRISON, MD  Instructor in Clinical Medicine, Internal Medicine, BA WEBSTER UNIVERSITY 76, MD WASHINGTON UNIV IN ST. LOUIS 82

JOY LOH, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BA RICE UNIVERSITY 96, PHD WASHINGTON UNIV IN ST. LOUIS 03

TIMOTHY M LOHMAN, PHD  Marvin A Brennecke Professor of Biological Chemistry in Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA CORNELL UNIVERSITY 73, PHD UNIV OF WISCONSIN MADISON 77

Timothy M. Lohman  Siteman Cancer Center, Marvin A. Brennecke Professor of Biological Chemistry, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, 1977-1979: Postdoctoral associate, biophysical chemistry, University of California, San Diego, 1979-1981: Postdoctoral fellow, physical biochemistry, University of Oregon, Eugene, 1977: PhD, physical chemistry, University of Wisconsin, Madison

JANE LOITMAN, MD  Assistant Professor of Clinical Neurology, Neurology, BA TUFTS UNIVERSITY 82, MS GEORGETOWN UNIVERSITY 88, MD UNIVERSITY OF MINNESOTA 92

JANE LOITMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BA TUFTS UNIVERSITY 82, MS GEORGETOWN UNIVERSITY 88, MD UNIVERSITY OF MINNESOTA 92

ALAN M LONDE, MD  Instructor in Clinical Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 57, MD WASHINGTON UNIV IN ST. LOUIS 61

STANLEY L LONDON, MD  Associate Professor Emeritus of Clinical Surgery (General Surgery), Surgery, MD WASHINGTON UNIV IN ST. LOUIS 49

WARREN M LONERGAN, MD, BA  Assistant Professor Emeritus of Clinical Medicine, Internal Medicine, BA WESTMINSTER COLLEGE 36, MD VANDERBILT UNIVERSITY 40, BA WESTMINSTER COLLEGE 36

FANXIN LONG, PHD  Associate Professor of Developmental Biology, Developmental Biology, BS BEIJING UNIVERSITY 88, MA UNIVERSITY OF CA SANTA BARBARA 92, PHD TUFTS UNIVERSITY 97

FANXIN LONG, PHD  Associate Professor of Medicine, Internal Medicine, BS BEIJING UNIVERSITY 88, MA UNIVERSITY OF CA SANTA BARBARA 92, PHD TUFTS UNIVERSITY 97

RYAN ERIC LONGMAN, MD  Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, BA UNIVERSITY OF PENNSYLVANIA 94, MD THOMAS JEFFERSON UNIVERSITY 01

Greg D Longmore  Siteman Cancer Center, Professor of Medicine, Division of Hematology, Washington University School of Medicine, 1983-1985: Intern and resident, internal medicine, New England Deaconess Hospital and Harvard Medical School, Boston, 1985-1986: Visiting scientist, Massachusetts Institute of Technology, Boston, 1986-1987: Chief resident, internal medicine, New England D, 1979: MS, biochemistry, University of Toronto, 1983: MD, McGill University, Montreal, Board Certified:, 1986: American Board of Internal Medicine, Internal Medicine

1989: American Board of Medicine, Medical Oncology

GREGORY D LONGMORE, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF WESTERN ONTARIO 77, MS UNIVERSITY OF TORONTO 79, MD MCGILL UNIVERSITY 83

GREGORY D LONGMORE, MD  Professor of Medicine, Internal Medicine, BS UNIVERSITY OF WESTERN ONTARIO 77, MS UNIVERSITY OF TORONTO 79, MD MCGILL UNIVERSITY 83

MAURICE J LONSWAY, JR, MD  Professor Emeritus of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 46, MD WASHINGTON UNIV IN ST. LOUIS 50

JAMES F LOOMIS, JR, MD  Instructor in Clinical Medicine, Internal Medicine, BA HENDRIX COLLEGE 81, MBA WASHINGTON UNIV IN ST. LOUIS 97, MD UNIVERSITY OF ARKANSAS 85

GLENN LOPATE, MD  Associate Professor of Neurology, Neurology, BS COLORADO ST UNIVERSITY 83, MD OHIO STATE UNIVERSITY 87

LATISHA D LOVE-GREGORY, PHD  Research Instructor in Medicine, Internal Medicine, BS RUST COLLEGE 95, PHD UNIVERSITY OF MISSOURI 01

MICHAEL LOVETT, PHD  Professor of Genetics, Genetics, BS EDINBURGH UNIVERSITY 77, PHD UNIVERSITY OF LONDON 82

MICHAEL LOVETT, PHD  Professor of Pediatrics, Pediatrics, BS EDINBURGH UNIVERSITY 77, PHD UNIVERSITY OF LONDON 82

DANIEL ABRAHAM LOW, PHD  Professor of Radiation Oncology, Radiation Oncology, BA OCCIDENTAL COLLEGE 81, MS INDIANA UNIVERSITY BLOOMINGTON 83, PHD INDIANA UNIVERSITY BLOOMINGTON 88

James B Lowe III  Siteman Cancer Center, Assistant Professor of Surgery, Division of Plastic and Reconstructive Surgery, Washington University School of Medicine, 1993-1997: Resident, surgery, University of Texas Health Science Center, San Antonio,
1997-1999: Resident, plastic surgery, University of Texas Southwestern Medical Center, Dallas, 1999-2000: Fellow, hand microsurgery, Washington University, St. Louis. 1992: MD, University of Oklahoma, Oklahoma City, Primary Specialty: Breast reconstruction, Board Certified; 1999: American Board of Surgery

2001: American Board of Plastic Surgery

ROBERT DOUGLAS LOWE, DDENT Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 77, DDENT WASHINGTON UNIV IN ST. LOUIS 82

JEFFREY A LOWELL, MD Professor of Pediatrics, Pediatrics, BA OBERLIN COLLEGE 81, MD YALE UNIVERSITY 85

JEFFREY A LOWELL, MD Professor of Surgery (General Surgery), Surgery, BA OBERLIN COLLEGE 81, MD YALE UNIVERSITY 85

Jeffrey A. Lowell Siteman Cancer Center, Professor of Surgery and of Pediatrics, Washington University School of Medicine, 1985-1990: Intern and resident, general surgery, Harvard University, 1988-1989: Fellow, hyperalimentation/nutrition support, Harvard University, 1992-1994: Fellow, adult and pediatric transplantation, University of Nebraska, Omaha, 1985: MD, Yale University, New Haven, Conn., Primary Specialty: Liver transplantation, kidney transplantation, liver surgery, dialysis access surgery, Board Certified; American Board of Surgery, General Surgery

American Board of Surgery, Surgical Critical Care

DONGSI LU, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD BEIJING MEDICAL UNIVERSITY 91, PHD SCHOOL NOT LISTED 97, MD BEIJING MEDICAL UNIVERSITY 91, PHD OREGON HEALTH SCIENCES UNIERS 97

Dongsi Lu Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1997-1998: Postdoctoral fellow, biomedic research, Oregon Health and Science University, Portland, 1998-2002: Resident, anatomic and clinical pathology, Washington University, St. Louis, 2002-2003: Fellow, surgical pathology, Washington University, 2003, 1991: MD, Beijing Medical University, 1997: PhD, biomedic research, Oregon Health and Science University, Portland, Primary Specialty: Dermatopathology, surgical pathology, Board Certified; 2002: American Board of Pathology, Anatomic and Clinical Pathology

2004: American Board of Pathology, Dermatopathology

WEI LU, PHD Instructor in Radiation Oncology, Radiation Oncology, PHD UNIVERSITY OF MISSOURI 03

YAN LU, PHD Research Assistant Professor of Surgery (General Surgery), Surgery, BS ANHUI UNIVERSITY 96, MS ANHUI UNIVERSITY 99, PHD ZHEJIANG MEDICAL UNIVERSITY 03

ZHI HONG LU, PHD Research Assistant Professor of Surgery (Urologic Surgery), Surgery, BS FUDAN UNIVERSITY 90, PHD UNIVERSITY OF MISSISSIPPI MED 99

RONALD J LUBELCHEK, MD Instructor in Clinical Medicine, Internal Medicine, MD UNIVERSITY OF ILLINOIS 99

DOUGLAS M LUBLIN, MD, PHD Associate Professor of Medicine, Internal Medicine, BS BROWN UNIVERSITY 71, MS BROWN UNIVERSITY 71, MD CALIFORNIA 82, PHD STANFORD UNIVERSITY 76

DOUGLAS M LUBLIN, MD, PHD Professor of Pathology and Immunology, Pathology & Immunology, BS BROWN UNIVERSITY 71, MS BROWN UNIVERSITY 71, MD UNIVERSITY OF CALIFORNIA 82, PHD STANFORD UNIVERSITY 76

ANTHONY J LUBNIEWSKI, MD Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF FLORIDA 80, MD UNIVERSITY OF FLORIDA 85

HERBERT LUBOWITZ, MD Associate Professor of Clinical Medicine, Internal Medicine, BA CLARK UNIVERSITY 54, MD WASHINGTON UNIV IN ST. LOUIS 58

JOAN L LUBY, MD Professor of Psychiatry (Child Psychiatry), Psychiatry, BA BROWN UNIVERSITY 81, MD WAYNE STATE UNIVERSITY 85

PHILIP A LUDBROOK, MBBS Associate Dean for Human Studies, Human Research Protection, BS SCHOOL NOT LISTED 57, MBBS UNIVERSITY OF ADELAIDE 63

PHILIP A LUDBROOK, MBBS Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 57, MBBS UNIVERSITY OF ADELAIDE 63

PHILIP A LUDBROOK, MBBS Professor of Radiology, Radiology, BS SCHOOL NOT LISTED 57, MBBS UNIVERSITY OF ADELAIDE 63

KENNETH M LUDMERER, MD Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 68, MA JOHNS HOPKINS UNIVERSITY 71, MD JOHNS HOPKINS UNIVERSITY 73

MARK A LUDWIG, MD Instructor in Clinical Surgery (General Surgery), Surgery, BA EMORY UNIVERSITY 72, MD UNIVERSITY OF CHICAGO 76

GREGG T LUEDER, MD Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS IOWA STATE
Gregg T Lueder, MD
Professor of Pediatrics, Pediatrics, BS IOWA STATE UNIVERSITY 81, MD UNIVERSITY OF IOWA 85

PETER DAVID LUKASIEWICZ, PHD
Professor of Neurobiology, Anatomy & Neurobiology, BS BROWN UNIVERSITY 77, PHD UNIVERSITY OF MICHIGAN 84

JINGQIN LUO, PHD
Instructor in Biostatistics, Biostatistics, BS RENMIN UNIVERSITY OF CHINA 98, MS DUKE UNIVERSITY 03, PHD DUKE UNIVERSITY 06

CARL A LYSS, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 52, MD WASHINGTON UNIV IN ST. LOUIS 56, BS WASHINGTON UNIV IN ST. LOUIS 52

CYNTHIA XIUGUAN MA, MD, PHD
Assistant Professor of Medicine, Internal Medicine, MD BEIJING MEDICAL UNIVERSITY 89, PHD UNIVERSITY OF CINCINNATI 97

LIANG MA, PHD
Assistant Professor of Developmental Biology, Developmental Biology, BA UNIVERSITY OF CA BERKELEY 89, PHD UNIVERSITY OF CA LOS ANGELES 95

RICHARD W MAACK, MD
Instructor in Clinical Otolaryngology, Otolaryngology, BA MUHLENBERG COLLEGE 81, MD UNIVERSITY OF MARYLAND 85

ROBERT R MAC DONALD III, MD
Instructor in Clinical Otolaryngology, Otolaryngology, BA DUKE UNIVERSITY 89, MD WASHINGTON UNIV IN ST. LOUIS 93

ROBERT H MACH, PHD
Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA STATE UNIV OF NY POTSDAM 78, PHD STATE UNIV OF NY BUFFALO 85

Robert H Mach
Siteman Cancer Center, Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of
Radiology, Washington University School of Medicine, 1983-1985: Predoctoral fellow, medicinal chemistry, State University of New York, Buffalo, 1985: PhD, medicinal chemistry, State University of New York, Buffalo

COLIN MACKENZIE Instructor in Clinical Psychiatry, Psychiatry

LISA MARIE MACKEY, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF KANSAS 89, OD UNIVERSITY OF MISSOURI 93

SUSAN E MACKINNON, MD Professor of Occupational Therapy, Occupational Therapy, BA QUEENS COLLEGE 71, MD QUEEN'S UNIVERSITY 75

SUSAN E MACKINNON, MD Professor of Otolaryngology, Otolaryngology, BA QUEENS COLLEGE 71, MD QUEEN'S UNIVERSITY 75

SUSAN E MACKINNON, MD Sydney M., Jr. and Robert H. Shoenberg Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BA QUEENS COLLEGE 71, MD QUEEN'S UNIVERSITY 75

GEORGE ANDREW MACONES, MD Mitchell and Elaine Yanow Professor of Obstetrics and Gynecology, Head of the Department of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF PENNSYLVANIA 84, MS UNIVERSITY OF PENNSYLVANIA 06, MD JEFFERSON MEDICAL COLLEGE 88


VINAY D. MADAN, MD Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF AL BIRMINGHAM 06

JOHN C. MADDEN, MD Instructor in Clinical Pediatrics, Pediatrics, BS YALE UNIVERSITY 94, MD WASHINGTON UNIV IN ST. LOUIS 02

PAMELA A MADDEN, PHD Associate Professor of Psychiatry, Psychiatry, BS UNIVERSITY OF PITTSBURGH 78, MS UNIVERSITY OF PITTSBURGH 83, PHD UNIVERSITY OF PITTSBURGH 92

Pamela AF Madden Siteman Cancer Center, Assistant Professor of Psychiatry, Washington University School of Medicine, 1992-1994: Postdoctoral fellow, psychiatry, Washington University, St. Louis, 1983: MS, child development and care, University of Pittsburgh, 1992: PhD, psychology in education, University of Pittsburgh

TESSA E MADDEN, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS SMITH COLLEGE 95, M PH JOHNS HOPKINS UNIVERSITY MEDIC 06, MD WASHINGTON UNIV IN ST. LOUIS 01

WILLIAM EDWIN MAGEE, MD Associate Professor of Clinical Medicine, Internal Medicine, MD DUKE UNIVERSITY 50

LEONARD B MAGGI, JR, PHD, BA Research Instructor in Medicine, Internal Medicine, BA CORNELL COLLEGE 95, PHD SAINT LOUIS UNIVERSITY 01, BA CORNELL COLLEGE 95

VINCENT J MAGRINI, PHD Research Assistant Professor of Genetics, Genetics, BS UNIVERSITY OF IDAHO 93, PHD UNIVERSITY OF IDAHO 98, PHD UNIVERSITY OF IDAHO 98

MUHAMMAD SALEEM MAHMOOD, MD Instructor in Clinical Radiation Oncology, Radiation Oncology, BS SCHOOL NOT LISTED 87, MD WASHINGTON UNIV IN ST. LOUIS 91

ROBERT JOHN MAHONEY, MD Assistant Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 93, MD WASHINGTON UNIV IN ST. LOUIS 97

ELAINE MICHELLE MAJERUS, MD, PHD, BS Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA WASHINGTON UNIV IN ST. LOUIS 86, MD SAINT LOUIS UNIVERSITY 98, PHD WASHINGTON UNIV IN ST. LOUIS 94, BS WASHINGTON UNIV IN ST. LOUIS 86

ELAINE MICHELLE MAJERUS, MD, PHD, BS Assistant Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 86, MD SAINT LOUIS UNIVERSITY 98, PHD WASHINGTON UNIV IN ST. LOUIS 94, BS WASHINGTON UNIV IN ST. LOUIS 86

PHILIP W MAJERUS, MD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF NOTRE DAME 57, MD WASHINGTON UNIV IN ST. LOUIS 61

PHILIP W MAJERUS, MD Professor of Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 57, MD WASHINGTON UNIV IN ST. LOUIS 61

Philip W Majerus Siteman Cancer Center, Professor of Medicine and Co-Chief, Division of Hematology, Washington University School of Medicine, 1961-1963: Intern and resident, medicine, Massachusetts General Hospital, Boston, 1963-1966: Research
associate, biochemistry, National Heart Institute, Bethesda, Md., 1961: MD, Washington University, St. Louis, Primary Specialty: Hematology

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**SURAJIT MAJUMDAR, MD**
Instructor in Clinical Medicine, Internal Medicine, MD UNIVERSITY OF CALCUTTA 89

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**SURAJIT MAJUMDAR, MD**
Instructor in Clinical Medicine, Internal Medicine, MD UNIVERSITY OF CALCUTTA 89

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95

**JOHN E MAJORS, PHD**
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF WASHINGTON 70, PHD HARVARD UNIVERSITY 77

**MAJESH MAKAN, MD**
Associate Professor of Medicine, Internal Medicine, MD UNIV OF PANAMA SCHOOL OF MED 84

**KAMLESH R MAKWANA, DDENT**
Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIV OF WISCONSIN MADISON 92, DDENT MARQUETTE UNIVERSITY 96

**RANJAN P MALHOTRA, MD**
Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MISSOURI 95, MD UNIVERSITY OF MISSOURI 95
SOE S MAR, MD Assistant Professor of Neurology, Neurology, MD INSTITUTE OF MEDICINE 87

DANIEL SCOTT MARCUS, PHD, BS Research Assistant Professor of Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 01, BS WASHINGTON UNIV IN ST. LOUIS 95

MORRIS D MARCUS, MD Professor Emeritus of Clinical Medicine (Dermatology), Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 34

Elaine Mardis Siteman Cancer Center

ELAINE RENE MARDIS, PHD Associate Professor of Genetics, Genetics, BS UNIVERSITY OF OKLAHOMA 84, PHD UNIVERSITY OF OKLAHOMA 89

ELAINE RENE MARDIS, PHD Associate Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF OKLAHOMA 84, PHD UNIVERSITY OF OKLAHOMA 89

CHRISTOPHER R MARET, MD Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 75, MD WASHINGTON UNIV IN ST. LOUIS 79


JULIE ANN MARGENTHALER, MD Assistant Professor of Surgery (General Surgery), Surgery, BA BOSTON UNIVERSITY 93, MD SOUTHERN ILLINOIS UNIVERSITY 97

ROBERT P MARGOLIS, MD Assistant Professor of Clinical Neurology, Neurology, BA KENT ST UNIVERSITY 71, MD SAINT LOUIS UNIVERSITY 75

SARAH K MARGOLIS, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA BARNARD COLLEGE 84, MD STATE UNIVERSITY OF NEW YORK 89

JAY MICHAEL MARION, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MISSOURI 73, MD VANDERBILT UNIVERSITY 77

IDA KOZAK MARIZ Research Assistant Professor Emerita of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 40

JOANNE MARKHAM Research Associate Professor of Radiology, Radiology, BA CENTRE COLLEGE 63, MS WASHINGTON UNIV IN ST. LOUIS 73

MARY A. MARKIEWICZ, PHD Research Instructor in Pathology and Immunology, Pathology & Immunology, BS OHIO STATE UNIVERSITY 95, PHD UNIVERSITY OF CHICAGO 01

DAVID BRADLEY MARRS, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA RICE UNIVERSITY 67, MD SOUTHWEST TEXAS STATE UNIVERS 78

JONAS MARSHALL, MD Instructor in Medicine (Pending Dean's Approval), Internal Medicine, MD UNIVERSITY OF BASEL 96

BEVS ADKINS MARSHALL, MD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS VANDERBILT UNIVERSITY 82, MD VANDERBILT UNIVERSITY 86

BEVS ADKINS MARSHALL, MD Associate Professor of Pediatrics, Pediatrics, BS VANDERBILT UNIVERSITY 82, MD VANDERBILT UNIVERSITY 86

GARLAND R MARSHALL, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS CALIFORNIA INSTITUTE TECHNOLO 62, PHD ROCKEFELLER UNIVERSITY 66

MELISSA ANN MARSHALL Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

JAV PHILLIPS MARSHALL, II, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA DE PAUL UNIVERSITY 68, MD UNIVERSITY OF MISSOURI 72

ANN G MARTIN, MD Associate Professor of Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF NOTRE DAME 77, MD CASE WESTERN RESERVE UNIV 81

CAROLYN MARIE MARTIN, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA LINDENWOOD COLLEGE 70, MD WASHINGTON UNIV IN ST. LOUIS 76

CHOENDAL MARLAA MARTIN, MD Instructor in Anesthesiology, Anesthesiology, BS PENNSYLVANIA STATE UNIVERSITY 98, MD SAINT LOUIS UNIVERSITY 04
DANIEL RICHARD MARTIN Research Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 76, MS UNIVERSITY OF MISSOURI 85

JOHN BARLOW MARTIN, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA AMHERST COLLEGE 51, MD WASHINGTON UNIV IN ST. LOUIS 55

NATHAN RUSSELL MARTIN, MD Instructor in Medicine, Internal Medicine, BA UNIVERSITY OF PENNSYLVANIA 01, MD UNIVERSITY OF TEXAS SOUTHWEST 05

NICOLAS CLAY MARTIN Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery

PHILIP LATHAM MARTIN, MD Associate Professor of Clinical Otolaryngology, Otolaryngology, MD SAINT LOUIS UNIVERSITY 68

THOMAS F MARTIN, MD Associate Professor of Medicine, Internal Medicine, BS SAINT LOUIS UNIVERSITY 61, MD SAINT LOUIS UNIVERSITY 65

TIMOTHY J. MARTIN, MD Assistant Professor of Medicine, Internal Medicine, BS SAINT LOUIS UNIVERSITY 85, MA SAINT LOUIS UNIVERSITY 87, MD SAINT LOUIS UNIVERSITY 91

WADE H MARTIN, III, MD Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF KANSAS 73, MD UNIVERSITY OF KANSAS 77

JOHN C MARTZ, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 38, MD WASHINGTON UNIV IN ST. LOUIS 42

JERALD ARTHUR MASLANKO, MD Instructor in Clinical Medicine, Internal Medicine, MD EMORY UNIVERSITY 75

MARY VEST MASON, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 90, MBA WASHINGTON UNIV IN ST. LOUIS 99, MD WASHINGTON UNIV IN ST. LOUIS 94

PHILIP JOHN MASON, PHD Professor of Medicine, Internal Medicine, PHD EDINBURGH UNIVERSITY 80

PHILIP JOHN MASON, PHD Research Professor of Genetics, Genetics, PHD EDINBURGH UNIVERSITY 80

JOAN ALICE MASS, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 71, MD TEMPLE UNIVERSITY 77

LESLIE STEWART MASSAD, MD Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS WILLIAMS COLLEGE 80, MD DUKE UNIVERSITY 84


MATTHEW J MATAVA, MD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF MO KANSAS CITY 86, MD UNIVERSITY OF MO KANSAS CITY 87

MATTHEW J MATAVA, MD Associate Professor of Physical Therapy, Physical Therapy, BA UNIVERSITY OF MO KANSAS CITY 86, MD UNIVERSITY OF MO KANSAS CITY 87

ALICIA B MATAYOSHI Instructor in Clinical Otolaryngology (DDS), Otolaryngology

F. SCOTT MATHEWS, PHD Professor Emeritus of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF CALIFORNIA 55, PHD UNIVERSITY OF MINNESOTA 59

JOSE MATHEWS Assistant Professor of Psychiatry, Psychiatry

KATHERINE JAHNI MATHEWS, MD, MA Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA YALE UNIVERSITY 85, M PH YALE UNIVERSITY 94, MD HARVARD UNIVERSITY 94, MA SCHOOL NOT LISTED 89

KATHERINE JAHNI MATHEWS, MD, MA Associate Professor of Obstetrics and Gynecology (Appointed to the Siteman Cancer Center), Siteman Cancer Center, BA YALE UNIVERSITY 85, M PH YALE UNIVERSITY 94, MD HARVARD UNIVERSITY 94, MA SCHOOL NOT LISTED 89

PATRICE MATHEWS, MD Instructor in Clinical Pediatrics, Pediatrics, BA TRINITY UNIVERSITY 84, MD UNIVERSITY OF OKLAHOMA 88

AMIT MATHUR, MBBS, MD Associate Professor of Pediatrics, Pediatrics, BS DELHI UNIVERSITY 76, MBBS DELHI UNIVERSITY 82, MD SMS MEDICAL COLLEGE 86

ANTHONY J-P MATTALINE, DOST, BS Assistant Professor of Clinical Medicine, Internal Medicine, BA ST EDWARDS
UNIVERSITY 79, DOST SCHOOL NOT LISTED 85, BS NORTHEAST MISSOURI ST UNIVRSTY 81

BRENT D. MATTHEWS, MD Associate Professor of Surgery (General Surgery), Surgery, BA MIAMI UNIVERSITY 89, MD INDIANA UNIVERSITY PURDUE 93

CLAIRE MATTHEWS, PHD Adjunct Assistant Professor of Otolaryngology (Speech Pathology), Otolaryngology, BA UNIVERSITY OF KANSAS 69, MA UNIVERSITY OF KANSAS 78, PHD UNIVERSITY OF KANSAS 80

JOHN W MATTHEWS, D SC Research Assistant Professor of Radiation Oncology, Radiation Oncology, BS WASHINGTON UNIV IN ST. LOUIS 68, MEE WASHINGTON UNIV IN ST. LOUIS 72, D SC WASHINGTON UNIV IN ST. LOUIS 80

GREGORY WARREN MATTINGLY, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BS UNIVERSITY OF MISSOURI 85, MD WASHINGTON UNIV IN ST. LOUIS 89

HENRY E MATTIS, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 71, MD WASHINGTON UNIV IN ST. LOUIS 75

MARVIN M MAURER, JR, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 68, MD WASHINGTON UNIV IN ST. LOUIS 72

KAREN GOELTZ MAURY Instructor in Emergency Medicine in Medicine, Internal Medicine

BESS D MAXWELL, PHD, MS Visiting Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF ARIZONA 76, MS BALL STATE UNIVERSITY 79, PHD UNIVERSITY OF ARIZONA 85, MS WASHINGTON UNIV IN ST. LOUIS 97

ARIANE E MAY, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA TUFTS UNIVERSITY 83, M PH BOSTON UNIVERSITY 92, MD SCHOOL NOT LISTED 93

BEN R MAYES, JR, MD Assistant Professor of Clinical Radiology, Radiology, BA VANDERBILT UNIVERSITY 62, MD WASHINGTON UNIV IN ST. LOUIS 66

Martin L Mayse Siteman Cancer Center, Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine, 1996-1999: Intern and resident, internal medicine, Yale University, New Haven, Conn., 1999-2002: Fellow, pulmonary disease and critical care medicine, Yale University, 2002-2003: Fellow, interventional pulmonology, Tulane University, New Orleans, 1996: MD, Yale University, New Haven, Conn., Primary Specialty: Lung cancer, Board Certified: 2002: American Board of Internal Medicine, Internal Medicine

2003: American Board of Internal Medicine, Pulmonary Disease

JOHN E. MAZUSKI, MD, PHD Associate Professor of Surgery (General Surgery), Surgery, BA CALIFORNIA STATE FRESNO 73, MS UNIV OF WISCONSIN MADISON 75, MD UNIVERSITY OF CA LOS ANGELES 81, PHD UNIVERSITY OF MINNESOTA 93

GABRIEL MBALAVIELE, PHD Adjunct Research Assistant Professor of Medicine, Internal Medicine, BA SCHOOL NOT LISTED 85, MA SCHOOL NOT LISTED 87, PHD SCHOOL NOT LISTED 92

JAMES P MC CARTER, MD, PHD Research Instructor in Genetics, Genetics, BA PRINCETON UNIVERSITY 89, MD WASHINGTON UNIV IN ST. LOUIS 98, PHD WASHINGTON UNIV IN ST. LOUIS 98

AUDREY MCALINDEN, PHD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, PHD UNIVERSITY OF LONDON 98

AUDREY MCALINDEN, PHD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, PHD UNIVERSITY OF LONDON 98

REBECCA P MCALISTER, MD Associate Dean for Graduate Medical Education, Assoc Dean of GME, BS UNIVERSITY OF KENTUCKY 77, MD UNIVERSITY OF KENTUCKY 79

REBECCA P MCALISTER, MD Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF KENTUCKY 77, MD UNIVERSITY OF KENTUCKY 79

WILLIAM H MCALISTER, MD Professor of Radiology, Radiology, BS WAYNE STATE UNIVERSITY 50, MD WAYNE STATE UNIVERSITY 54

WILLIAM H MCALISTER, MD Professor of Radiology in Pediatrics, Pediatrics, BS WAYNE STATE UNIVERSITY 50, MD WAYNE STATE UNIVERSITY 54

JOHN D MCALLISTER, MD Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF MANITOBA 82, MD UNIVERSITY OF MANITOBA 80

JOHN D MCALLISTER, MD Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MANITOBA 82, MD UNIVERSITY OF MANITOBA 80

JINA L MCATEE Instructor in Clinical Pediatrics, Pediatrics

MARK P. MCAVOY, PHD Research Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 91, MEE
SOUTHERN ILLINOIS UNIVERSITY 93, PHD SOUTHERN ILLINOIS UNIVERSITY 98

MEGAN MCBRIDE Instructor in Clinical Pediatrics, Pediatrics

MARCIA JUNE MCCABE, PHD Assistant Professor of Psychiatry, Psychiatry, BA WASHBURN UNIVERSITY 85, MA UNIVERSITY OF MISSOURI 87, PHD UNIVERSITY OF MISSOURI 91

MICHAEL E MCCADDEN, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA VANDERBILT UNIVERSITY 78, MD VANDERBILT UNIVERSITY 82

KIMBERLI MCCALLUM, MD Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, BS BROWN UNIVERSITY 81, MD YALE UNIVERSITY 86

CHRISTOPHER E MCCARTHY, MD Instructor in Clinical Medicine, Internal Medicine, MD SAINT LOUIS UNIVERSITY 79

MARGARET MCCARTHY Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF MISSOURI 83

SCOTT A MCCLAIN, DDENT Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BS GRACELAND COLLEGE 87, DDENT UNIVERSITY OF MISSOURI 91

DONTE D MCCLARY, MD Instructor in Clinical Medicine, Internal Medicine, BS XAVIER UNIVERSITY 93, MD MEHARRY MED COLLEGE 98

JEREMY JAMES MCCORMICK, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS DARTMOUTH COLLEGE 99, MD LOYOLA UNIVERSITY CHICAGO 03

MOLLY ANN MCCORMICK, MD Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF MISSOURI 87

SCOTT MCCORMICK, III, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BA COE COLLEGE 81, MD UNIVERSITY OF CHICAGO 85

DOUGLAS E MCCOY, MD Instructor in Clinical Psychiatry, Psychiatry, BS EASTERN ILLINOIS UNIVERSITY 86, MD SOUTHERN ILLINOIS UNIVERSITY 90

VIVIA VAN DYNE MCCUTCHEON, MD Research Instructor in Psychiatry, Psychiatry, BA OHIO STATE UNIVERSITY 85, MS WASHINGTON UNIV IN ST. LOUIS 01, MD WASHINGTON UNIV IN ST. LOUIS 05

MICHAEL L MCDANIEL, PHD Professor of Pathology and Immunology, Pathology & Immunology, BS SOUTHERN ILLINOIS UNIVERSITY 63, MS UNIVERSITY OF NORTH DAKOTA 66, PHD SAINT LOUIS UNIVERSITY 70

KATHLEEN BLYTH MCDERMOTT, PHD Research Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF NOTRE DAME 90, MA RICE UNIVERSITY 94, PHD RICE UNIVERSITY 96

DANIEL S MCDONALD, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS YALE UNIVERSITY 84, MD UNIVERSITY OF MISSOURI 89

Douglas J McDonald Siteman Cancer Center, Professor of Orthopaedic Surgery, Washington University School of Medicine, 1982-1987: Resident, orthopaedic surgery, Mayo Graduate School of Medicine, Rochester, Minn., 1987: Fellow, orthopaedic oncology, Mayo Graduate School of Medicine, 1988: Fellow, orthopaedic oncology, University di Bologna, Bologna, Italy, 1982: MD, University of Minnesota, Minneapolis, 1987: MS, Orthopaedic surgery, Mayo Graduate School of Medicine, Rochester, Minn., Primary Specialty: Benign and malignant bone tumors, Ewing's sarcoma, Board Certified:, 1990, 2001: American Board of Orthopaedic Surgery

DOUGLAS J. MCDONALD, MD Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS ST JOHNS UNIVERSITY 78, MD UNIVERSITY OF MINNESOTA 82

JAY R. MCDONALD, MD, BS Assistant Professor of Medicine, Internal Medicine, BA DUKE UNIVERSITY 91, MD OREGON HEALTH SCIENCE UNIERS 98, BS PORTLAND ST UNIVERSITY 94

DEBRA ANN MCDONNELL, DPT, AS Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS WASHINGTON UNIV IN ST. LOUIS 90, MS WASHINGTON UNIV IN ST. LOUIS 90, DPT WASHINGTON UNIV IN ST. LOUIS 05, AS OAKTON COMMUNITY COLLEGE 00

DEBRA ANN MCDONNELL, DPT, AS Assistant Professor of Physical Therapy, Physical Therapy, BS WASHINGTON UNIV IN ST. LOUIS 90, MS WASHINGTON UNIV IN ST. LOUIS 90, DPT WASHINGTON UNIV IN ST. LOUIS 05, AS OAKTON COMMUNITY COLLEGE 00

MARY KATE MCDONNELL, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS SAINT LOUIS UNIVERSITY 81, MHS WASHINGTON UNIV IN ST. LOUIS 85, DPT WASHINGTON UNIV IN ST. LOUIS 03

MARY KATE MCDONNELL, DPT Associate Director of Residencies and Fellowships in Physical Therapy, Assistant Professor of Physical Therapy, Physical Therapy, BS SAINT LOUIS UNIVERSITY 81, MHS WASHINGTON UNIV IN ST. LOUIS 85, DPT WASHINGTON UNIV IN ST. LOUIS 03
Robert C McKinstry III
Siteman Cancer Center, Alumni Endowed Professor of Cell Biology and Physiology, Washington University School of Medicine, 1976-1977: Postdoctoral fellowship, biochemistry, Boston University, 1976: PhD, biochemistry, Boston University
1999: American Board of Radiology, Neuroradiology

ROBERT CAROLIN MCKINSTRY, III, MD, PHD
Associate Professor of Pediatrics, Pediatrics, BS BOSTON UNIVERSITY 84, MS MASS INST OF TECHNOLOGY (MIT) 86, MD HARVARD UNIVERSITY 92, PHD MASS INST OF TECHNOLOGY (MIT) 91

ROBERT CAROLIN MCKINSTRY, III, MD, PHD
Associate Professor of Radiology, Radiology, BS BOSTON UNIVERSITY 84, MS MASS INST OF TECHNOLOGY (MIT) 86, MD HARVARD UNIVERSITY 92, PHD MASS INST OF TECHNOLOGY (MIT) 91

HOWARD LAWRENCE MCLEOD, PHS
Adjunct Professor of Medicine, Internal Medicine, BS UNIVERSITY OF WASHINGTON 88, PHS SCHOOL NOT LISTED 90

JULIE K MCMANEMY, MD
Instructor in Pediatrics, Pediatrics, BA ST MARYS UNIVERSITY 91, M PH SAINT LOUIS UNIVERSITY 06, MD UNIVERSITY OF TEXAS HOUSTON 98

WILLIAM A MCMANUS, MD
Instructor in Pediatrics, Pediatrics, BA CARROLL COLLEGE 80, MD SAINT LOUIS UNIVERSITY 86

AMY McQUEEN, PHD
Research Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF CA SAN DIEGO 96, MA UNIVERSITY OF HOUSTON 99, PHD UNIVERSITY OF HOUSTON 02

Robert P Mecham
Siteman Cancer Center, Alumni Endowed Professor of Cell Biology and Physiology, Washington University School of Medicine, 1976-1977: Postdoctoral fellowship, biochemistry, Boston University, 1976: PhD, biochemistry, Boston University

ROBERT PAUL MECHAM, PHD
Alumni Endowed Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF UTAH 73, PHD BOSTON UNIVERSITY 77

ROBERT PAUL MECHAM, PHD
Professor of Medicine, Internal Medicine, BS UNIVERSITY OF UTAH 73, PHD BOSTON UNIVERSITY 77

ROBERT PAUL MECHAM, PHD
Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF UTAH 73, PHD BOSTON UNIVERSITY 77

DENISE ANDREA MECKLER, MD
Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA DUKE
1999: American Board of Thoracic Surgery, Thoracic Surgery

JERRY R MEYERS, MD Assistant Professor of Clinical Surgery (General Surgery), Surgery, BA UNIVERSITY OF TEXAS AUSTIN 62, MD WASHINGTON UNIV IN ST. LOUIS 66

CRAIG ANTHONY MICCHELLI, PHD Assistant Professor of Developmental Biology, Developmental Biology, BS UNIV OF WISCONSIN MADISON 93, PHD UNIV OF WISCONSIN MADISON 99

Craig Micchelli Siteman Cancer Center, Assistant Professor of Developmental Biology, Washington University School of Medicine, 2000-2006: Postdoctoral fellow, Harvard Medical School, Boston, 1999: PhD, neurobiology, University of Wisconsin, Madison

GINA MICHAEL, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MISSOURI 78, MD DUKE UNIVERSITY 82

JEFF MICHAEL MICHALSKI, MD Professor of Radiation Oncology, Vice Chairman of Radiation Oncology, Radiation Oncology, BS UNIV OF WISCONSIN MADISON 82, MBA WASHINGTON UNIV IN ST. LOUIS 01, MD UNIV OF WISCONSIN MADISON 86

LOREN S. MICHEL, MD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA EMORY UNIVERSITY 83, MBA COLUMBIA UNIVERSITY 93, MD CASE WESTERN RESERVE UNIV 88

LOREN S. MICHEL, MD Assistant Professor of Medicine, Internal Medicine, BA EMORY UNIVERSITY 83; MBA COLUMBIA UNIVERSITY 93. MD CASE WESTERN RESERVE UNIV 88

Loren S. Michel Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine, 1988-1989: Intern, Cleveland Clinic, 1992-1994: Research fellow, Columbia University, New York, 1994-1996: Resident, medicine, Mount Sinai Medical Center, New York, 1996-1999: Fellow, hematology and oncology, Memorial Sloan-Kettering Cancer Center, New Yo, 1988: MD, Case Western Reserve University, Cleveland, 1993: MBA, finance, Columbia University, New York, Primary Specialty: Breast cancer, Board Certified., 1996: American Board of Internal Medicine, Internal Medicine

1999: American Board of Internal Medicine, Oncology

JOHN NEAL MIDDLEKAMP, MD Lecturer in Pediatrics, Professor Emeritus of Pediatrics, Pediatrics, BS UNIVERSITY OF MISSOURI 46, MD WASHINGTON UNIV IN ST. LOUIS 48

JERRY N MIDDLETON, MD Instructor Emeritus in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WESTMINSTER COLLEGE 59, MD WASHINGTON UNIV IN ST. LOUIS 63

MARY ANN MIDDLETON, MD Assistant Professor of Radiology, Radiology, BS UNIV OF WISCONSIN WHITEWATER 74, MD MEDICAL COLLEGE OF WISCONSIN 82

WILLIAM D MIDDLETON, MD Professor of Radiology, Radiology, BS DUKE UNIVERSITY 77, MD DUKE UNIVERSITY 81

JENNY LYNN MIELE Instructor in Clinical Pediatrics, Pediatrics

FRANCIS M MIEZIN Research Associate Professor of Neurology, Neurology, BS UNIV OF WISCONSIN MADISON 69, MS UNIV OF WISCONSIN MADISON 72

FRANCIS M MIEZIN Research Associate Professor of Radiology, Radiology, BS UNIV OF WISCONSIN MADISON 69, MS UNIV OF WISCONSIN MADISON 72

MARY KAY MIGNECO, OD, BS Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MISSOURI 86, OD UNIVERSITY OF MO ST LOUIS 91, BS UNIVERSITY OF MISSOURI 86

JAMES R MIKOLAJCZAK, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BS SAINT LOUIS UNIVERSITY 68, MD SAINT LOUIS UNIVERSITY 72

JEFFREY D MILBRANDT, MD, PHD Head of the Dept of Genetics, Professor of Genetics, Genetics, BS UNIV OF NEBRASKA AT KEARNEY 74, MD WASHINGTON UNIV IN ST. LOUIS 78, PHD UNIVERSITY OF VIRGINIA 83

JEFFREY D MILBRANDT, MD, PHD Professor of Medicine, Internal Medicine, BS UNIV OF NEBRASKA AT KEARNEY 74, MD WASHINGTON UNIV IN ST. LOUIS 78, PHD UNIVERSITY OF VIRGINIA 83

JEFFREY D MILBRANDT, MD, PHD Professor of Neurology, Neurology, BS UNIV OF NEBRASKA AT KEARNEY 74, MD WASHINGTON UNIV IN ST. LOUIS 78, PHD UNIVERSITY OF VIRGINIA 83

JEFFREY D MILBRANDT, MD, PHD Professor of Pathology, Pathology & Immunology, BS UNIV OF NEBRASKA AT KEARNEY 74, MD WASHINGTON UNIV IN ST. LOUIS 78, PHD UNIVERSITY OF VIRGINIA 83

BARRY DAVID MILDEN, MD Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS MASS INST OF TECHNOLOGY (MIT) 69, MD WASHINGTON UNIV IN ST. LOUIS 73

BENJAMIN MILDEN, MD Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD
MICHELLE M MILLER-THOMAS, MD Instructor in Radiology, Radiology, BS CALIFORNIA INSTITUTE TECHNOLO 98, MD SAINT LOUIS UNIVERSITY 02
AARON SAMUEL MILLER, MD Instructor in Pediatrics, Pediatrics, BA DUKE UNIVERSITY 99, MS UNIVERSITY OF NORTH CAROLINA 02, MD DUKE UNIVERSITY 03
BRENT WILLIAM MILLER, MD Associate Professor of Medicine, Internal Medicine, BS STANFORD UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 90
CHARLES WILLIAM MILLER, MD Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BS SCHOOL NOT LISTED 68, MD WASHINGTON UNIV IN ST. LOUIS 72
DONNA C MILLER, MD Instructor in Clinical Pediatrics, Pediatrics, BS BOSTON COLLEGE 78, MD UNIVERSITY OF MIAMI 82
GARY ARTHUR MILLER, MD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF CHICAGO 73, MD JEFFERSON MEDICAL COLLEGE 77
JAMES D. MILLER, PHD Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun. Science, BS UNIV OF WISCONSIN MADISON 51, MA INDIANA UNIVERSITY BLOOMINGTON 53, PHD INDIANA UNIVERSITY BLOOMINGTON 57
JAMES E MILLER, MD Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS TULANE UNIVERSITY 46, MD UNIVERSITY OF ALABAMA 49
JAMES G. MILLER, PHD Professor of Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 64, MA WASHINGTON UNIV IN ST. LOUIS 66, PHD WASHINGTON UNIV IN ST. LOUIS 69
J. PHILIP MILLER Professor of Biostatistics, Biostatistics, BA WASHINGTON UNIV IN ST. LOUIS 65
LARA ELIZABETH MILLER Instructor in Clinical Medicine, Internal Medicine
MARK JAMES MILLER, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF CALIFORNIA 91, PHD UNIVERSITY OF CALIFORNIA 96
SUZANNE LEE MILLER, MD Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 74, MD UNIVERSITY OF ILLINOIS 78
TIMOTHY M MILLER, MD, PHD Assistant Professor of Neurology, Neurology, MD WASHINGTON UNIV IN ST. LOUIS 98, PHD WASHINGTON UNIV IN ST. LOUIS 98
JUDE P. MILLER, JR Instructor in Clinical Psychiatry, Psychiatry
JASON C MILLS, MD, PHD Assistant Professor of Developmental Biology, Developmental Biology, BA WASHINGTON UNIV IN ST. LOUIS 89, MD UNIVERSITY OF PENNSYLVANIA 97, PHD UNIVERSITY OF PENNSYLVANIA 97, MD UNIVERSITY OF PENNSYLVANIA 97
JASON C MILLS, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA WASHINGTON UNIV IN ST. LOUIS 89, MD UNIVERSITY OF PENNSYLVANIA 97, PHD UNIVERSITY OF PENNSYLVANIA 97, MD UNIVERSITY OF PENNSYLVANIA 97
PAMELA F MILLSAP Research Instructor in Neurology, Neurology, BN TEXAS WOMANS UNIVERSITY 81, MSN UNIVERSITY OF TEXAS AUSTIN 89
SUSAN MINCHIN, MD, PHD Instructor in Clinical Psychiatry, Psychiatry, BS OREGON ST UNIVERSITY 81, MD UNIVERSITY OF IOWA 91, PhD UNIVERSITY OF IOWA 91
JEFFREY H MINER, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA NORTHWESTERN UNIVERSITY 85, PHD CALIFORNIA INSTITUTE TECHNOLO 91
JEFFREY H MINER, PHD Professor of Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 85, PHD CALIFORNIA INSTITUTE TECHNOLO 91
MARIAN A MINOR, PHD Research Associate Professor of Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF KANSAS 65, M PH UNIVERSITY OF MISSOURI 79, PHD UNIVERSITY OF MISSOURI 89
MARK A MINTUN, MD Professor of Neurobiology, Anatomy & Neurobiology, BS MASS INST OF TECHNOLOGY (MIT) 77, MD WASHINGTON UNIV IN ST. LOUIS 81
MARK A MINTUN, MD Professor of Psychiatry, Psychiatry, BS MASS INST OF TECHNOLOGY (MIT) 77, MD WASHINGTON UNIV IN ST. LOUIS 81
MARK A MINTUN, MD Professor of Radiology, Vice Chair for Research in Radiology, Radiology, BS MASS INST OF TECHNOLOGY (MIT) 77, MD WASHINGTON UNIV IN ST. LOUIS 81
MARVIN R MISHKIN, MD Assistant Professor of Clinical Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF
ELIZABETH TRACY MISHLER  Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS NORTHWESTERN UNIVERSITY 80, MA NORTHWESTERN UNIVERSITY 81

STANLEY MISHLER, MD, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS CITY UNIVERSITY OF NEW YORK 70, MS NEW YORK UNIVERSITY 74, MD NEW YORK UNIVERSITY 77, PHD NEW YORK UNIVERSITY 77

STANLEY MISHLER, MD, PHD  Associate Professor of Medicine, Internal Medicine, BS CITY UNIVERSITY OF NEW YORK 70, MS NEW YORK UNIVERSITY 74, MD NEW YORK UNIVERSITY 77, PHD NEW YORK UNIVERSITY 77

TARA GURETZKY MISSIO, MD  Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD UNIV OF NEBRASKA MED CENTER 05

NEVILLE FAROOKH MISTRY, MD  Instructor in Medicine, Internal Medicine, BS DUKE UNIVERSITY 01, MD BAYLOR COLLEGE OF MEDICINE 06

TEHMTON S MISTRY, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD UNIVERSITY OF BOMBAY 68

KEVIN JOSEPH MITCHELL, MD  Instructor in Clinical Surgery (General Surgery), Surgery, BS HOWARD UNIVERSITY 81, MD HOWARD UNIVERSITY 85

ROBI D. MITRA, PhD  Assistant Professor of Genetics, Genetics, PHD MASS INST OF TECHNOLOGY (MIT) 00

MAKEDONKA MITREVA, PhD  Research Assistant Professor of Genetics, Genetics, BS UNIVERSITY OF SKOPJE - MACEDON 90, MS UNIVERSITY OF SKOPJE - MACEDON 94, PHD WAGENINGEN UNIVERSITY 01

BETTINA MITTENDORFER, PHD  Research Associate Professor of Medicine, Internal Medicine, MS UNIVERSITY OF VIENNA 99, PHD UNIVERSITY OF TEXAS AUSTIN 99

DUANE L MITZEL, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF CALIFORNIA 00, MD WASHINGTON UNIV IN ST. LOUIS 77

NADER MOAZAMI, MD  Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, BA NEW YORK UNIVERSITY 88, MD COLUMBIA UNIVERSITY 92

EUGENE JAMES MOBLEY, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD NORTHERN ILLINOIS UNIVERSITY 50

ROBERT L MOBLEY, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD ILLINOIS COLLEGE OF OPTOMETRY 58

STEPHEN M MOERLEIN, PHD  Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF ILLINOIS 76, MA WASHINGTON UNIV IN ST. LOUIS 79, PHD WASHINGTON UNIV IN ST. LOUIS 82

STEPHEN M MOERLEIN, PHD  Associate Professor of Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 76, MA WASHINGTON UNIV IN ST. LOUIS 79, PHD WASHINGTON UNIV IN ST. LOUIS 82

SHAKIR MOHAMED, MD, BS  Instructor in Pediatrics, Pediatrics, BA DRAKE UNIVERSITY 99, MD UNIVERSITY OF IOWA 03, BS DRAKE UNIVERSITY 99

BALSAMANIRINA S MOHAMMED, MD, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS OHIO STATE UNIVERSITY 85, MD OHIO STATE UNIVERSITY 98, PHD OHIO STATE UNIVERSITY 96, MD OHIO STATE UNIVERSITY 98

THALACHALLOUR MOHANAKUMAR, PHD  Jacqueline G. and William E. Maritz Professor of Surgery (General Surgery), Surgery, PHD DUKE UNIVERSITY 74

THALACHALLOUR MOHANAKUMAR, PHD  Professor of Medicine, Internal Medicine, PHD DUKE UNIVERSITY 74

THALACHALLOUR MOHANAKUMAR, PHD  Professor of Pathology and Immunology, Pathology & Immunology, PHD DUKE UNIVERSITY 74

Thalachallour Mohanakumar  Siteman Cancer Center, Jacqueline G. and William E. Maritz Professor of Immunology and Oncology, Department of Surgery, Washington University School of Medicine, 1966: DVM, Madras Veterinary College, Madras, India, 1969: MS, microbiology, All-India Institute of Medical Sciences, New Delhi, 1974: PhD, immunology, Duke University, Durham, N.C.

C. SCOTT MOLDEN, MD  Instructor in Clinical Medicine, Internal Medicine, BA DE PAUL UNIVERSITY 68, MD CASE WESTERN RESERVE UNIV 72

JEFFREY F MOLEY, MD  Professor of Surgery (General Surgery), Surgery, BA HARVARD UNIVERSITY 76, MD COLUMBIA UNIVERSITY 80

Jeffrey F Moley  Siteman Cancer Center, Associate Director of Translational and Clinical Investigation, Alvin J. Siteman Cancer
DANIEL MORAN, PHD Assistant Professor of Physical Therapy, Physical Therapy, BS MILWAUKEE SCHOOL OF ENGINEERING 89, PHD ARIZONA STATE UNIVERSITY 94

STEWARD EDWARD MORELAND, DDENT Instructor in Clinical Otolaryngology (DMD), Otolaryngology, BA UNIVERSITY OF MISSOURI 78, DDENT WASHINGTON UNIV IN ST. LOUIS 83

KERRI A MORGAN Instructor in Neurology, Neurology, BA TEXAS CHRISTIAN UNIVERSITY 96, MS WASHINGTON UNIV IN ST. LOUIS 98

KERRI A MORGAN Instructor in Occupational Therapy, Occupational Therapy, BA TEXAS CHRISTIAN UNIVERSITY 96, MS WASHINGTON UNIV IN ST. LOUIS 98

MARY R MORGAN, MD Instructor in Clinical Pediatrics, Pediatrics, BA MIAMI UNIVERSITY 84, MD WASHINGTON UNIV IN ST. LOUIS 90

DANIEL MORGENSZTERN, MD Assistant Professor of Medicine, Internal Medicine, MD FTE SOUZA MARQUES 95

Daniel Morgensztern Siteman Cancer Center, Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1996-1998: Resident, internal medicine and hematology, State University of Rio de Janeiro, Brazil, 1998-2001: Resident, internal medicine, University of Miami-Jackson Memorial Hospital, 2001-2004: Fellow, hematology and oncology, University of Miami-Jacks, 1995: MD, Fundação Técnico-Educacional Souza Marques, Rio de Janeiro, Brazil, Primary Specialty: Lung and esophageal cancer, Board Certified:, 2001: American Board of Internal Medicine, Internal Medicine

2004: American Board of Internal Medicine, Medical Oncology

SHARON CELESTE MORLEY, MD, PHD Instructor in Pediatrics, Pediatrics, MD HARVARD UNIVERSITY 02, PHD HARVARD UNIVERSITY 02

JEFFREY STUART MORMOL Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS INDIANA UNIVERSITY BLOOMINGTON 86

DANIEL R. MORRA Instructor in Clinical Pediatrics, Pediatrics

ALAN H MORRIS, MD Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, MD UNIVERSITY OF ILLINOIS 63

CARRIE LYNN MORRIS, MD Assistant Professor of Ophthalmology and Visual Science, Ophthalmology & Visual Sci, MD UNIVERSITY OF ALABAMA 03

DONALD G MORRIS, MD Instructor in Clinical Medicine, Internal Medicine, BA BENEDICTINE COLLEGE 87, MS SAINT LOUIS UNIVERSITY 89, MD UNIVERSITY OF MISSOURI 93

JOHN CARL MORRIS, MD Harvey A and Dorismae Hacker Friedman Professor of Neurology, Neurology, BA OHIO WESLEYAN UNIVERSITY 70, MD UNIVERSITY OF ROCHESTER 74

JOHN CARL MORRIS, MD Professor of Occupational Therapy, Occupational Therapy, BA OHIO WESLEYAN UNIVERSITY 70, MD UNIVERSITY OF ROCHESTER 74

JOHN CARL MORRIS, MD Professor of Pathology and Immunology, Pathology & Immunology, BA OHIO WESLEYAN UNIVERSITY 70, MD UNIVERSITY OF ROCHESTER 74

JOHN CARL MORRIS, MD Professor of Physical Therapy, Physical Therapy, BA OHIO WESLEYAN UNIVERSITY 70, MD UNIVERSITY OF ROCHESTER 74

AUBREY R MORRISON, MBBS Professor of Developmental Biology, Developmental Biology, MBBS UNIVERSITY OF LONDON 70

AUBREY R MORRISON, MBBS Professor of Medicine, Internal Medicine, MBBS UNIVERSITY OF LONDON 70

JEREMIAH J MORRISSEY, PHD Research Professor of Anesthesiology, Anesthesiology, BA MACMURRAY COLLEGE 69, PHD SAINT LOUIS UNIVERSITY 74

Jeremiah J. Morrissey Siteman Cancer Center, Research Professor of Anesthesiology, Division of Clinical and Translational Research, Washington University School of Medicine, 1973-1975: Postdoctoral fellow, Roche Institute of Molecular Biology, Nutley, N.J., 1975-1977: Staff fellow and senior staff fellow, National Heart, Lung and Blood Institute, Bethesda, Md., 1974: PhD, Saint Louis University

LISA MAE MOSCOSO, MD, PHD Assistant Professor of Pediatrics, Pediatrics, BS UNIV OF WISCONSIN MADISON 89, MD WASHINGTON UNIV IN ST. LOUIS 98, PHD WASHINGTON UNIV IN ST. LOUIS 98

JULIAN C MOSLEY, MD Instructor in Clinical Surgery (General Surgery), Surgery, BS SAINT LOUIS UNIVERSITY 00, MD WASHINGTON UNIV IN ST. LOUIS 72

KRISTA L MOULDER, PHD Research Assistant Professor of Psychiatry, Psychiatry, BA NORTHWESTERN UNIVERSITY 93, PHD WASHINGTON UNIV IN ST. LOUIS 01
RANDI H MOZENTER, PHD Instructor in Clinical Medical Psychology in Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 80, MA WASHINGTON UNIV IN ST. LOUIS 82, PHD WASHINGTON UNIV IN ST. LOUIS 89

RICHARD GERARD MRAD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 81

MIKE MAX MUECKLER, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA UNIV OF WISCONSIN MADISON 76, PHD UNIV OF WISCONSIN MADISON 82

MIKE MAX MUECKLER, PHD Professor of Medicine, Internal Medicine, BA UNIV OF WISCONSIN MADISON 76, PHD UNIV OF WISCONSIN MADISON 82

JANET GWEN MUELLER, MD Instructor in Clinical Pediatrics, Pediatrics, BA KANSAS STATE UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 92

MARGARET M MUELLER Instructor in Clinical Pediatrics, Pediatrics

MICHAEL JEFFREY MUELLER, PHD Professor of Physical Therapy, Associate Director for Movement Science Curriculum in Physical Therapy, Physical Therapy, BS WASHINGTON UNIV IN ST. LOUIS 79, MHS WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 92

MICHAEL JEFFREY MUELLER, PHD Professor of Radiology, Radiology, BS WASHINGTON UNIV IN ST. LOUIS 79, MHS WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 92

JARED T. MUENZER, MD Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF CALIFORNIA 99, MD UNIVERSITY OF PITTSBURGH 01

STEVEN MUETH Instructor in Clinical Pediatrics, Pediatrics

DANIEL KAST MULLADY, MD Assistant Professor of Medicine, Internal Medicine, MD UNIVERSITY OF CONNECTICUT 01

SUPARNA MULLICK Instructor in Clinical Pediatrics, Pediatrics

MICHAEL E MULLINS, MD Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD HAHNEMANN UNIVERSITY 87

STEVEN ROBERT MUMM, PHD Research Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MISSOURI 78, MS UNIVERSITY OF MISSOURI 84, PHD SAINT LOUIS UNIVERSITY 92

NABIL A MUNFAKH, MD Professor of Surgery (Cardiothoracic Surgery), Surgery, BS UNIVERSITY OF MICHIGAN 81, MD UNIVERSITY OF MICHIGAN 85

MANOHARA MUNIMUDDAPPA Instructor in Clinical Pediatrics, Pediatrics

ROBERT F MUNSCH, MD Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF COLORADO BOULDER 74, MD SAINT LOUIS UNIVERSITY 77

FARIS MOHAMMED MURAD Assistant Professor of Medicine, Internal Medicine

NATHANIEL H MURDOCK, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS HOWARD UNIVERSITY 58, MD MEHARRY MED COLLEGE 83

GEORGE E MURPHY, MD Professor Emeritus of Psychiatry, Psychiatry, BS OREGON ST UNIVERSITY 49, MD WASHINGTON UNIV IN ST. LOUIS 52

JOSHUA J MURPHY, MD Instructor in Pediatrics, Pediatrics, BA BELOIT COLLEGE 92, MD LOYOLA UNIVERSITY CHICAGO 02

Kenneth M Murphy Siteman Cancer Center, Professor of Pathology and Immunology, Division of Immunology and Molecular Pathology, Washington University School of Medicine, 1986-1990: Postdoctoral fellow, Washington University, St. Louis, 1984: MD/PhD, Johns Hopkins University, Baltimore

KEVIN J MURPHY, MD Professor of Clinical Pediatrics, Pediatrics, BS BIRMINGHAM SOUTHERN COLLEGE 74, MD SAINT LOUIS UNIVERSITY 78

THERESA L MURPHY, PHD Research Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF ARIZONA 78, PHD JOHNS HOPKINS UNIVERSITY MEDIC 83

DAVID J MURRAY, MD Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF SASKATCHEWAN 73, MD UNIVERSITY OF SASKATCHEWAN 78

NANCY TYE MURRAY, PHD Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS TEXAS CHRISTIAN UNIVERSITY 77, MS UNIVERSITY OF IOWA 79, PHD UNIVERSITY OF IOWA 84

NANCY TYE MURRAY, PHD Research Professor of Otolaryngology, Otolaryngology, BS TEXAS CHRISTIAN UNIVERSITY 77, MS UNIVERSITY OF IOWA 79, PHD UNIVERSITY OF IOWA 84
GIAN MARCO MUSARRA, MD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF CENTRAL FLORIDA 98, MD UNIVERSITY OF MIAMI 03

ANTHONY MUSLIN, MD  Langenberg Distinguished Professor of Medicine, Internal Medicine, BA YALE UNIVERSITY 80, MD HARVARD UNIVERSITY 84

ANTHONY MUSLIN, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA YALE UNIVERSITY 80, MD HARVARD UNIVERSITY 84

HELEN I-YUN MUSSEMANN, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA RICE UNIVERSITY 92, MD BEAUFORT TECHNICAL COLLEGE 96

DAVID G MUTC, MD  Ira C and Judith Gall Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA CARLETON COLLEGE 76, MD WASHINGTON UNIV IN ST. LOUIS 80

MATTHEW G MUTC, MD  Associate Professor of Surgery (General Surgery), Surgery, BA ST OLAF COLLEGE 90, MD WASHINGTON UNIV IN ST. LOUIS 94


2003: American Board of Colon and Rectal Surgery

SASA MUTIC  Associate Professor of Radiation Oncology, Radiation Oncology, BS CAMERON UNIVERSITY 94, MS UNIVERSITY OF COLORADO BOULDER 96

TERENCE M. MYCKATYN, MD  Assistant Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS UNIV OF NORTHERN BRITISH COLU 03, MD UNIV OF NORTHERN BRITISH COLU 97


JOHN A MYERS  Instructor in Clinical Pediatrics, Pediatrics

RAYMOND I MYERS, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF NOTRE DAME 66, OD INDIANA UNIVERSITY BLOOMINGTON 70

ROBERT J MYERSON, MD, PhD  Professor of Radiation Oncology, Radiation Oncology, BA PRINCETON UNIVERSITY 69, MD UNIVERSITY OF MIAMI 80, PhD UNIVERSITY OF CALIFORNIA 74

Robert J Myerson  Site of Cancer Center, Professor of Radiation Oncology, Washington University School of Medicine, 1980-1984: Resident, radiation therapy, University of Pennsylvania, Philadelphia, 1974: PhD, physics, University of California, Berkeley, 1980: MD, University of Miami, Primary Specialty: Colon and rectal cancer; pancreatic cancer; liver cancer, Board Certified: 1985: American Board of Radiology, Therapeutic Radiology

INDIRA U MYSOREKAR, PHD  Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF LUND 94, MS UNIVERSITY OF LUND 95, PHD WASHINGTON UNIV IN ST. LOUIS 02

INDIRA U MYSOREKAR, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF LUND 94, MS UNIVERSITY OF LUND 95, PHD WASHINGTON UNIV IN ST. LOUIS 02

RANDALL EARL NACKE  Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci

RAKESH NAGARAJAN, MD, PHD, BA  Associate Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF VIRGINIA 94, MD WASHINGTON UNIV IN ST. LOUIS 02, PhD WASHINGTON UNIV IN ST. LOUIS 02, BA UNIVERSITY OF VIRGINIA 94

PETER NAGELE, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD SCHOOL NOT LISTED 95

VENKATA S. NAVIREDI  Instructor in Clinical Pediatrics, Pediatrics

ROBERT T NAISME, II, MD  Assistant Professor of Neurology, Neurology, BS CASE WESTERN RESERVE UNIV 94, MD CASE WESTERN RESERVE UNIV 98

TASNIM A NAJAF, MD  Instructor in Pediatrics, Pediatrics, MD DOW MEDICAL COLLEGE KARACHI 91

AYESHA NAJIB  Instructor in Clinical Pediatrics, Pediatrics
RASHMI R NAKRA  Associate Professor of Clinical Psychiatry, Psychiatry


NICOLA NAPOLI  Adjunct Research Assistant Professor of Medicine, Internal Medicine

VAMSI R. NARRA, MD  Associate Professor of Radiology, Radiology, MD OSMANIA MEDICAL COLLEGE 90

ALISON C NASH, MD  Professor of Clinical Pediatrics, Pediatrics, BS HOWARD UNIVERSITY 77, MD BEAUFORT TECHNICAL COLLEGE 81

HELEN E NASH, MD  Professor Emerita of Clinical Pediatrics, Pediatrics, BA SPELMAN COLLEGE 42, MD MEHARRY MED COLLEGE 45

HOMER E NASH, JR, MD  Professor of Clinical Pediatrics, Pediatrics, BS MOREHOUSE COLLEGE 48, MD MEHARRY MED COLLEGE 51

FATIHA NASSIR, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 86, MS SCHOOL NOT LISTED 89, PHD SCHOOL NOT LISTED 94

Michael J Naughton  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1994-1996: Resident, internal medicine, Washington University, St. Louis, 1996-1999: Fellow, hematology and oncology, Washington University, 1999-2000: Chief resident, internal medicine, Washington University, 2000-2001: Clinical associate, hematology and, 1993: MD, State University of New York, Buffalo, Primary Specialty: Clinical oncology, breast cancer, colorectal cancer, Board Certified; 1996: American Board of Internal Medicine, Internal Medicine 1999: American Board of Internal Medicine, Medical Oncology 2000: American Board of Internal Medicine, Hematology

MICHAEL J. NAUGHTON, MD  Assistant Professor of Medicine, Internal Medicine, BA WILLIAMS COLLEGE 89, MD STATE UNIV OF NY BUFFALO 93

ROSANNE S NAUNHEIM, MD  Associate Professor of Emergency Medicine in Medicine, Internal Medicine, BA CARLETON COLLEGE 70, MD UNIVERSITY OF CHICAGO 78

ROBERT F NEASE, JR, PHD  Adjunct Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF CALIFORNIA 80, MA STANFORD UNIVERSITY 81, PHD STANFORD UNIVERSITY 89

PHILIP NEEDLEMAN, PHD  Adjunct Professor of Molecular Biology and Pharmacology, Developmental Biology, BS SCHOOL NOT LISTED 60, MS SCHOOL NOT LISTED 62, PHD UNIVERSITY OF MARYLAND 64

BURTON M NEEDLES, MD  Instructor in Clinical Medicine, Internal Medicine, BS CITY COLLEGE 70, MD LOYOLA UNIVERSITY CHICAGO 74

JOHN GAIL NEELY, MD  Professor of Occupational Therapy, Occupational Therapy, BS UNIVERSITY OF CENTRAL OKLAHOM 62, MD UNIVERSITY OF OKLAHOMA 65

JOHN GAIL NEELY, MD  Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF CENTRAL OKLAHOM 62, MD UNIVERSITY OF OKLAHOMA 65

JEFFREY J NEIL, MD, PHD  Allen P. and Josephine B. Green Professor of Neurology, Neurology, MD WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 84

JEFFREY J NEIL, MD, PHD  Professor of Neurobiology, Anatomy & Neurobiology, MD WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 84

JEFFREY J NEIL, MD, PHD  Professor of Pediatrics, Pediatrics, MD WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 84

JEFFREY J NEIL, MD, PHD  Professor of Radiology, Radiology, MD WASHINGTON UNIV IN ST. LOUIS 84, PHD WASHINGTON UNIV IN ST. LOUIS 84

CHRISTOPHER A NELSON, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BS UNIV OF WISCONSIN MADISON 85, PHD WASHINGTON UNIV IN ST. LOUIS 95

DONALD MICHAEL NELSON, MD, PHD  Virginia Lang Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA CORNELL COLLEGE 71, MD WASHINGTON UNIV IN ST. LOUIS 77, PHD WASHINGTON UNIV IN ST. LOUIS 77

ELLIOIT C NELSON, MD  Associate Professor of Psychiatry, Psychiatry, BA JOHNS HOPKINS UNIVERSITY 82, MD UNIVERSITY OF ILLINOIS 86

J. ROGER NELSON, MD  Assistant Professor Emeritus of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST.
LOUIS 49, MD WASHINGTON UNIV IN ST. LOUIS 53

JEANNE M NERBONNE, PHD Alumni Endowed Professor of Molecular Biology and Pharmacology in Developmental Biology, Developmental Biology, BS FRAMINGHAM STATE COLLEGE 74, PHD GEORGETOWN UNIVERSITY 78

JEANNE M NERBONNE, PHD Professor of Medicine, Internal Medicine, BS FRAMINGHAM STATE COLLEGE 74, PHD GEORGETOWN UNIVERSITY 78


APRIL ERWIN NESIN Instructor in Clinical Pediatrics, Pediatrics

NEAL NEUMAN, MD Instructor in Clinical Surgery (Urologic Surgery), Surgery, MD SAINT LOUIS UNIVERSITY 71

ROSALIND J NEUMAN, PHD Research Professor of Genetics, Genetics, BA WASHINGTON UNIV IN ST. LOUIS 60, MA WASHINGTON UNIV IN ST. LOUIS 74, PHD WASHINGTON UNIV IN ST. LOUIS 81

ROSALIND J NEUMAN, PHD Research Professor of Mathematics in Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 60, MA WASHINGTON UNIV IN ST. LOUIS 74, PHD WASHINGTON UNIV IN ST. LOUIS 81

ELIZABETH P. NEWBERRY, PHD Research Assistant Professor of Medicine, Internal Medicine, BS KNOX COLLEGE 88, PHD WASHINGTON UNIV IN ST. LOUIS 95

RODNEY D NEWBERRY, MD Associate Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 87, MD WASHINGTON UNIV IN ST. LOUIS 91

Rodney Newberry Siteman Cancer Center, Associate Professor of Medicine, Division of Gastroenterology, Washington University School of Medicine, 1991-1994: Intern and resident, internal medicine, Washington University, St. Louis, 1995-1999: Fellow, gastroenterology, Washington University, 1991: MD, Washington University, St. Louis

JOHN W NEWCOMER, MD Professor of Medicine, Internal Medicine, BA BROWN UNIVERSITY 81, MD WAYNE STATE UNIVERSITY 85

JOHN W NEWCOMER, MD Professor of Psychiatry, Psychiatry, BA BROWN UNIVERSITY 81, MD WAYNE STATE UNIVERSITY 85

MATTHEW NEWMAN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA VANDERBILT UNIVERSITY 56, MD COLUMBIA UNIVERSITY 59

AMY C NEY Instructor in Clinical Medicine, Internal Medicine

KHAI NGO, MD Instructor in Clinical Pediatrics, Pediatrics, MD SCHOOL NOT LISTED 74

NGUYET MINH NGUYEN, MD, BS Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 89, MD WAYNE STATE UNIVERSITY 93, BS UNIVERSITY OF MICHIGAN 89, MD WAYNE STATE UNIVERSITY 93

TU-DUNG THI NGUYEN, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF CALIFORNIA 92, MD UNIVERSITY OF SOUTHERN CALIF 01, PHD UNIVERSITY OF SOUTHERN CALIF 91

ELLEN MARGARET NICASTRO Instructor in Clinical Pediatrics, Pediatrics

JOHANNA GRANT NICHOLAS, PHD Associate Professor of Audiology and Communication Sciences, Pgrm in Aud & Commun.Science, BA UNIVERSITY OF NORTHERN COLORA 78, MA UNIVERSITY OF NORTHERN COLORA 82, PHD WASHINGTON UNIV IN ST. LOUIS 90

JOHANNA GRANT NICHOLAS, PHD Research Associate Professor of Otolaryngology, Otolaryngology, BA UNIVERSITY OF NORTHERN COLORA 78, MA UNIVERSITY OF NORTHERN COLORA 82, PHD WASHINGTON UNIV IN ST. LOUIS 90

COLIN G NICHOLS, PHD Professor of Cell Biology and Physiology, Carl F Cori Professor, Cell Biology & Physiology, BS UNIVERSITY OF LEEDS 82, PHD UNIVERSITY OF LEEDS 85

PAUL F NICHOLS, III, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF CALIFORNIA 78, MD UNIVERSITY OF CALIFORNIA 82

RAMZI T NICOLAS Adjunct Instructor in Pediatrics, Pediatrics

JOAN M NIEHOFF, MD Assistant Professor of Anesthesiology, Anesthesiology, BA UNIVERSITY OF MO KANSAS CITY 82, MD UNIVERSITY OF MO COLUMBIA 82

CARL HELGE NIelsen, MD Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF COPENHAGEN 79

JOHN HART NIEMEYER, MD Instructor in Clinical Radiology, Radiology, BS UNIVERSITY OF MICHIGAN 78, MD WASHINGTON UNIV IN ST. LOUIS 82
THOMAS E NIESSEN, MD Instructor in Clinical Surgery (General Surgery), Surgery, BS TULANE UNIVERSITY 75, MD TULANE UNIVERSITY 79

DANIEL C NIEVA, MD Instructor in Anesthesiology, Anesthesiology, BS UNIVERSITY OF IOWA 98, MD UNIVERSITY OF IOWA 03

DAVID A NILE, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS SANTA CLARA UNIVERSITY 77, MD SAINT LOUIS UNIVERSITY 81

RICHARD JAMES NISSEN, DDENT Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BS IOWA STATE UNIVERSITY 79, MS WASHINGTON UNIV IN ST. LOUIS 85, DDENT UNIVERSITY OF IOWA 83

ANNE FAGAN NIVEN, PHD Research Associate Professor of Neurology, Neurology, BA WELLESLEY COLLEGE 84, PHD UNIVERSITY OF CA SAN DIEGO 92

BRUCE L NOCK, PHD Associate Professor of Neurobiology, Anatomy & Neurobiology, BA ELIZABETHTOWN COLLEGE 69, MS BUCKNELL UNIVERSITY 75, PHD RUTGERS UNIVERSITY 81

BRUCE L NOCK, PHD Associate Professor of Neurobiology in Psychiatry, Psychiatry, BA ELIZABETHTOWN COLLEGE 69, MS BUCKNELL UNIVERSITY 75, PHD RUTGERS UNIVERSITY 81

MICHAEL JUSTIN NOETZEL, MD Professor of Neurology, Neurology, BA YALE UNIVERSITY 73, MD UNIVERSITY OF VIRGINIA 77

MICHAEL JUSTIN NOETZEL, MD Professor of Pediatrics, Pediatrics, BA YALE UNIVERSITY 73, MD UNIVERSITY OF VIRGINIA 77

KEVIN K. NOGUCHI Research Instructor in Psychiatry, Psychiatry

MICHAEL L NONET, PHD Associate Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF CA DAVIS 84, PHD MASS INST OF TECHNOLOGY (MIT) 89

KAREN E. NORBERG, MD Research Instructor in Psychiatry, Psychiatry, MD WASHINGTON UNIV IN ST. LOUIS 73

SCOTT MONROE NORDLICHT, MD Professor of Medicine, Internal Medicine, BA COLUMBIA UNIVERSITY 69, MD STATE UNIVERSITY OF NEW YORK 73

CHARLES C NORLAND, MD Professor Emeritus of Clinical Medicine, Internal Medicine, BS WASHINGTON ST UNIVERSITY 55, MD WASHINGTON UNIV IN ST. LOUIS 59

DAVID CRAIG NORMAN, MD Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 88, MD SCHOOL NOT LISTED 92

BARBARA JEAN NORTON, PHD Associate Director for Postprofessional Education in Physical Therapy, Associate Professor of Physical Therapy, Physical Therapy, BS WASHINGTON UNIV IN ST. LOUIS 66, MHS WASHINGTON UNIV IN ST. LOUIS 85, PHD WASHINGTON UNIV IN ST. LOUIS 96

BARBARA JEAN NORTON, PHD Associate Professor of Neurology, Neurology, BS WASHINGTON UNIV IN ST. LOUIS 66, MHS WASHINGTON UNIV IN ST. LOUIS 85, PHD WASHINGTON UNIV IN ST. LOUIS 96

KAREN K NORTON, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS LOYOLA UNIVERSITY 85, MD LOUISIANA ST UNIVERSITY 89

OSCAR D. NORTON, MD Instructor in Clinical Radiation Oncology, Radiation Oncology, BA UNIVERSITY OF MISSOURI 84, MD UNIVERSITY OF MISSOURI 93

DEBORAH J NOVACK, MD, PHD Associate Professor of Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 87, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

DEBORAH J NOVACK, MD, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA PRINCETON UNIVERSITY 87, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

PETRA NOWOTNY, PHD Research Assistant Professor of Psychiatry, Psychiatry, PHD SCHOOL NOT LISTED 83

THOMAS JOHN NOWOTNY, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BS WASHINGTON UNIV IN ST. LOUIS 80, MD WASHINGTON UNIV IN ST. LOUIS 85

ERIC J NUETZEL, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF MISSOURI 72, MA WASHINGTON UNIV IN ST. LOUIS 95, MD SAINT LOUIS UNIVERSITY 76

MARLYNN NUNEZ Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

KARA STERNHELL NUNLEY, BS Assistant Professor of Medicine (Dermatology) (Pending Executive Faculty Approval), Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 99, BS WASHINGTON UNIV IN ST. LOUIS 99

RYAN M. NUNLEY, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA VANDERBILT UNIVERSITY 98,
DIANA ROBERTOVNA NURUTDINOVA, MD  
Instructor in Medicine, Internal Medicine, MD  
KAZAN STATE UNIVERSITY

GILBERT H NUSSBAUM, PHD  
Associate Professor Emeritus of Radiation Oncology, Radiation Oncology, BS  
CITY COLLEGE, MA  
HARVARD UNIVERSITY, PHD  
HARVARD UNIVERSITY

SAMUEL R NUSSBAUM, MD  
Professor of Clinical Medicine, Internal Medicine, BA  
NEW YORK UNIVERSITY, MD  
SCHOOL NOT LISTED

BRIAN NUSSENBAUM, MD  
Vice Chair for Clinical Affairs, Department of Otolaryngology, Associate Professor of Otolaryngology, Otolaryngology, BA  
STATE UNIV OF NY BINGHAMPTON, MD  
NEW YORK UNIVERSITY

Brian Nussenbaum  
Siteman Cancer Center, Associate Professor and Vice Chairman for Clinical Affairs, Department of Otolaryngology, Washington University School of Medicine, 1996-2000: Resident, otolaryngology, University of Texas Southwestern Medical Center, Dallas, 2000-2002: Fellow, head and neck oncology and microvascular surgery, University of Michigan, Ann Arbor, 1994: MD, New York University, Primary Specialty: Head and neck cancers, thyroid cancer, melanoma

, Board Certified; 2001: American Board of Otolaryngology

OROMA BEATRICE NWANODI  
Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

MUHAMMAD AKRAM NYAZEE  
Instructor in Clinical Medicine, Internal Medicine

G PATRICK O'DONNELL, MD  
Instructor in Clinical Medicine, Internal Medicine, BA  
UNIVERSITY OF KANSAS, MD  
SCHOOL NOT LISTED

CATINA LYNN O'LEARY, PHD  
Research Instructor in Psychiatry, Psychiatry, BS  
UNIVERSITY OF MISSISSIPPI, MS  
WASHINGTON UNIV IN ST. LOUIS, PHD  
WASHINGTON UNIV IN ST. LOUIS

KAREN LAUREL O'MALLEY, PHD  
Professor of Neurobiology, Anatomy & Neurobiology, BA  
SONOMA STATE UNIVERSITY, MS  
PORTLAND ST UNIVERSITY, PHD  
UNIVERSITY OF TEXAS AUSTIN

PATRICIA L O'NEAL, MD  
Professor Emerita of Clinical Psychiatry, Psychiatry, BA  
WASHINGTON UNIV IN ST. LOUIS, MD  
WASHINGTON UNIV IN ST. LOUIS

JEROME H O'NEIL, JR, MD  
Instructor in Clinical Pediatrics, Pediatrics, BA  
UNIVERSITY OF MISSOURI, MD  
SAINT LOUIS UNIVERSITY

JOSEPH A. O'SULLIVAN, PHD  
Associate Professor of Radiology, Radiology, BS  
UNIVERSITY OF MISSOURI, MD  
UNIVERSITY OF NOTRE DAME, PHD  
UNIVERSITY OF NOTRE DAME

MARGARET MARY OAKLEY, MD  
Assistant Professor of Clinical Anesthesiology, Anesthesiology, BS  
UNIVERSITY OF ILLINOIS, MD  
SAINT LOUIS UNIVERSITY

MARGARET MARY OAKLEY, MD  
Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BS  
UNIVERSITY OF ILLINOIS, MD  
SAINT LOUIS UNIVERSITY

LAMAR H OCHS, MD  
Instructor Emeritus in Clinical Medicine, Internal Medicine, BA  
WASHINGTON UNIV IN ST. LOUIS, MD  
WASHINGTON UNIV IN ST. LOUIS

RANDALL ODEM, MD  
Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA  
UNIVERSITY OF IOWA, MD  
UNIVERSITY OF IOWA

ANTHONY O ODIBO, MD  
Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, MD  
UNIVERSITY OF BENIN

AUDREY R ODOM, MD, PHD  
Instructor in Pediatrics, Pediatrics, BS  
DUKE UNIVERSITY, MD  
DUKE UNIVERSITY, PHD  
DUKE UNIVERSITY

JEROME H O'NEIL, JR, MD  
Instructor in Clinical Pediatrics, Pediatrics, BA  
UNIVERSITY OF MISSOURI, MD  
SAINT LOUIS UNIVERSITY

KEVIN KENNETH OHLEMILLER, PHD  
Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS  
INDIANA UNIVERSITY BLOOMINGTON, PHD  
NORTHWESTERN UNIVERSITY

KEVIN KENNETH OHLEMILLER, PHD  
Research Associate Professor of Otolaryngology, Otolaryngology, BS  
INDIANA
EDWARD OKUN, MD  Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS DARTMOUTH COLLEGE 52, MD UNIVERSITY OF VERMONT 56

ADEWOLE L. OKUNADE, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 75, PHD SCHOOL NOT LISTED 81

GEORGE A OLIVER, MD  Assistant Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52

GEORGE CHARLES OLIVER, MD  Professor Emeritus of Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 53, MD HARVARD UNIVERSITY 57

PAUL D OLIVO, MD, PHD  Adjunct Assistant Professor of Molecular Microbiology, Molecular Microbiology, BA GEORGE WASHINGTON UNIVERSITY 72, MD UNIVERSITY OF FLORIDA 81, PHD UNIVERSITY OF FLORIDA 82

JOHN WILLIAM OLNEY, MD  John P Feighner Professor of Psychiatry, Psychiatry, BA UNIVERSITY OF IOWA 56, MD UNIVERSITY OF IOWA 63

JOHN WILLIAM OLNEY, MD  Professor of Pathology and Immunology (Neuropathology), Pathology & Immunology, BA UNIVERSITY OF IOWA 56, MD UNIVERSITY OF IOWA 63

MARGARET OLSEN, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 76, MPH SAINT LOUIS UNIVERSITY 01, PHD UNIVERSITY OF PENNSYLVANIA 86

THOMAS FREDERIC OLMANN, PHD  Professor of Psychiatry, Psychiatry, BA UNIV OF WISCONSIN MADISON 72, PHD NEW YORK UNIVERSITY 76

EUGENE MERLE OLTZ, PHD  Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology & Immunology, BS CORNELL UNIVERSITY 82, PHD COLUMBIA UNIVERSITY 87


GARY H OMELL, MD  Assistant Professor of Clinical Radiology, Radiology, MD UNIVERSITY OF TENNESSEE 67

ROBERT F ONDER, JR, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 83, MD WASHINGTON UNIV IN ST. LOUIS 87

NUR FIONA ONEN, MD  Instructor in Medicine (Pending Dean's Approval), Internal Medicine, BS GLASGOW CALEDONIAN UNIVERSITY 97, MD GLASGOW CALEDONIAN UNIVERSITY 99

PHINEAS PHILLIP OREN, MD  Assistant Professor of Pediatrics, Pediatrics, BA CORNELL UNIVERSITY 90, MD UNIVERSITY OF PENNSYLVANIA 94

S. MICHAEL ORGEL, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 60, MD SAINT LOUIS UNIVERSITY 65

MATTHEW J ORLAND, MD  Associate Professor of Clinical Medicine, Internal Medicine, BS YALE UNIVERSITY 75, MD UNIVERSITY OF MIAMI 79

DAVID M ORNITZ, MD, PHD  Alumni Endowed Professor of Developmental Biology, Interim Head of the Department of Developmental Biology, Developmental Biology, BS UNIVERSITY OF CA DAVIS 81, MD UNIVERSITY OF WASHINGTON 88, PHD UNIVERSITY OF WASHINGTON 87

RACHEL C. ORSCHELN, MD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MO COLUMBIA 94, MD UNIVERSITY OF MO COLUMBIA 98

DAVID WILLIAM ORTBALS, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BS SAINT LOUIS UNIVERSITY 66, MD WASHINGTON UNIV IN ST. LOUIS 70

IRMA I ORTIZ-ARROYO, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF PUERTO RICO 81, MD UNIVERSITY OF PUERTO RICO 85

DANIEL SCOTT ORY, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA HARVARD UNIVERSITY 82, MD HARVARD UNIVERSITY 86

DANIEL SCOTT ORY, MD  Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 82, MD HARVARD UNIVERSITY 86

OLEG OSIPOVICH, PHD  Research Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology & Immunology, PHD RIGA POLYTECHNIC INSTITUTE 93
MATTHEW S PARSONS, MD Assistant Professor of Radiology, Radiology, BA MIAMI UNIVERSITY 95, MD UNIVERSITY OF CINCINNATI 00

TERALANDUR K. PARTHASARATHY, PHD Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS INSTITUTE OF MEDICAL SCIENCE 76, MS UNIVERSITY OF SALFORD 80, PHD UNIVERSITY OF TEXAS DALLAS 87, PHD UNIVERSITY OF TEXAS DALLAS 87

ROBERT T PASCHALL, MD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF TENNESSEE 67, MA PARK UNIVERSITY 86, MD UNIVERSITY OF TENNESSEE 74

MICHAEL K PASQUE, MD Professor of Radiology, Radiology, MD UNIVERSITY OF OKLAHOMA 78

MICHAEL K PASQUE, MD Professor of Surgery (Cardiothoracic Surgery), Surgery, MD UNIVERSITY OF OKLAHOMA 78

PABLO PASTOR, MD, PHD Visiting Instructor in Psychiatry, Psychiatry, MD UNIVERSITY OF BARCELONA 01, PHD UNIVERSITY OF BARCELONA 92

ANAND C PATEL, MD Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF URBANA IL 95, MD RUSH UNIVERSITY 99

KETAN J PATEL, MD Instructor in Emergency Medicine in Medicine, Internal Medicine, MD MEDICAL COLLEGE OF INDIA 88

MEERA RAMAN PATEL, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MO KANSAS CITY 95, MD UNIVERSITY OF MO KANSAS CITY 96

ANJALI K PATHAK, MD, BS Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA WEST VIRGINIA UNIVERSITY 93, MD WEST VIRGINIA UNIVERSITY 97, BS WEST VIRGINIA UNIVERSITY 93, MD WEST VIRGINIA UNIVERSITY 97

AMANULLAH PATHAN Instructor in Clinical Medicine, Internal Medicine, MS SCHOOL NOT LISTED 89

DEBabrata Patra, PHD Research Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF BOMBAY 85, MS UNIVERSITY OF BOMBAY 05, PHD UNIVERSITY OF PITTSBURGH 93


1981: Royal College of Physicians and Surgeons, Thoracic Surgery

1983: Royal College of Physicians and Surgeons, Vascular Surgery

BRUCE PATTERSON, PHD Research Associate Professor of Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 74, PHD UNIVERSITY OF ILLINOIS 80

G. ALEXANDER PATTERSON, MD Evarts A. Graham Professor of Surgery (Cardiothoracic Surgery), Surgery, MD QUEEN'S UNIVERSITY 74

MICHAEL J PAUL, MD Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS NORTHWESTERN UNIVERSITY 78, MD NORTHWESTERN UNIVERSITY 80

ROBERT HARRIS PAUL, PHD Adjunct Assistant Professor of Neurology, Neurology, BS CALIFORNIA STATE LONG BEACH 93, MS OKLAHOMA ST UNIVERSITY 95, PHD OKLAHOMA ST UNIVERSITY 98

Jacqueline E Payton Siteman Cancer Center

JACQUELINE ELIS PAYTON, MD, PHD Research Instructor in Pathology and Immunology, Pathology & Immunology, BS BRADLEY UNIVERSITY 96, MD UNIVERSITY OF ILLINOIS 04, PHD UNIVERSITY OF ILLINOIS 02

MARGARET GRACE PEAK, PHD Adjunct Assistant Professor of Otolaryngology (Audiology), Otolaryngology, BS MARYVILLE UNIVERSITY 59, MA SAINT LOUIS UNIVERSITY 61, PHD COLUMBIA UNIVERSITY 75

ALAN L PEARLMAN, MD Professor Emeritus of Neurology, Neurology, BA UNIVERSITY OF IOWA 58, MD WASHINGTON UNIV IN ST. LOUIS 61

ANTHONY CRAIG PEARLSTONE, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA WASHINGTON UNIV IN ST. LOUIS 81, MD WASHINGTON UNIV IN ST. LOUIS 85

SUSAN J PEARSON, DOST, PHD Instructor in Clinical Medicine, Internal Medicine, BFA SOUTHERN METHODIST UNIVERSITY 77, MS CENTRAL MICHIGAN UNIVERSITY 84, DOST SCHOOL NOT LISTED 92, PHD UNIVERSITY OF SOUTHWESTERN LO 86
REBECCA D PECK, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 82, MD WASHINGTON UNIV IN ST. LOUIS 86

WILLIAM A PECK, MD Alan A and Edith L Wolff Distinguished Professor, Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 55, MD UNIVERSITY OF ROCHESTER 60

PARVIN FATHEDI PEDDI, MD Instructor in Medicine, Internal Medicine, BS VANDERBILT UNIVERSITY 02, MD DUKE UNIVERSITY 06

DAVID M PEEPLES, MD Instructor in Clinical Neurology, Neurology, BA VANDERBILT UNIVERSITY 82, MD UNIVERSITY OF CHICAGO 86

JEFFREY F PEIPERT, MD, PhD Vice Chairman of Clinical Research, Department of Obstetrics and Gynecology, Robert J. Terry Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA BROWN UNIVERSITY 82, MPH YALE UNIVERSITY 92, MD EMORY UNIVERSITY 86, PHD BROWN UNIVERSITY 07

PATRICIA A. PENKOSKE, MD Instructor in Anesthesiology, Anesthesiology, BS LINDENWOOD UNIVERSITY 69, MD WASHINGTON UNIV IN ST. LOUIS 74

MICHAEL W PENNEY, MD Assistant Professor of Radiology, Radiology, BS UNIVERSITY OF ARKANSAS 92, MD UNIVERSITY OF AR LITTLE ROCK 96

KAREN J PENTELLA, MD Assistant Professor of Clinical Neurology, Neurology, BS OHIO STATE UNIVERSITY 75, MD OHIO STATE UNIVERSITY 79

JAY S PEPOSE, MD, PhD Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA BRANDEIS UNIVERSITY 75, MA BRANDEIS UNIVERSITY 75, MD UNIVERSITY OF CA LOS ANGELES 82, PHD UNIVERSITY OF CALIFORNIA 80

DONNA T PERDAN, MD Instructor in Clinical Pediatrics, Pediatrics, BS JOHN CARROLL UNIVERSITY 90, MD WRIGHT STATE UNIVERSITY 94

MARYBETH PEREIRA, MD Associate Professor of Clinical Medicine, Internal Medicine, BA SWARTHMORE COLLEGE 73, MD UNIVERSITY OF CALIFORNIA 78

MARIA ISABEL PEREZ CANDAL, MD Instructor in Pediatrics, Pediatrics, MD UNIVERSITY OF PUERTO RICO 00

CARLOS A PEREZ, MD Professor Emeritus of Radiation Oncology, Radiation Oncology, BS SCHOOL NOT LISTED 52, MD SCHOOL NOT LISTED 60

JULIO E PEREZ, MD Professor of Medicine, Internal Medicine, BS UNIVERSITY OF PUERTO RICO 70, MD UNIVERSITY OF PUERTO RICO 73

Michele L Pergadia Siteman Cancer Center, Research Assistant Professor of Psychiatry, Washington University School of Medicine, 2001-2003: Postdoctoral fellow, behavioral genetics, Washington University, St. Louis, 1997: MS, clinical psychology, Finch University of Health Sciences/The Chicago Medical School, 2001: PhD, clinical psychology, Finch University of Health Sciences/The Chicago Medical School

MIECHELE L. PERGADIA, PHD Research Assistant Professor of Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 91, MS FINCH UNIV OF HEALTH SCIENCES 97, PHD FINCH UNIV OF HEALTH SCIENCES 01

ENRIQUE PEDRO PERINETTI, MD, PhD Instructor in Clinical Surgery (Urologic Surgery), Surgery, MD SCHOOL NOT LISTED 69, PHD SCHOOL NOT LISTED 75

JOEL S PERLMUTTER, MD Professor of Neurobiology, Anatomy & Neurobiology, BA PRINCETON UNIVERSITY 75, MD UNIVERSITY OF MISSOURI 79

JOEL S PERLMUTTER, MD Professor of Neurology, Neurology, BA PRINCETON UNIVERSITY 75, MD UNIVERSITY OF MISSOURI 79

JOEL S PERLMUTTER, MD Professor of Occupational Therapy, Occupational Therapy, BA PRINCETON UNIVERSITY 75, MD UNIVERSITY OF MISSOURI 79

JOEL S PERLMUTTER, MD Professor of Physical Therapy, Physical Therapy, BA PRINCETON UNIVERSITY 75, MD UNIVERSITY OF MISSOURI 79

JOEL S PERLMUTTER, MD Professor of Radiology, Radiology, BA PRINCETON UNIVERSITY 75, MD UNIVERSITY OF MISSOURI 79

JOHN CRAIG PERLMUTTER, MD Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA QUEENS COLLEGE 67, MD CORNELL UNIVERSITY 71

MONICA S PERLMUTTER Instructor in Occupational Therapy, Occupational Therapy, BSOT UNIVERSITY OF MO COLUMBIA 81, MA WASHINGTON UNIV IN ST. LOUIS 89
MONICA S PERLMUTTER  Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS OT UNIVERSITY OF MO COLUMBIA 81, MD WASHINGTON UNIV IN ST. LOUIS 89

LAURENCE F PERLSTEIN, MD  Instructor in Clinical Medicine, Internal Medicine, BS TULANE UNIVERSITY 67, MD UNIVERSITY OF LOUISVILLE 74

MARCUS ALAN PERMUTT, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA JOHN HOPKINS UNIVERSITY MEDIC 61, MD WASHINGTON UNIV IN ST. LOUIS 65

MARCUS ALAN PERMUTT, MD  Professor of Medicine, Internal Medicine, BA JOHN HOPKINS UNIVERSITY MEDIC 61, MD WASHINGTON UNIV IN ST. LOUIS 65

MICHAEL JAMES PERNOD, DDS  Instructor in Clinical Otolaryngology, Otolaryngology, BA SAINT LOUIS UNIVERSITY 70, DDS UNIVERSITY OF MISSOURI 75

RICHARD J. PERRIN, MD, PhD  Instructor in Pathology and Immunology, Pathology & Immunology, BS YALE UNIVERSITY 92, MD UNIVERSITY OF ILLINOIS CHICAGO 04, PHD UNIVERSITY OF ILLINOIS 01

ARIE PERRY, MD  Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF TEXAS AUSTIN 86, MD UNIVERSITY OF TEXAS SOUTHWEST 90

ARIE PERRY, MD  Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF TEXAS AUSTIN 86, MD UNIVERSITY OF TEXAS SOUTHWEST 90

ARIE PERRY  Siteman Cancer Center, Professor of Pathology, Division of Neuropathology, Washington University School of Medicine, 1994-1995: Fellow, surgical pathology, Mayo Clinic, Rochester, Minn., 1995-1998: Clinical and research fellow, neuropathology, Mayo Clinic, 1990: MD, University of Texas Southwestern Medical School, Dallas, Primary Specialty: Neuropathology, Board Certified: American Board of Pathology, Anatomic Pathology and Clinical Pathology

ALAN PESTRONK, MD  Professor of Neurology, Neurology, BA PRINCETON UNIVERSITY 66, MD JOHN HOPKINS UNIVERSITY MEDIC 70

ALAN PESTRONK, MD  Professor of Pathology and Immunology, Pathology & Immunology, BA PRINCETON UNIVERSITY 66, MD JOHN HOPKINS UNIVERSITY MEDIC 70

STEVEN E PETERSEN, PHD  Associate Professor of Neurological Surgery (Neuropsychology), Neurological Surgery, BA UNIVERSITY OF MONTANA MISSOULA 74, PHD CALIFORNIA INSTITUTE TECHNOLOGY 82

STEVEN E PETERSEN, PHD  James S. McDonnell Professor of Cognitive Neuroscience in Neurology, Neurology, BA UNIVERSITY OF MONTANA MISSOULA 74, PHD CALIFORNIA INSTITUTE TECHNOLOGY 82

STEVEN E PETERSEN, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA UNIVERSITY OF MONTANA MISSOULA 74, PHD CALIFORNIA INSTITUTE TECHNOLOGY 82

STEVEN E PETERSEN, PHD  Professor of Radiology, Radiology, BA UNIVERSITY OF MONTANA MISSOULA 74, PHD CALIFORNIA INSTITUTE TECHNOLOGY 82

FREDERICK D PETERSON, MD  Professor of Clinical Pediatrics, Pediatrics, BA KNOX COLLEGE 53, MD WASHINGTON UNIV IN ST. LOUIS 57

LINDA R PETERSON, MD  Associate Professor of Medicine, Internal Medicine, BS GEORGETOWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 90

LINDA R PETERSON, MD  Associate Professor of Radiology, Radiology, BS GEORGETOWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 90

ROY R PETERSON, PHD  Professor Emeritus of Anatomy, Anatomy & Neurobiology, BA UNIVERSITY OF KANSAS 48, PHD UNIVERSITY OF KANSAS MEDICAL 52

John D Pfeifer  Siteman Cancer Center, Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine, 1987: PhD, immunology, University of California, San Diego, 1988: MD, University of California, San Diego, Primary Specialty: Gynecological pathology, Board Certified: American Board of Pathology, Anatomic Pathology

JOHN DAVID PFEIFER, MD, PHD  Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF CALIFORNIA 81, MD UNIVERSITY OF CALIFORNIA 88, PHD UNIVERSITY OF CALIFORNIA 87

JOHN DAVID PFEIFER, MD, PHD  Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF CALIFORNIA 81, MD UNIVERSITY OF CALIFORNIA 88, PHD UNIVERSITY OF CALIFORNIA 87

CHRISTINE T PHAM, MD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF FLORIDA 81, MD UNIVERSITY OF FLORIDA 85

CHRISTINE T PHAM, MD  Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF FLORIDA 81, MD
JANE PHILLIPS CONROY, PHD  Professor of Anatomy, Anatomy & Neurobiology, BA BRANDEIS UNIVERSITY 69, MA NEW YORK UNIVERSITY 73, PHD NEW YORK UNIVERSITY 78

DANIEL PHILLIPS, MD, BS  Assistant Professor of Clinical Neurology, Neurology, BE NORTHWESTERN UNIVERSITY 82, MD WASHINGTON UNIV IN ST. LOUIS 80, BS NORTHWESTERN UNIVERSITY 76

WILLIAM J PHILLIPS, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA OHIO STATE UNIVERSITY 59, MD WASHINGTON UNIV IN ST. LOUIS 63

GORDON W PHILPOTT, MD  Professor Emeritus of Surgery (General Surgery), Surgery, BS YALE UNIVERSITY 57, MD WASHINGTON UNIV IN ST. LOUIS 61

TIMOTHY CHARLES PHILPOTT, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA CARLETON COLLEGE 87, MD WASHINGTON UNIV IN ST. LOUIS 94

SUPOTE PHIPATANAKUL, MD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, MD CHULOLONGKORN UNIVERSITY 65

ALBERTO GIUSEPP PIACENTINI, MBBS  Instructor in Anesthesiology, Anesthesiology, MBBS UNIVERSITY OF MILAN 96

LAURA PICCIO, MD  Research Instructor in Neurology, Neurology, MD UNIVERSITY OF MILAN 97

JAY FRANCIS PICCIRILLO, MD  Professor of Medicine, Internal Medicine, BA UNIVERSITY OF VERMONT 79, MD UNIVERSITY OF VERMONT 85

JAY FRANCIS PICCIRILLO, MD  Professor of Occupational Therapy, Occupational Therapy, BA UNIVERSITY OF VERMONT 79, MD UNIVERSITY OF VERMONT 85

JAY FRANCIS PICCIRILLO, MD  Professor of Otolaryngology, Otolaryngology, BA UNIVERSITY OF VERMONT 79, MD UNIVERSITY OF VERMONT 85

DANIEL D PICUS, MD, BS  Professor of Radiology, Vice Chair for Diagnostic Radiology in Radiology, Radiology, BS UNIVERSITY OF ILLINOIS 77, MD UNIVERSITY OF CHICAGO 81, BS UNIVERSITY OF ILLINOIS 77

DANIEL D PICUS, MD, BS  Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF ILLINOIS 77, MD UNIVERSITY OF CHICAGO 81, BS UNIVERSITY OF ILLINOIS 77

JOEL PICUS, MD, BS  Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF ILLINOIS 79, MD HARVARD UNIVERSITY 84, BS UNIVERSITY OF ILLINOIS 79

STEPHEN J PIEPER, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 83, MD WASHINGTON UNIV IN ST. LOUIS 88

JAMES VERNON PIEPHOFF, MD  Instructor in Clinical Radiation Oncology, Radiation Oncology, BS CITADEL 85, MD UNIVERSITY OF SOUTH CAROLINA 89

EUGENIA M PIERCE, MD  Instructor in Clinical Pediatrics, Pediatrics, MD SAINT LOUIS UNIVERSITY 58

JOHN A PIERCE, MD  Professor Emeritus of Medicine, Internal Medicine, MD UNIVERSITY OF ARKANSAS 48

RICHARD A PIERCE, PHD  Research Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS STATE UNIVERSITY OF NEW YORK 75, PHD RUTGERS UNIVERSITY 90

RICHARD A PIERCE, PHD  Research Associate Professor of Medicine, Internal Medicine, BS STATE UNIVERSITY OF NEW YORK 75, PHD RUTGERS UNIVERSITY 90

LINDA J PIKE, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF DELAWARE 75, PhD DUKE UNIVERSITY 80

AARON JUAN PILE, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA NORFOLK STATE UNIVERSITY 80, MD SCHOOL NOT LISTED 83

THOMAS KURT PILGRAM, PHD  Instructor in Radiology, Radiology, BA UNIVERSITY OF CALIFORNIA 74, MA UNIVERSITY OF CALIFORNIA 78, PHD UNIVERSITY OF CALIFORNIA 82

SELVI PILLAI, MD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS CHICAGO 02, MD UNIVERSITY OF ILLINOIS CHICAGO 06

JORGE PINEDA, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 72

JOSE A PINEDA SOTO, MD  Assistant Professor of Neurology, Neurology, BS FRANCISCO MARROQUIN UNIVERSITY 88, MD FRANCISCO MARROQUIN UNIVERSITY 93
JOSE A PINEDA SOTO, MD  Assistant Professor of Pediatrics, Pediatrics, BS FRANCISCO MARROQUIN UNIVERSITY 88, MD FRANCISCO MARROQUIN UNIVERSITY 93

TERRENCE L PIPER, MD  Assistant Professor of Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA SAINT LOUIS UNIVERSITY 71, MD SAINT LOUIS UNIVERSITY 75

ARLYN JUNE PITTLER, MSN, BS  Research Instructor in Medicine, Internal Medicine, BN SAINT LOUIS UNIVERSITY 86, MS UNIVERSITY OF KENTUCKY 78, BS UNIVERSITY OF CALIFORNIA 72, MSN UNIVERSITY OF ARKANSAS 97

SUSAN PITTMAN, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 59, MD UNIVERSITY OF MISSOURI 63

DAVID R PIWNICA-WORMS, MD, PHD  Professor of Developmental Biology, Developmental Biology, BS STANFORD UNIVERSITY 78, MD DUKE UNIVERSITY 84, PHD DUKE UNIVERSITY 84

DAVID R PIWNICA-WORMS, MD, PHD  Professor of Radiology, Radiology, BS STANFORD UNIVERSITY 78, MD DUKE UNIVERSITY 84, PHD DUKE UNIVERSITY 84


HELEN PIWNICA-WORMS, PHD  Professor of Cell Biology and Physiology, Gerty T Cori Professor, Howard Hughes Medical Institute Investigator in Cell Biology and Physiology, Cell Biology & Physiology, BA ST OLAF COLLEGE 79, PHD DUKE UNIVERSITY 84

HELEN PIWNICA-WORMS, PHD  Professor of Medicine, Internal Medicine, BA ST OLAF COLLEGE 79, PHD DUKE UNIVERSITY 84

CAROLYN PIZZI, MD, PHD  Instructor in Neurology, Neurology, BS GOUCHER COLLEGE 96, MD PENNSYLVANIA STATE UNIVERSITY 03, PHD PENNSYLVANIA STATE UNIVERSITY 03

MITCHELL R PLATIN, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD KENT ST UNIVERSITY 87

DANIEL S PLAX, MD  Instructor in Clinical Pediatrics, Pediatrics, BA BROWN UNIVERSITY 88, MD WASHINGTON UNIV IN ST. LOUIS 93

KATHRYN L. PLAX, MD  Associate Professor of Pediatrics, Pediatrics, BA BROWN UNIVERSITY 89, MD UNIVERSITY OF ROCHESTER 96

STEVEN I PLAX, MD, BA  Professor Emeritus of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 57, MD UNIVERSITY OF MISSOURI 61, BA WASHINGTON UNIV IN ST. LOUIS 57

TIMOTHY JOSEPH PLUARD, MD  Assistant Professor of Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 83, MD WASHINGTON UNIV IN ST. LOUIS 87

Timothy J. Pluard  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1987-1991: Resident and chief resident, internal medicine, University of Texas Southwestern Medical School, Dallas, 1991-1993: Fellow, medical oncology, Harvard Medical School, Boston, 1987: MD, Washington University, St. Louis, Primary Specialty: Medical oncology, Board Certified: American Board of Internal Medicine, Internal Medicine

1993 and 2003: American Board of Internal Medicine, Oncology

SANTIAGO BOYE PLURAD, JR, MD  Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 82, MD SCHOOL NOT LISTED 87

DOUG POGUE, MD  Instructor in Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 96

ROBERT FRANCIS POIRIER, JR, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD SCHOOL NOT LISTED 99

GREGORY POLITES  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine

MARY POLITI, PHD  Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval), Surgery, BS BARNARD COLLEGE 01, M PHIL GEORGE WASHINGTON UNIVERSITY 04, PHD GEORGE WASHINGTON UNIVERSITY 06

Mary C. Politi  Siteman Cancer Center

JUANITA C POLITO-COLVIN, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF DALLAS 75, MD SOUTHWEST TEXAS STATE UNIVERS 79

DAVID GERARD POLITTE, D SC  Research Instructor in Radiology, Radiology, BS WASHINGTON UNIV IN ST. LOUIS 81,
KENNETH S POLONSKY, MBBC
Busch Professor of Medicine, Head of the Department of Internal Medicine, Internal Medicine, MBBC UNIVERSITY OF THE WITWATERSRA 73

KENNETH S POLONSKY, MBBC
Professor of Cell Biology and Physiology, Cell Biology & Physiology, MBBC UNIVERSITY OF THE WITWATERSRA 73

JAY WILLIAM PONDER, PHD
Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BA WABASH COLLEGE 78, PHD HARVARD UNIVERSITY 84

KATHERINE P PONDER, MD
Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS STANFORD UNIVERSITY 79, MD WASHINGTON UNIV IN ST. LOUIS 83

KATHERINE P PONDER, MD
Professor of Medicine, Internal Medicine, BS STANFORD UNIVERSITY 79, MD WASHINGTON UNIV IN ST. LOUIS 83

Katherine P Ponder Siteman Cancer Center, Professor of Medicine, Division of Hematology, Washington University School of Medicine, 1983-1985: Resident, internal medicine, Parkland Hospital, Dallas, 1985-1988: Postdoctoral associate, molecular biophysics and biochemistry, Yale University, New Haven, Conn., 1988-1990: Postdoctoral associate, cell biology, Baylor College of Medicine, Ho, 1983: MD, Washington University, St. Louis, Primary Specialty: Hematology, Board Certified:, American Board of Internal Medicine, Internal Medicine

HARISH PONNURU, MD
Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 95, MD UNIVERSITY OF MISSOURI 95

GERALD RAYMOND POPELKA
Adjunct Professor of Otolaryngology, Otolaryngology

LEE S PORTNOFF, MD
Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BS PURDUE UNIVERSITY 72, MA UNIVERSITY OF CALIFORNIA 74, MD WASHINGTON UNIV IN ST. LOUIS 78

DANIEL E POTTS, MD
Associate Professor of Clinical Medicine, Internal Medicine, BS BEAUFORT TECHNICAL COLLEGE 68, MD WASHINGTON UNIV IN ST. LOUIS 72

LISA GAYLE POTTS, PHD
Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS SOUTHERN ILLINOIS UNIVERSITY 88, MS WASHINGTON UNIV IN ST. LOUIS 91, PHD WASHINGTON UNIV IN ST. LOUIS 06

LISA GAYLE POTTS, PHD
Research Instructor in Otolaryngology, Otolaryngology, BS SOUTHERN ILLINOIS UNIVERSITY 88, MS WASHINGTON UNIV IN ST. LOUIS 91, PHD WASHINGTON UNIV IN ST. LOUIS 06

JOHN A POWELL, MD
Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF NOTRE DAME 67, MD UNIVERSITY OF MICHIGAN 71

MATTHEW A POWELL, MD
Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS WASHINGTON ST UNIVERSITY 90, MD MICHIGAN STATE UNIVERSITY 95

Matthew A Powell Siteman Cancer Center, Assistant Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology, Washington University School of Medicine, 1995-1999: Resident, obstetrics and gynecology, Ohio State University, Columbus, 1999-2002: Fellow, gynecologic oncology, Washington University, St. Louis, 1995: MD, Michigan State University, East Lansing, Primary Specialty: Women's cancers, Board Certified:, American Board of Obstetrics and Gynecology, Obstetrics and Gynecology

American Board of Obstetrics and Gynecology, Gynecologic Oncology

STEPHANIE K POWELL, PHD
Instructor in Clinical Neurology, Neurology, BS UNIVERSITY OF NOTRE DAME 94, MS UNIV OF WISCONSIN MILWAUKEE 00, PHD UNIV OF WISCONSIN MILWAUKEE 04

WILLIAM JOHN POWERS, MD
Adjunct Professor of Neurology, Neurology, BA DARTMOUTH COLLEGE 71, MD CORNELL UNIVERSITY 75

DIANA A PRABLEK, MD
Instructor in Clinical Medicine, Internal Medicine, BA TEXAS CHRISTIAN UNIVERSITY 84, MD SOUTHWESTERN UNIVERSITY 88

LAWRENCE PRABLEK, MD
Instructor in Clinical Medicine, Internal Medicine, BS SOUTHERN METHODIST UNIVERSITY 84, MD UNIVERSITY OF TEXAS SOUTHWEST 88

SIMEON PRAGER, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BA YALE UNIVERSITY 81, MD UNIVERSITY OF CALIFORNIA 91

HEIDI PRATHER, DOST
Associate Professor of Neurology, Neurology, BA DRURY COLLEGE 87, DOST UNIV OF HEALTH SCIENCES KC 91

HEIDI PRATHER, DOST
Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA DRURY COLLEGE 87, DOST UNIV OF HEALTH SCIENCES KC 91
KIMBERLY S QUAYLE, MD Associate Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF MO COLUMBIA 84, MD WASHINGTON UNIV IN ST. LOUIS 88

PATRICIA M QUINLEY, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 85, MD UNIVERSITY OF ILLINOIS 89

JENNIFER QUINN, MD Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF KENTUCKY 82, MD UNIVERSITY OF KENTUCKY 86

JAMES D QUIRK, PHD Research Instructor in Radiology, Radiology, BS MASS INST OF TECHNOLOGY (MIT) 94, MA WASHINGTON UNIV IN ST. LOUIS 98, PHD WASHINGTON UNIV IN ST. LOUIS 01

ABDUL H QURESHI Instructor in Clinical Medicine, Internal Medicine, MS SCHOOL NOT LISTED 92

JOHN S RABUN, MD Instructor in Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF TENNESSEE, MD UNIVERSITY OF TENNESSEE

BRAD ALAN RACETTE, MD Professor of Neurology, Neurology, BA PRINCETON UNIVERSITY 88, MD NORTHWESTERN UNIVERSITY 92

SUSAN B. RACETTE, PHD Research Associate Professor of Medicine, Internal Medicine, BS BUCKNELL UNIVERSITY 88, PHD UNIVERSITY OF CHICAGO 94

RAMESH RAGHAVAN, MBBS, PHD, MD Assistant Professor of Psychiatry, Psychiatry, MBBS SMS MEDICAL COLLEGE 94, PhD UNIVERSITY OF CA LOS ANGELES 03, MD KASTURBA MEDICAL COLLEGE 97

EDWARD FLOYD RAGSDALE, MD Instructor in Clinical Radiology, Radiology, BA UNIVERSITY OF ARKANSAS 60, MD WASHINGTON UNIV IN ST. LOUIS 64

MOHAMMAD H RAHMAN Instructor in Clinical Pediatrics, Pediatrics

JODIE RAI, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA HARVARD UNIVERSITY 83, MD UNIVERSITY OF ILLINOIS 88

JAMAL RAIHLE, MD Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF WASHINGTON 60, MD UNIVERSITY OF WASHINGTON 64

KAMALESH JANAKS RAMAIYA, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD UNIVERSITY OF ARIZONA 05

KATHLEEN G RAMAN, MD Assistant Professor of Surgery (General Surgery), Surgery, BS YALE UNIVERSITY 93, MD COLUMBIA UNIVERSITY 98

VIDYA RAMAN Instructor in Clinical Pediatrics, Pediatrics

SASANKA RAMANADHAM, PHD Research Associate Professor of Medicine, Internal Medicine, BS MCGILL UNIVERSITY 80, PHD TEXAS TECH UNIVERSITY 85

NARENDRAKUMAR RAMANAN, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS PSG INST OF MEDICAL SCI & RES 93, MS MADURAI KAMARAJ UNIVERSITY 95, PHD THE NATIONAL UNIV OF SINGAPORE 01

PATHMAWATHY T RAMESVARA Instructor in Clinical Pediatrics, Pediatrics, MS SCHOOL NOT LISTED 72

ROXANE M. RAMPERSAD, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS EMORY UNIVERSITY 94, MD EMORY UNIVERSITY 98

PRABHA RANGANATHAN, MBBS Assistant Professor of Medicine, Internal Medicine, MBBS KILPAUK MEDICAL COLLEGE 90

DHARANIPATHY RANGARAJ, PHD Instructor in Radiation Oncology, Radiation Oncology, BE GOVERNMENT COLLEGE OF ENGRNG 01, ME UNIVERSITY OF MISSOURI 02, PHD UNIVERSITY OF MISSOURI 04
RESHMA RANGWALA, MD, PHD  Instructor in Medicine, Internal Medicine, BS DUKE UNIVERSITY 99, MD UNIVERSITY OF CINCINNATI 06, PHD UNIVERSITY OF CINCINNATI 06

DIANE RANKIN, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF COLORADO BOULDER 62, MD UNIVERSITY OF COLORADO BOULDER 68

DABEERU C RAO, PHD  Professor of Biostatistics in Genetics, Genetics, BS INDIAN STATISTICAL INSTITUTE 67, MS INDIAN STATISTICAL INSTITUTE 68, PHD INDIAN STATISTICAL INSTITUTE 71

DABEERU C RAO, PHD  Professor of Biostatistics in Psychiatry, Psychiatry, BS INDIAN STATISTICAL INSTITUTE 67, MS INDIAN STATISTICAL INSTITUTE 68, PHD INDIAN STATISTICAL INSTITUTE 71

DABEERU C RAO, PHD  Professor of Biostatistics, Director of the Division of Biostatistics, Biostatistics, BS INDIAN STATISTICAL INSTITUTE 67, MS INDIAN STATISTICAL INSTITUTE 68, PHD INDIAN STATISTICAL INSTITUTE 71

PRABAKAR KUMAR RAO, MD  Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF CA SAN DIEGO 91, MD UNIVERSITY OF SOUTHERN CALIF 95

RADHIKA RAO, MD  Instructor in Clinical Psychiatry, Psychiatry, MD UNIVERSITY OF SOUTH DAKOTA 01

RAKESH RAO, MBBS, MD  Assistant Professor of Pediatrics, Pediatrics, MBBS UNIVERSITY COLLEGE OF MED SCI 92, MD MAULANA AZAD MEDICAL COLLEGE 96

RICARDO RAO, MD  Instructor in Clinical Surgery (General Surgery), Surgery, BA UNIVERSITY OF CA SAN DIEGO 83, MD UNIVERSITY OF MISSOURI 87

U. RAMAKRISHNA RAO, PHD  Research Associate Professor of Medicine, Internal Medicine, BS MYSORE UNIVERSITY 75, MS ANDHRA UNIVERSITY 77, PHD UNIVERSITY OF BOMBAY 87

RAVI RASALINGAM, MD  Assistant Professor in Medicine, Internal Medicine, MD UNIVERSITY OF AUCKLAND 95

EMANUEL RASHET, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 58, MD SAINT LOUIS UNIVERSITY 62

SAUMYA RASHID, MD  Assistant Professor of Neurology, Neurology, MD UNIVERSITY OF NORTH TEXAS 01

Antonella L Rastelli  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1994-1997: Resident, internal medicine, Washington University, St. Louis, 2000-2002: Clinical fellow, women's health, Washington University, St. Louis, 1991: MD, University of Verona, Verona, Italy, Primary Specialty: Breast health, including benign breast disease, treatment of women at high risk for breast cancer, long-term follow-up of breast cancer patients and ductal carcinoma in situ; bone and mineral diseases, Board Certified: 1997: American Board of Internal Medicine, Internal Medicine

ANTONELLA LUISA RASTELLI, MD  Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF VERONA 84, MD UNIVERSITY OF VERONA 91

ANTONELLA LUISA RASTELLI, MD  Instructor in Surgery (General Surgery), Surgery, BA UNIVERSITY OF VERONA 84, MD UNIVERSITY OF VERONA 91

DEVNANDINI RASTOGI, MD  Associate Professor of Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 87, MD WASHINGTON UNIV IN ST. LOUIS 91

RAHUL RASTOGI, MBBS  Associate Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF RAJASTHAN 85, MBBS SMS MEDICAL COLLEGE 92

RAJIV RAMESH RATHOD, MD  Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD VANDERBILT UNIVERSITY 05

GARY A RATKIN, MD  Associate Professor of Clinical Medicine, Internal Medicine, BA RICE UNIVERSITY 63, MD WASHINGTON UNIV IN ST. LOUIS 67

GARY A RATKIN, MD  Instructor in Clinical Radiation Oncology, Radiation Oncology, BA RICE UNIVERSITY 63, MD WASHINGTON UNIV IN ST. LOUIS 67

JEBADURAI RATNARAJ, MD  Assistant Professor of Anesthesiology, Anesthesiology, BS MADURAI KAMARAJ UNIVERSITY 79, MD NORTHCHRINE WESTFALEN MEDICAL 85

LEE RATNER, MD, PHD  Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 73, MA HARVARD UNIVERSITY 73, MD YALE UNIVERSITY 79, PHD YALE UNIVERSITY 79

LEE RATNER, MD, PHD  Professor of Molecular Microbiology, Molecular Microbiology, BA HARVARD UNIVERSITY 73, MA HARVARD UNIVERSITY 73, MD YALE UNIVERSITY 79, PHD YALE UNIVERSITY 79

Lee Ratner  Siteman Cancer Center, Professor of Medicine, of Molecular Microbiology, and of Pathology and Immunology,
Washington University School of Medicine, 1979-1982: Resident, internal medicine, Washington University, St. Louis, 1982-1985: Postdoctoral fellow, medical oncology, National Cancer Institute, Bethesda, Md., 1973: MA, chemistry, Harvard University, Cambridge, Mass., 1979: MD/PhD, molecular biochemistry and biophysics, Yale University, New Haven, Conn., Primary Specialty: AIDS-related malignancies, Board Certified., 1982: American Board of Internal Medicine, Internal Medicine

1985: American Board of Internal Medicine, Medical Oncology

VALERIE RATTS, MD Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 83, MD JOHNS HOPKINS UNIVERSITY MEDIC 87

DANIEL RAUCH, PhD, BS Research Instructor in Medicine, Internal Medicine, BS AUGUSTANA COLLEGE 96, PHD UNIVERSITY OF IOWA 01, BS AUGUSTANA COLLEGE 96

V. NATHAN RAVI, MD, PhD Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF BOMBAY 72, MS UNIVERSITY OF BOMBAY 75, MD UNIVERSITY OF MIAMI 88, PHD VIRGINIA TECH 80

AMY J. RAVIN, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS MASS INST OF TECHNOLOGY (MIT) 92, MD UNIVERSITY OF CHICAGO 96

SYED A RAZA, MD Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, BS OSMANIA MEDICAL COLLEGE 53, MD SCHOOL NOT LISTED 59

BABAK RAZANI, MD, PhD Instructor in Medicine, Internal Medicine, MD ALBERT EINSTEIN COLLEGE OF MED 03, PHD ALBERT EINSTEIN COLLEGE OF MED 03

SHERYL S REAM, MD Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 82, MD SAINT LOUIS UNIVERSITY 86

NEIL F. REBBE, MD, PHS Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MO ST LOUIS 78, MD SAINT LOUIS UNIVERSITY 96, PHS WASHINGTON UNIV IN ST. LOUIS 83

JEFFREY T REED, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF MISSOURI 88, MD UNIVERSITY OF MISSOURI 92

JONATHAN R REED, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA FISK UNIVERSITY 56, MD MEHARRY MED COLLEGE 65

TIMOTHY REED Instructor in Clinical Pediatrics, Pediatrics

DOMINIC N REEDS Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF TEXAS AUSTIN 92, MD TEXAS TECH UNIVERSITY 96

SUSAN ROBINSON REEDS Instructor in Clinical Medicine, Internal Medicine

LESTER T REESE, MD Professor of Clinical Medicine (Dermatology), Internal Medicine, BS TULANE UNIVERSITY 62, MD TULANE UNIVERSITY 66

GWENDOLYN G REICH, PHD Research Professor of Psychiatry (Child Psychiatry), Psychiatry, BA MCGILL UNIVERSITY 61, MA WASHINGTON UNIV IN ST. LOUIS 69, PHD WASHINGTON UNIV IN ST. LOUIS 78

DAVID E REICHERT, PHD Assistant Professor of Radiology, Radiology, BS ROANOKE COLLEGE 86, PHD UNIVERSITY OF ILLINOIS 94

David E Reichert Siteman Cancer Center, Assistant Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1994: PhD, organic chemistry, University of Illinois, Urbana

PHILLIP D REICHERT Instructor in Clinical Pediatrics, Pediatrics

VALERIE C REICHERT, MD Assistant Professor of Radiology, Radiology, BS STANFORD UNIVERSITY 86, MD STANFORD UNIVERSITY 90

Valerie C. Reichert Siteman Cancer Center, Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Washington University School of Medicine, 1991: Intern, internal medicine, Santa Clara Valley Medical Center, San Jose, Calif., 1995: Resident, diagnostic radiology, Washington University, St. Louis, 1996: Fellow, abdominal imaging, Washington University, 1990: MD, Stanford University, Stanford, Calif., Primary Specialty: Diagnostic radiology and breast imaging, Board Certified., 1996: American Board of Radiology, Diagnostic Radiology

ANGELA M. REIERSEN Assistant Professor of Psychiatry (Child Psychiatry), Psychiatry

MARGARET REIKER, MD, PHD Instructor in Clinical Medicine, Internal Medicine, MD SAINT LOUIS UNIVERSITY 93, PHD SAINT LOUIS UNIVERSITY 91

DANIEL B. REISING Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry

DAVID MARTIN REISLER, MD Assistant Professor of Clinical Neurology, Neurology, BA HARVARD UNIVERSITY 57, M PH JOHNS HOPKNS UNIVERSITY MEDIC 71, MD WASHINGTON UNIV IN ST. LOUIS 61
ILLINOIS 81, PHD UNIVERSITY OF ILLINOIS 87

FRANK O RICHARDS, MD Assistant Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BA TALLADEGA COLLEGE 44, MD HOWARD UNIVERSITY 47

SUSAN LYNN RICHARDSON, PHD Instructor in Radiation Oncology, Radiation Oncology, BS WASHINGTON ST UNIVERSITY 99, MS UNIV OF WISCONSIN MADISON 01, PHD UNIV OF WISCONSIN MADISON 04

THOMAS F RICHARDSON, MD Associate Professor of Psychiatry, Psychiatry, BA MILLIKIN UNIVERSITY 60, MD WASHINGTON UNIV IN ST. LOUIS 63

WILLIAM M RIEDESEL, II, MD Associate Professor of Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF ROCHELLE 68, MD CORNELL UNIVERSITY 73

TERRENCE E RIEHL, PHD Research Assistant Professor of Medicine, Internal Medicine, BS RUTGERS UNIVERSITY 74, MS RUTGERS UNIVERSITY 76, PHD OHIO UNIVERSITY 81

K. DANIEL RIEW, MD Mildred B. Simon Distinguished Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA HARVARD UNIVERSITY 80, MD CASE WESTERN RESERVE UNIV 84

K. DANIEL RIEW, MD Professor of Neurological Surgery, Neurological Surgery, BA HARVARD UNIVERSITY 80, MD CASE WESTERN RESERVE UNIV 84

ROBERT D RIFKIN, MD Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 68, MD NEW YORK UNIVERSITY 72

SHALE M RIFKIN, MD Assistant Professor of Clinical Surgery (General Surgery), Surgery, MD WASHINGTON UNIV IN ST. LOUIS 48

CARON E RIGDEN, MD Assistant Professor of Medicine, Internal Medicine, BFA TULANE UNIVERSITY 96, MD TULANE UNIVERSITY 00

Caron Rigden Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 2000-2003: Intern and resident, Tulane University, New Orleans, 2003-2007: Fellow, hematology and medical oncology, Washington University, St. Louis, 2000: MD, Tulane University, New Orleans, Primary Specialty: Medical oncology, gastrointestinal cancers, Board Certified.; 2003: American Board of Internal Medicine, Internal Medicine

LEE A RIGG, MD, PHD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA ARIZONA STATE UNIVERSITY 61, MD WASHINGTON UNIV IN ST. LOUIS 71, PHD UNIVERSITY OF COLORADO BOULDER 65

JOAN K. RILEY, PHD Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 98

JOAN K. RILEY, PHD Instructor in Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF ILLINOIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 98

JOAN K. RILEY, PHD Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 98

DANIEL S RING, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF MO KANSAS CITY 90, MD UNIVERSITY OF MISSOURI 92

JULIE L RING, DDENT Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIVERSITY OF MO KANSAS CITY 94, DDENT UNIVERSITY OF MO KANSAS CITY 98

LISA B RING, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 76, MD WASHINGTON UNIV IN ST. LOUIS 80

STEPHEN L. RISTVEDT, PHD Associate Professor of Psychiatry, Psychiatry, BA UNIVERSITY OF MINNESOTA 81, MA UNIVERSITY OF PENNSYLVANIA 83, PHD UNIVERSITY OF PENNSYLVANIA 89

JON H RITTER, MD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA MANKATO ST UNIVERSITY 83, MD UNIVERSITY OF MINNESOTA 88

KATHERINE RIVERA-SPOLJARIC, MD Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF PUERTO RICO 97, MS WASHINGTON UNIV IN ST. LOUIS 08, MD UNIVERSITY OF PUERTO RICO 01

WILLIAM L. RIVES, MD Instructor in Pediatrics, Pediatrics, MS UNIVERSITY OF MISSOURI 92, MD UNIVERSITY OF MISSOURI 96

ROBERT V RIVLIN, DDENT Instructor in Clinical Otolaryngology (MDM), Otolaryngology, BA RUTGERS UNIVERSITY 72, MS FAIRLEIGH DICKINSON UNIVERSITY 75, DDENT WASHINGTON UNIV IN ST. LOUIS 79

SYED MOHSAN RIZVI, MBBS Assistant Professor of Medicine (Pending Executive Faculty Approval), Internal Medicine, BS UNIVERSITY OF PANJAB 97, MBBS KING EDWARD MEDICAL COLLEGE 99
SYED T RIZVI  Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry
NECITA L ROA, MD  Associate Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF THE PHILIPPINES 69
FRANK EDWARD ROBBINS, MD  Assistant Professor of Anesthesiology, Anesthesiology, BA EARLHAM COLLEGE 73, MD WASHINGTON UNIV IN ST. LOUIS 77
LEE NELKEN ROBINS, PHD  Professor Emerita of Sociology in Psychiatry, Psychiatry, BA SCHOOL NOT LISTED 42, MA SCHOOL NOT LISTED 43, PHD HARVARD UNIVERSITY 51, PHD HARVARD UNIVERSITY 51
CLIFFORD GRANT ROBINSON, MD  Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval), Radiation Oncology, BS UNIVERSITY OF PITTSBURGH 00, MD CASE WESTERN RESERVE UNIV 04
CLIFTON A ROBINSON, MD  Instructor in Emergency Medicine in Medicine (Pending Dean's Approval), Internal Medicine, BA UNIV OF WISCONSIN MADISON 93, MD UNIV OF WISCONSIN MADISON 97
JANIS B ROBINSON, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA ST JOSEPH COLLEGE 69, MA YALE UNIVERSITY 72, MD UNIVERSITY OF PENNSYLVANIA 77
KATHRYN ANN ROBINSON, MD  Instructor in Radiology, Radiology, MD STATE UNIV OF NY STONYBROOK 01
PAUL ARTHUR ROBIOLIO, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BS HAVERFORD COLLEGE 83, M PHIL CAMBRIDGE UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 89
ANN MARIE ROCKAMANN, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA SAINT LOUIS UNIVERSITY 87, MD SAINT LOUIS UNIVERSITY 91
VERNON J RODEN, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF NOTRE DAME 67, MD SAINT LOUIS UNIVERSITY 71
CATHERINE M ROE, PHD  Research Instructor in Neurology, Neurology, BA PURDUE UNIVERSITY 86, MA SOUTHERN ILLINOIS UNIVERSITY 90, PHD SOUTHERN ILLINOIS UNIVERSITY 92
JOHN DENO ROGAKOS, MD  Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry, BS UNIVERSITY OF DAYTON 90, MD WASHINGTON UNIV IN ST. LOUIS 95
Buck E Rogers  Siteman Cancer Center, Assistant Professor of Radiation Oncology, Division of Radiation and Cancer Biology, Washington University School of Medicine, 1991: MA, chemistry, Washington University, St. Louis, 1995: PhD, inorganic chemistry, Washington University
BUCK EDWARD ROGERS, PhD  Associate Professor of Radiation Oncology, Radiation Oncology, BS LOYOLA UNIVERSITY CHICAGO 89, MA WASHINGTON UNIV IN ST. LOUIS 91, PHD WASHINGTON UNIV IN ST. LOUIS 95
BUCK EDWARD ROGERS, PhD  Associate Professor of Radiology, Radiology, BS LOYOLA UNIVERSITY CHICAGO 89, MA WASHINGTON UNIV IN ST. LOUIS 91, PHD WASHINGTON UNIV IN ST. LOUIS 95
H. BRYAN ROGERS  Instructor in Clinical Medicine, Internal Medicine
SHARON ALICIA ROGERS  Research Instructor in Medicine, Internal Medicine, BA SOUTHERN ILLINOIS UNIVERSITY 81, MS SOUTHERN ILLINOIS UNIVERSITY 83
SANDEEP ROHATGI, MD  Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 89, MD U MEDICAL-DENTAL OF NEW JERSEY 93
MICHAEL DENNIS ROHDE, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS VALPARAISO UNIVERSITY 83, OD UNIVERSITY OF MISSOURI 87
JAMES R ROHRBAUGH, MD  Associate Professor of Clinical Neurology, Neurology, BA YALE UNIVERSITY 71, MD OHIO STATE UNIVERSITY 74
JAMES R ROHRBAUGH, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA YALE UNIVERSITY 71, MD OHIO STATE UNIVERSITY 74
JOHN W ROHRBAUGH, PHD  Professor of Psychiatry, Psychiatry, BS HEIDELBERG COLLEGE 68, PHD UNIVERSITY OF ILLINOIS 73
John W Rohrbaugh  Siteman Cancer Center, Associate Professor of Psychiatry, Washington University School of Medicine, 1972-1979: Postdoctoral fellow, psychology, University of California, Los Angeles, 1973: PhD, psychology, University of Illinois Urbana-Champaign, Champaign
CHINDA VANASIN ROJANASATHIT, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 67
FELICE A ROLNICK, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNION COLLEGE NEW YORK 82, MD SCHOOL NOT LISTED 87
ANDRES ANIBAL ROMA, MD Assistant Professor of Pathology and Immunology, Pathology & Immunology, MD
UNIVERSIDAD DEL BUENOS AIRES 98

CHARLES L ROOPER, MD Professor Emeritus of Surgery (Cardiothoracic Surgery), Surgery, BA COLORADO COLLEGE 49, MD
UNIVERSITY OF COLORADO BOULDER 53

HERBERT E ROSENBAUM, MD Professor Emeritus of Neurology, Neurology, BS UNIVERSITY OF OREGON 47, MD
OREGON HEALTH SCIENCE UNIVERS 49

JOAN LEE ROSENBAUM, MD Professor of Pediatrics, Pediatrics, BA RICE UNIVERSITY 78, MS UNIVERSITY OF
CALIFORNIA 80, MD UNIVERSITY OF TEXAS AUSTIN 83

LOUIS J ROSENBAUM, MD Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci,
BA UNIVERSITY OF MICHIGAN 59, MD WASHINGTON UNIV IN ST. LOUIS 63

ISABEL L ROSENBLOOM, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA GOUCHER COLLEGE 79, MD
UNIVERSITY OF MARYLAND 84

DANIEL B ROSENBLUTH, MD Professor of Medicine, Internal Medicine, BS COLUMBIA UNIVERSITY 85, MD SCHOOL NOT
LISTED 89

DANIEL B ROSENBLUTH, MD Professor of Pediatrics, Pediatrics, BS COLUMBIA UNIVERSITY 85, MD SCHOOL NOT
LISTED 89

Daniel B Rosenbluth Siteman Cancer Center, Professor of Medicine, Division of Pulmonary and Critical Care Medicine,
Washington University School of Medicine, 1989-1992: Resident, internal medicine, Northwestern University, Chicago, 1992-1995:
Fellow, pulmonary and critical care medicine, Washington University School of Medicine, St. Louis, 1989: MD, Mount Sinai School
of Medicine, New York, Primary Specialty: Lung cancer, Board Certified.; 1992: American Board of Internal Medicine, Internal
Medicine
1994: American Board of Internal Medicine, Pulmonary Disease
1995: American Board of Internal Medicine, Critical Care Medicine

ANNA ROshal, MD Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ROCHESTER 93, MD
UNIVERSITY OF ROCHESTER 97

KELLY ROSS, MD Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MO KANSAS CITY 91, MD UNIVERSITY
OF MO COLUMBIA 96

WILLIAM J ROSS, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA MIAMI UNIVERSITY 68, MD WASHINGTON
UNIV IN ST. LOUIS 72

WILLIE RAY ROSS, MD Assistant Professor of Medicine, Internal Medicine, BS YALE UNIVERSITY 80, M PH SAINT LOUIS
UNIVERSITY 07, MD WASHINGTON UNIV IN ST. LOUIS 84

WILLIE RAY ROSS, MD Director of the Office of Diversity, Associate Dean for Diversity, Student Support Services, BS YALE
UNIVERSITY 80, M PH SAINT LOUIS UNIVERSITY 07, MD WASHINGTON UNIV IN ST. LOUIS 84

ROBERT J ROTHBAUM, MD Professor of Pediatrics, Pediatrics, BA BROWN UNIVERSITY 72, MD UNIVERSITY OF
CHICAGO 76

MARCOS ROTHSTEIN, MD Professor of Medicine, Internal Medicine, MD SCHOOL NOT LISTED 74

MARK A ROTHSTEIN, MD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA
WILLIAMS COLLEGE 86, MD UNIVERSITY OF UTAH 91

JOSEPH L ROTI ROTI, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS MICHIGAN
TECH UNIVERSITY 65, PHD UNIVERSITY OF ROCHESTER 72

JOSEPH L ROTI ROTI, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS MICHIGAN TECH
UNIVERSITY 65, PHD UNIVERSITY OF ROCHESTER 72

JOSEPH L ROTI ROTI, PHD Professor of Radiation Oncology, Radiation Oncology, BS MICHIGAN TECH UNIVERSITY 65,
PHD UNIVERSITY OF ROCHESTER 72

Joseph L. Roti Roti Siteman Cancer Center, Professor of Radiation Oncology and Chief, Division of Cancer and Radiation
Biology, Washington University School of Medicine, 1966: Fellow, health physics, Oak Ridge National Laboratory, Oak Ridge,
of Rochester, Rochester, N.Y.

ERNEST TUTTLE ROUSE, III, MD Instructor in Clinical Medicine, Internal Medicine, BA PRINCETON UNIVERSITY 67, MD
WASHINGTON UNIV IN ST. LOUIS 71

CARL MARX ROVAINEN, PHD Professor Emeritus of Cell Biology and Physiology, Cell Biology & Physiology, BS
CALIFORNIA INSTITUTE TECHNOLOGY 62, PHD HARVARD UNIVERSITY 67

JEREMY ROWER, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF CINCINNATI 93, MD UNIVERSITY OF CINCINNATI 97

TAPAN ROY  Instructor in Clinical Radiation Oncology, Radiation Oncology, MS BARODA MEDICAL COLLEGE 74

HENRY D ROYAL, MD  Professor of Radiology, Radiology, BS PROVIDENCE COLLEGE 70, MD SAINT LOUIS UNIVERSITY 74

Henry D Royal  Siteman Cancer Center, Professor of Radiology and Chief, Division of Nuclear Medicine, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1974-1977: Resident, internal medicine, Brown University, Providence, R.I., 1977-1979: Resident, nuclear medicine, Harvard Medical School, Boston, 1974: MD, Saint Louis University, Primary Specialty: Tumor imaging, pulmonary embolism, radiation injuries, positron emission tomography, Board Certified:, American Board of Internal Medicine, Internal Medicine

American Board of Nuclear Medicine, Nuclear Medicine

ELLA ROZIN  Instructor in Clinical Pediatrics, Pediatrics

BRIAN G RUBIN, MD  Associate Professor of Radiology, Radiology, BA COLGATE UNIVERSITY 79, MD UNIVERSITY OF VERMONT 84

BRIAN G RUBIN, MD  Professor of Surgery (General Surgery), Surgery, BA COLGATE UNIVERSITY 79, MD UNIVERSITY OF VERMONT 84

DAVID A RUBIN, MD  Associate Professor of Radiology, Radiology, BA BROWN UNIVERSITY 84, MD UNIVERSITY OF PENNSYLVANIA 88

DEBORAH C RUBIN, MD  Professor of Developmental Biology, Developmental Biology, BS MASS INST OF TECHNOLOGY (MIT) 77, MD SCHOOL NOT LISTED 81

DEBORAH C RUBIN, MD  Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 77, MD SCHOOL NOT LISTED 81

EUGENE HAROLD RUBIN, MD, PHD  Professor of Psychiatry, Vice Chairman for Education, Department of Psychiatry, Psychiatry, BA UNIVERSITY OF ROCHESTER 71, MD WASHINGTON UNIV IN ST. LOUIS 78, PHD WASHINGTON UNIV IN ST. LOUIS 77

Joshua B Rubin  Siteman Cancer Center, Assistant Professor of Pediatrics, Division of Hematology and Oncology, Washington University School of Medicine, 1994-1997: Resident, Children's Hospital and Harvard University, Boston, 1997-2000: Clinical fellow, hematology/oncology, Children's Hospital and Dana-Farber Cancer Institute, Boston, 1992: MSc, neuroscience, Albert Einstein College of Medicine, New York, 1994: MD/PhD, neuroscience, Albert Einstein College of Medicine, Primary Specialty: Pediatric brain tumors, Board Certified:, 2000: American Board of Pediatrics, Pediatric Hematology/Oncology

JOSHUA BENNETT RUBIN, MD, PHD  Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS YALE UNIVERSITY 82, MS ALBERT EINSTEIN COLLEGE OF MED 92, MD ALBERT EINSTEIN COLLEGE OF MED 94, PHD ALBERT EINSTEIN COLLEGE OF MED 94

JOSHUA BENNETT RUBIN, MD, PHD  Assistant Professor of Neurology, Neurology, BS YALE UNIVERSITY 82, MS ALBERT EINSTEIN COLLEGE OF MED 92, MD ALBERT EINSTEIN COLLEGE OF MED 94, PHD ALBERT EINSTEIN COLLEGE OF MED 94

JOSHUA BENNETT RUBIN, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BS YALE UNIVERSITY 82, MS ALBERT EINSTEIN COLLEGE OF MED 92, MD ALBERT EINSTEIN COLLEGE OF MED 94, PHD ALBERT EINSTEIN COLLEGE OF MED 94

MYRA L. RUBIO, MD  Assistant Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 94, MD INDIANA UNIVERSITY BLOOMINGTON 98

CHRISTINA M RUBY, MD  Instructor in Clinical Pediatrics, Pediatrics, BS LOYOLA UNIVERSITY 90, MD NORTHWESTERN UNIVERSITY MED 94

MARTIN D RUDLOFF, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA CENTRAL METHODIST COLLEGE 77, MD WASHINGTON UNIV IN ST. LOUIS 81

DAVID RUDNICK, MD, PHD  Assistant Professor of Developmental Biology, Developmental Biology, BS UNIVERSITY OF ILLINOIS 87, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

DAVID RUDNICK, MD, PHD  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 87, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

DANIEL G. RUDOLPH, MD  Instructor in Clinical Pediatrics, Pediatrics, BS SAINT LOUIS UNIVERSITY 88, MD SAINT LOUIS UNIVERSITY 92
YORAM RUDY  Professor of Cell Biology and Physiology, Cell Biology & Physiology
YORAM RUDY  Professor of Medicine, Internal Medicine
YORAM RUDY  Professor of Pediatrics, Pediatrics
YORAM RUDY  Research Professor of Radiology, Radiology
ALBERT F RUEHL, MD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, BS WASHINGTON UNIV IN ST. LOUIS 61, MS WASHINGTON UNIV IN ST. LOUIS 64, MD SAINT LOUIS UNIVERSITY 73
ANA MARIA RUIZ MANZANO, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, PHD UNIVERSIDAD AUTOMAMA DE MADRID 04
MICHAEL B RUMELT, MD  Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS LAMAR UNIVERSITY 62, MD WASHINGTON UNIV IN ST. LOUIS 66
BRENT E RUOFF, MD  Associate Professor of Emergency Medicine in Medicine, Internal Medicine, BS GRACELAND COLLEGE 77, MD SAINT LOUIS UNIVERSITY 81
DIANE MARY RUP, MD  Instructor in Clinical Pediatrics, Pediatrics, BA STATE UNIVERSITY OF NEW YORK 76, MA STATE UNIVERSITY OF NEW YORK 79, MD CASE WESTERN RESERVE UNIV 86
JANNETTE RUSCH, PHD  Research Instructor in Genetics, Genetics, PHD UNIVERSITY OF CALIFORNIA 96
PAULA J RUSHING, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF TENN MEMPHIS 91
JOHN HALL RUSSELL, PHD  Associate Dean for Graduate Education for the Division of Biology and Biomedical Sciences, Div Biology & Biomed - 26xx, BS JUNIATA COLLEGE 68, PHD WASHINGTON UNIV IN ST. LOUIS 74
JOHN HALL RUSSELL, PHD  Professor of Developmental Biology, Developmental Biology, BS JUNIATA COLLEGE 68, PHD WASHINGTON UNIV IN ST. LOUIS 74
TONYA D RUSSELL, MD, BS  Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF FLORIDA 93, MD UNIVERSITY OF FLORIDA 97, BS UNIVERSITY OF FLORIDA 93, MD UNIVERSITY OF FLORIDA 97
JAMES RUTHERFORD, MD  Assistant Professor Emeritus of Clinical Psychiatry, Psychiatry, BA DRAKE UNIVERSITY 75, MD UNIVERSITY OF IOWA 80
RIMMA RUVINSKAYA, MD  Assistant Professor of Neurology, Neurology, BA SCHOOL NOT LISTED 79, MD LENINGRAD INST OF PEDS MED 85
JOSEPH F RUWITCH, JR, MD  Professor of Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 66
JO-ELLYN M RYALL, MD  Associate Professor of Clinical Psychiatry, Psychiatry, BA RUTGERS UNIVERSITY 71, MD WASHINGTON UNIV IN ST. LOUIS 75
LISA A RYAN  Instructor in Clinical Pediatrics, Pediatrics
KENNETH J RYBICKI, MD, PHD  Instructor in Clinical Medicine, Internal Medicine, BA SOUTHERN ILLINOIS UNIVERSITY 78, MS SOUTHERN ILLINOIS UNIVERSITY 80, MD UNIVERSITY OF TEXAS AUSTIN 87, PHD UNIVERSITY OF TEXAS AUSTIN 84
GEORGES SAAB, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MO COLUMBIA 96, MD UNIVERSITY OF MO COLUMBIA 00
NAEL E. A. SAAD, MBBC  Instructor in Radiology, Radiology, MBBC AIN SHAMS UNIVERSITY 98
Nael Saad  Siteman Cancer Center, Instructor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 2002-2003: Intern, general surgery, University of Illinois, Chicago, 2003-2007: Resident, radiology, University of Rochester, Rochester, N.Y., 2007-2008: Fellow, interventional radiology, Washington University, St. Louis, 1998: MB BCh, Ain Shams University, Cairo, Egypt, Primary Specialty: Minimally invasive treatment of primary and secondary tumors through radioembolization, transarterial chemoembolization, transarterial bland embolization, radiofrequency ablation (RFA) and cryoablation, Board Certified.; 2007: American Board of Radiology, Diagnostic Radiology
ROSHAN I SABAR  Instructor in Clinical Medicine, Internal Medicine
FRANK SCOTT SACCOME, PHD  Research Assistant Professor of Psychiatry, Psychiatry, BA RENSSELAER POLYTECHNIC INSTIT 90, PHD BROWN UNIVERSITY 95
NANCY L. SACCOME, PHD  Assistant Professor of Genetics, Genetics, BA UNIVERSITY OF CALIFORNIA 88, MS BROWN UNIVERSITY 90, PHD BROWN UNIVERSITY 93
Nancy L. Saccone  Siteman Cancer Center, Assistant Professor of Genetics, Washington University School of Medicine, 1997-2000: Research fellow, statistical genetics, Washington University, St. Louis, 1990: MS, mathematics, Brown University, Providence, R.I., 1993: PhD, mathematics, Brown University
JEROME D SACHAR, MD  Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA AMHERST COLLEGE 00, MD UNIVERSITY OF MISSOURI 79

ADNAN SADIQ, MD  Assistant Professor of Anesthesiology (Pending Executive Faculty Approval), Anesthesiology, BS STATE UNIV OF NY BUFFALO 96, MD ROYAL COLLEGE OF SURGEONS 01

J. EVAN SADLER, MD, PHD  Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, MD DUKE UNIVERSITY 79, PHD DUKE UNIVERSITY 78

J. EVAN SADLER, MD, PHD  Professor of Medicine, Internal Medicine, MD DUKE UNIVERSITY 79, PHD DUKE UNIVERSITY 78

MEHRDAD SAEED-VAFA, MD  Instructor in Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 00

IBRAHIM MUHAMMA SAEED, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF VIRGINIA 95, MD VIRGINIA COMM UNIVERSITY 99

BASHAR SAFAR, MD  Assistant Professor of Surgery (General Surgery), Surgery, MD UTD MED & DNTL/GUY’S/ST.THOMAS 97

SHABBIR H SAFDAR  Professor of Clinical Medicine, Internal Medicine

Stuart S Sagel  Siteman Cancer Center, Professor of Radiology and Chief, Section of Chest Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1982: Postdoctoral fellows, radiology, American College of Radiology, 1965: MD, Temple University, Philadelphia, Primary Specialty: Body computed tomography, chest radiology

, Board Certified.: 1970: American Board of Radiology, Diagnostic Radiology

STUART STEVEN SAGEL, MD  Professor of Radiology, Radiology, BA TEMPLE UNIVERSITY 61, MD TEMPLE UNIVERSITY 65

SCOTT GEOFFREY SAGETT  Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci

MARCEL T SAGHIR, MD  Professor of Psychiatry, Psychiatry, BS AMERICAN UNIVERSITY OF BEIRUT 59, MD AMERICAN UNIVERSITY OF BEIRUT 63

SUDHA SAHA, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA BALURGHAT COLLEGE 57, MD SCHOOL NOT LISTED 63

SHIRLEY ANN SAHRMANN, PHD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS WASHINGTON UNIV IN ST. LOUIS 58, MA WASHINGTON UNIV IN ST. LOUIS 71, PHD WASHINGTON UNIV IN ST. LOUIS 73

SHIRLEY ANN SAHRMANN, PHD  Professor of Neurology (Neurophysiology), Neurology, BS WASHINGTON UNIV IN ST. LOUIS 58, MA WASHINGTON UNIV IN ST. LOUIS 71, PHD WASHINGTON UNIV IN ST. LOUIS 73

SHIRLEY ANN SAHRMANN, PHD  Professor of Physical Therapy, Physical Therapy, BS WASHINGTON UNIV IN ST. LOUIS 58, MA WASHINGTON UNIV IN ST. LOUIS 71, PHD WASHINGTON UNIV IN ST. LOUIS 73

JACQUELINE MITS SAITO, MD  Assistant Professor of Surgery (Pediatric Surgery), Surgery, BS HARVARD RADCLIFF 89, MD COLUMBIA UNIVERSITY 93

SHELLY SAKIYAMA-ELBERT, PHD  Instructor in Surgery (Plastic and Reconstructive Surgery), Surgery, BS MASS INST OF TECHNOLOGY (MIT) 96, MS CALIFORNIA INSTITUTE TECHNOLO 98, PHD CALIFORNIA INSTITUTE TECHNOLO 00

KAORI A. SAKURAI  Instructor in Clinical Medicine, Internal Medicine

MONICA SALA-RABANAL, PHD  Research Instructor in Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF BARCELONA 97, PHD UNIVERSITY OF BARCELONA 03

BERETTE A SALAZAR, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA MIDDLEBURY COLLEGE 73, MD UNIVERSITY OF NEW MEXICO 82

LLEWELLYN SALE, JR, MD, BA  Professor Emeritus of Clinical Medicine, Internal Medicine, BA YALE UNIVERSITY 36, MD WASHINGTON UNIV IN ST. LOUIS 40, BA YALE UNIVERSITY 36

LAWRENCE B SALKOFF, PHD  Professor of Genetics, Genetics, BA UNIVERSITY OF CA LOS ANGELES 67, PHD UNIVERSITY OF CA BERKELEY 79

LAWRENCE B SALKOFF, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA UNIVERSITY OF CA LOS ANGELES 67, PHD UNIVERSITY OF CA BERKELEY 79

MICKEY L SALMON, MD  Instructor Emeritus in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS CENTENARY COLLEGE 55, MD LOUISIANA ST UNIVERSITY 59
ALEC N SALT, PHD Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF EAST ANGLIA 73, MS UNIVERSITY OF BIRMINGHAM 74, PHD UNIVERSITY OF BIRMINGHAM 77

CHRISTINE JOAN SALTER, MD, DC Instructor in Clinical Medicine, Internal Medicine, BS READING UNIVERSITY 82, MD SAINT LOUIS UNIVERSITY 98, DC LOGAN COLLEGE OF CHIROPRACTIC 91

ROBERT J SALTMAN, MD Associate Professor of Clinical Medicine, Internal Medicine, BA YALE UNIVERSITY 76, MD WASHINGTON UNIV IN ST. LOUIS 80

NANDAKUMAR SAMBANDAM, PHD Research Assistant Professor of Medicine, Internal Medicine, PHD UNIVERSITY OF BRITISH COLUMBIA 99

JOHN MARK SAMET, MD Instructor in Clinical Medicine, Internal Medicine, BS WASHINGTON & LEE 64, MD UNIVERSITY OF MISSOURI 68

DOUGLAS M SAMMER, MD Assistant Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, MD UNIVERSITY OF TEXAS SOUTHWEST 01

CHRISTOPHER S. SAMPSON, MD Instructor in Emergency Medicine in Medicine, Internal Medicine, MD ROYAL COLLEGE OF SURGEONS 03

LAWRENCE E SAMUELS, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF TEXAS AUSTIN 72, MD WASHINGTON UNIV IN ST. LOUIS 76

NICOLE P SAMUY, MD Instructor in Pediatrics, Pediatrics, BS BIRMINGHAM SOUTHERN COLLEGE 01, MD UNIVERSITY OF AL BIRMINGHAM 05

SOUZAN SANATI, MD Assistant Professor of Pathology and Immunology (Pending Executive Faculty Approval), Pathology & Immunology, MD IRAN UNIV OF MEDICAL SCIENCES 93

GUADALUPE SANCHEZ, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA BERRY COLLEGE 74, MD HARVARD UNIVERSITY 78

LUIS A SANCHEZ, MD Professor of Surgery (General Surgery), Surgery, BS YALE UNIVERSITY 83, MD HARVARD UNIVERSITY 87

LINDA J SANDELL, PHD Mildred B Simon Research Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF DENVER 69, MS UNIVERSITY OF DENVER 71, PHD NORTHWESTERN UNIVERSITY 80

LINDA J SANDELL, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA UNIVERSITY OF DENVER 69, MS UNIVERSITY OF DENVER 71, PHD NORTHWESTERN UNIVERSITY 80

GRETCHEN A SANDER, MD Instructor in Clinical Pediatrics, Pediatrics, BA VANDERBILT UNIVERSITY 00, MD LOYOLA UNIVERSITY CHICAGO 04

HEIDI L SANDIGE, MD, MA Instructor in Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 91, MA YALE UNIVERSITY 93, MD WASHINGTON UNIV IN ST. LOUIS 95, MA WASHINGTON UNIV IN ST. LOUIS 03

Mark S Sands Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Stem Cell Biology, Washington University School of Medicine, 1990-1993: Postdoctoral fellow, Jackson Laboratory, Bar Harbor, Maine, 1993-1994: Postdoctoral research fellow, pathobiology, University of Pennsylvania, Philadelphia, 1990: PhD, molecular and cellular pharmacology, State University of New York, Stony Brook

MARK STEVEN SANDS, PHD Professor of Genetics, Genetics, BS ROCHESTER INSTITUTE OF TECHNO 80, PHD STATE UNIV OF NY STONYBROOK 90

MARK STEVEN SANDS, PHD Professor of Medicine, Internal Medicine, BS ROCHESTER INSTITUTE OF TECHNO 80, PHD STATE UNIV OF NY STONYBROOK 90

DANIEL JOSE SANTA CRUZ, MD Instructor in Clinical Medicine (Dermatology), Internal Medicine, MD UNIVERSIDAD DEF BUENOS AIRES 71

LAKSHMI SANTANAM, PHD Instructor in Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF MADRAS 91, MS UNIVERSITY OF MADRAS 93, PHD WAYNE STATE UNIVERSITY 03

CELIA MARIA SANTI GRAU PEREZ, MD, PHD Instructor in Neurobiology, Anatomy & Neurobiology, BS INSTITUTO DE MONTEVIDEO 79, MD INSTITUTO DE MONTEVIDEO 92, PHD NATIONAL AUTONOMOUS U OF MEX 98

PAUL SANTIAGO, MD Assistant Professor of Neurological Surgery, Neurological Surgery, BS STANFORD UNIVERSITY 90, MD YALE UNIVERSITY 95

PAUL SANTIAGO, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS STANFORD UNIVERSITY 90, MD YALE UNIVERSITY 95

Paul Santiago Siteman Cancer Center, Assistant Professor of Neurosurgery, Washington University School of Medicine,

CARLOS SANTOS, MD Instructor in Medicine (Pending Dean's Approval), Internal Medicine, BS UNIVERSITY OF THE PHILIPPINES 97, MD UNIVERSITY OF THE PHILIPPINES 02

RICHARD ALBERT SANTOS, MD, PHD Instructor in Medicine, Internal Medicine, BS MICHIGAN STATE UNIVERSITY 94, MD UNIVERSITY OF IOWA 02, PHD UNIVERSITY OF IOWA 02

EVELIO E. SARDINA, MD, PHD Instructor in Clinical Medicine, Internal Medicine, BA RUTGERS UNIVERSITY 85, MS UNIVERSITY OF SOUTH FLORIDA 88, MD UNIVERSITY OF SOUTH FLORIDA 94, PHD UNIVERSITY OF SOUTH FLORIDA 90

CAROLYN E. SARTHOR, MD Research Instructor in Psychiatry, Psychiatry, BS OBERLIN COLLEGE 94, MS CATHOLIC UNIVERSITY AMERICA 99, PHD PALO ALTO COLLEGE 05

NORMAN SARTORIUS Adjunct Professor of Psychiatry, Psychiatry

YO SASAKI, PHD Research Instructor in Pathology and Immunology, Genetics, BS TOKYO U OF AGRIC & TECHNOLOGY 91, MS TOKYO U OF AGRIC & TECHNOLOGY 94, PHD GUNMA UNIVERSITY, MED SCHOOL 97

DIANA M SATER-ROUKOZ Instructor in Clinical Pediatrics, Pediatrics

GEORGE SATO, MD Professor of Clinical Pediatrics, Pediatrics, MD WASHINGTON UNIV IN ST. LOUIS 47

RICHARD WILLIAM SATO, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA JOHNS HOPKINS UNIVERSITY 73, MD WASHINGTON UNIV IN ST. LOUIS 77

DONALD C SAUER, MD Assistant Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 56, MD WASHINGTON UNIV IN ST. LOUIS 60

SCOTT SAUNDERS, MD, PHD Associate Professor of Developmental Biology, Developmental Biology, BS UNIVERSITY OF MINNESOTA 83, MD STANFORD UNIVERSITY 90, PHD STANFORD UNIVERSITY 90

SCOTT SAUNDERS, MD, PHD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MINNESOTA 83, MD STANFORD UNIVERSITY 90, PHD STANFORD UNIVERSITY 90


BRIAN J. SAVILLE, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 97, MD WASHINGTON UNIV IN ST. LOUIS 01

STANLEY A SAWYER, PHD Professor of Biostatistics, Biostatistics, BS CALIFORNIA INSTITUTE TECHNOLO 60, MA BROWN UNIVERSITY 69, PHD CALIFORNIA INSTITUTE TECHNOLO 64

STANLEY A SAWYER, PHD Professor of Genetics, Genetics, BS CALIFORNIA INSTITUTE TECHNOLO 60, MA BROWN UNIVERSITY 69, PHD CALIFORNIA INSTITUTE TECHNOLO 64

BLAINE M SAYRE, MD Professor of Clinical Pediatrics, Pediatrics, M PH UNIVERSITY OF CA BERKELEY 72, MD WASHINGTON UNIV IN ST. LOUIS 68

GREGORY STEPHEN SAYUK, MD Assistant Professor of Medicine, Internal Medicine, MD UNIVERSITY OF TEXAS AUSTIN 00

GREGORY STEPHEN SAYUK, MD Assistant Professor of Psychiatry, Psychiatry, MD UNIVERSITY OF TEXAS AUSTIN 00

NICOLE MARIE SCACCIA, DOST Instructor in Anesthesiology, Anesthesiology, BS ST XAVIER UNIVERSITY 95, DOST MIDWESTERN UNIVERSITY 01

BARBARA ANNA SCHAAAL, PHD Professor of Genetics, Genetics, BS UNIVERSITY OF ILLINOIS 69, MS YALE UNIVERSITY 71, PHD YALE UNIVERSITY 74

LAWRENCE R SCHACHT, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY WYOMING 71, MD OREGON HEALTH SCIENCE UNIVERS 75

JOSEPH SCHACHTER, MD Instructor in Clinical Pediatrics, Pediatrics, BA INDIANA UNIVERSITY BLOOMINGTON 74, MD INDIANA UNIVERSITY BLOOMINGTON 79

ANNELIESE M SCHAFFER, PHD, JD Research Assistant Professor of Neurology, Neurology, BBA WASHINGTON UNIV IN ST. LOUIS 85, PHD WASHINGTON UNIV IN ST. LOUIS 01, JD WASHINGTON UNIV IN ST. LOUIS 88

JEAN E. SCHAFFER, MD Professor of Developmental Biology, Developmental Biology, BA HARVARD RADCLIFF 82, MD
LAURENCE M. SCHEIER Adjunct Associate Professor of Psychiatry, Psychiatry

MARK SCHEPERLE, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 89, MD UNIVERSITY OF MISSOURI 89

ALVIN K. SCHEGEN, MD Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 76, MD SAINT LOUIS UNIVERSITY 80

JEFFREY FRANK SCHERRER, PHD Research Assistant Professor of Psychiatry, Psychiatry, PHD SAINT LOUIS UNIVERSITY 04

JOEL D. SCHILLING, MD, PHD Instructor in Medicine, Internal Medicine, BA COLORADO COLLEGE 96, MD WASHINGTON UNIV IN ST. LOUIS 03, PHD WASHINGTON UNIV IN ST. LOUIS 01

BRADLEY L. SCHLAGGAR, MD, PHD A Ernest and Jane G Stein Associate Professor of Neurology, Neurology, BS BROWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

BRADLEY L. SCHLAGGAR, MD, PHD Associate Professor of Neurobiology, Anatomy & Neurobiology, BS BROWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

BRADLEY L. SCHLAGGAR, MD, PHD Associate Professor of Pediatrics, Pediatrics, BS BROWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

BRADLEY L. SCHLAGGAR, MD, PHD Associate Professor of Radiology, Radiology, BS BROWN UNIVERSITY 86, MD WASHINGTON UNIV IN ST. LOUIS 94, PHD WASHINGTON UNIV IN ST. LOUIS 94

HOWARD J. SCHLANSKY, MD Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MO KANSAS CITY 76, MD UNIVERSITY OF MO KANSAS CITY 78

MILTON J. SCHLESINGER, PHD Professor Emeritus of Molecular Microbiology, Molecular Microbiology, BS YALE UNIVERSITY 51, MS UNIVERSITY OF ROCHESTER 53, PHD UNIVERSITY OF MICHIGAN 59

PAUL HENRY SCHLESINGER, MD, PHD Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF ILLINOIS 66, MD UNIVERSITY OF CHICAGO 70, PHD UNIVERSITY OF CHICAGO 73

SONDRA SCHLESINGER, PHD Professor Emerita of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF MICHIGAN 56, PHD UNIVERSITY OF MICHIGAN 60

MARGARET ANN SCHMANDT, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF IOWA 82, MD SAINT LOUIS UNIVERSITY 87

TANIA L. SCHMID, MD Instructor in Clinical Medicine, Internal Medicine, BA UNIVERSITY OF MISSISSIPPI 81, MD UNIVERSITY OF MISSISSIPPI 85

MARTIN P. SCHMIDT, MD, BS Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 82, MD SAINT LOUIS UNIVERSITY 86, BS SAINT LOUIS UNIVERSITY 82

ROBERT EDWARD SCHMIDT, MD, PHD Professor of Pathology and Immunology, Pathology & Immunology, BA
ROBERT JAY SCHNEIDER, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY 73, MD JOHNS HOPKINS UNIVERSITY 76

JACQUELYN C SCHNIDMAN, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 75, MD SAINT LOUIS UNIVERSITY 79

PERRY LEE SCHONECKER, MD  Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS Univ OF WISCONSIN MADISON 64, MD Univ OF WISCONSIN MADISON 68

GUSTAV SCHONFELD, MD  Samuel E Schechter Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 56, MD WASHINGTON UNIV IN ST. LOUIS 60

MARIO SCHOOTMAN, PHD  Associate Professor of Medicine, Internal Medicine, MS SCHOOL NOT LISTED 90, PHD UNIVERSITY OF IOWA 93

JAMES R SCHREIBER, MD  Assistant Dean for Educational Technology Development, Assoc Dean Curriculum, BA RICE UNIVERSITY 68, MD JOHNS HOPKINS UNIVERSITY 72

JAMES R SCHREIBER, MD  Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA RICE UNIVERSITY 68, MD JOHNS HOPKINS UNIVERSITY 72

ROBERT D SCHREIBER, PHD  Alumni Professor of Pathology and Immunology, Pathology & Immunology, BA STATE UNIVERSITY OF NEW YORK 68, PHD STATE UNIVERSITY OF NEW YORK 73

ROBERT D SCHREIBER, PHD  Professor of Molecular Microbiology, Molecular Microbiology, BA STATE UNIVERSITY OF NEW YORK 68, PHD STATE UNIVERSITY OF NEW YORK 73

Robert D Schreiber  Siteman Cancer Center, Alumni Endowed Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine, 1973: Postdoctoral fellow, medicine and biochemistry, State University of New York, Buffalo, 1973-1976: Postdoctoral fellow, molecular immunology, Scripps Research Institute, La Jolla, Calif., 1973: PhD, biochemistry and immunology, State University of New York, Buffalo

RICHARD E SCHRICK, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BS UNIVERSITY OF MISSOURI 68, MEE UNIVERSITY OF MISSOURI 72, MD UNIVERSITY OF MISSOURI 77

CHARLES R SCHROCK, MD  Assistant Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF NOTRE DAME 86, MD UNIVERSITY OF MO COLUMBIA 91

MARK ANDREW SCHROEDER, MD  Research Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF TOLEDO 99, MD UNIVERSITY OF CINCINNATI 03

DOUGLAS J SCHUERER, MD  Associate Professor of Surgery (General Surgery), Surgery, BS ALLEGHENY COLLEGE 91, MD UNIVERSITY OF PITTSBURGH 95

RICHARD B SCHUESSLER, PHD  Research Professor of Surgery (Cardiothoracic Surgery), Surgery, BS UNIVERSITY OF MISSOURI 73, MS UNIVERSITY OF MISSOURI 74, PHD CLEMSON UNIVERSITY 77

ALEXANDER E SCHUETZ, MD  Instructor in Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 91, MD SAINT LOUIS UNIVERSITY 96

MARYLS E SCHUH, MD, BS  Instructor in Clinical Surgery (General Surgery), Surgery, BS UNIVERSITY OF NORTH DAKOTA 73, MD WASHINGTON UNIV IN ST. LOUIS 79, BS UNIVERSITY OF NORTH DAKOTA 77

JEFFREY I SCHULMAN, MD  Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry, BA YALE UNIVERSITY 70, MBA WASHINGTON UNIV IN ST. LOUIS 88, MD UNIVERSITY OF KENTUCKY 74

EARL R SCHULTZ, MD, BS  Associate Professor of Clinical Psychiatry, Psychiatry, BA SOUTHEAST MISSOURI ST UNVERS 52, MD WASHINGTON UNIV IN ST. LOUIS 55, BS UNIVERSITY OF MISSOURI 53

EARL R SCHULTZ, MD, BS  Professor of Clinical Neurology, Neurology, BA SOUTHEAST MISSOURI ST UNVERS 52, MD WASHINGTON UNIV IN ST. LOUIS 55, BS UNIVERSITY OF MISSOURI 53

PAUL SCHULTZ, MD  Instructor in Clinical Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY 84, MD UNIVERSITY OF MISSOURI 88

FREDERICK W SCHWAGGER, OD, BS  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS ILLINOIS COLLEGE OF OPTOMETRY 57, OD ILLINOIS COLLEGE OF OPTOMETRY 57, BS WASHINGTON UNIV IN ST. LOUIS 00

ALAN L SCHWARTZ, MD, PHD  Harriet B Spoehrer Professor of Pediatrics, Head of the Department of Pediatrics, Pediatrics, BA CASE WESTERN RESERVE UNIV 70, MD CASE WESTERN RESERVE UNIV 76, PHD CASE WESTERN RESERVE UNIV 74

ALAN L SCHWARTZ, MD, PHD  Professor of Developmental Biology, Developmental Biology, BA CASE WESTERN RESERVE UNIV 70, MD CASE WESTERN RESERVE UNIV 76, PHD CASE WESTERN RESERVE UNIV 74
Alan L Schwartz
Siteman Cancer Center, Harriet B. Spoehrer Professor and Chairman, Department of Pediatrics, Washington University School of Medicine, 1976–1978: Resident, medicine, Children's Hospital Medical Center, Boston, 1978–1979: Fellow, hematology-oncology, Children's Hospital Medical Center and Dana Farber Cancer Institute, Boston, 1974: PhD, pharmacology, Case Western Reserve University, Cleveland, 1976: MD, Case Western Reserve University, Board Certified; 1981: American Board of Pediatrics, General Pediatrics

Benjamin D Schwartz, MD, PhD
Adjunct Professor of Medicine, Professor of Clinical Medicine, Internal Medicine, BA Columbia College 65, MD School Not Listed 72, PhD School Not Listed 71

David B Schwartz, MD, PhD
Associate Professor of Medicine, Internal Medicine, BS University of Michigan 80, MA Washington University in St. Louis 87, MD Washington University in St. Louis 87, PhD Washington University in St. Louis 86

Julie K Schwart, MD, PhD
Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval), Radiation Oncology, BS Duke University 95, MD Washington University in St. Louis 04, PhD Washington University in St. Louis 04

Sally J Schware, Research Associate Professor of Radiology, Radiology, BS University of Iowa 71, MS University of Southern Calif 76

Nicole Joy Schwarze, PhD
Assistant Professor of Neurology, Neurology, BS UNIV OF MINNESOTA TWIN CITIES 97, MS SAINT LOUIS UNIVERSITY 00, PhD SAINT LOUIS UNIVERSITY 04

Todd J. Schwedt, MD
Assistant Professor of Anesthesiology, Anesthesiology, BS University of Missouri Columbia 97, MS University of Missouri 01

Todd J. Schwedt, MD
Assistant Professor of Neurology, Neurology, BS University of Missouri Columbia 97, MD University of Missouri 01

Allen Sclaroff, DDent
Professor of Clinical Otolaryngology (Oral Surgery), Otolaryngology, BA University of Colorado Boulder 68, DDent Temple University 72

Mitchell Scott, PhD
Clinical Research Assistant Professor of Medicine, Internal Medicine, BS Washington University in St. Louis 74, MS University of Missouri 77, PhD Washington University in St. Louis 82

Mitchell G Scott, PhD
Professor of Pathology and Immunology, Pathology & Immunology, BS Washington University in St. Louis 74, MS University of Missouri 77, PhD Washington University in St. Louis 82

Shaun Patrick Scott, PhD, BS
Instructor in Radiation Oncology, Radiation Oncology, BS Griffith University 91, PhD Griffith University 97, BS Griffith University 92

Lynne M Seacord, MD
Assistant Professor of Medicine, Internal Medicine, MD Washington University in St. Louis 83

Mary Seaton
Instructor in Neurology, Neurology, BS University of Missouri 77, MHS Washington University in St. Louis 96

Mary Seaton
Instructor in Occupational Therapy, Occupational Therapy, BS University of Missouri 77, MHS Washington University in St. Louis 96

Homayoun Sedighi, DDent
Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BA Indiana University Bloomington 83, DDent Washington University in St. Louis 87

Colleen Erika Seematter
Instructor in Clinical Pediatrics, Pediatrics

Christopher G Seep, OD
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA University of Missouri 71, OD University of MO ST Louis 84

Adelita Segovia Langley
Instructor in Clinical Psychiatry (Child Psychiatry), Psychiatry

Bradley J Segura
Assistant Professor of Surgery (Pediatric Surgery), Surgery

David Brian Seibel, OD
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD University of Missouri 87

Susumu Seino, MD, PhD
Adjunct Professor of Medicine, Internal Medicine, MD School Not Listed 74, PhD Kyoto University 82

David Seltzer, MD
Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, MD School Not Listed 93

Jay R Seltzer, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BA University of Missouri 87, MD University of Missouri 87

Clay F Semenkovich, MD
Herbert S Gasser Professor, Professor of Medicine, Internal Medicine, BA University of Virginia 77, MD Washington University in St. Louis 81
CLAY F SEMENKOVICH, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA UNIVERSITY OF VIRGINIA 77, MD WASHINGTON UNIV IN ST. LOUIS 81

JANICE SEMENKOVICH, MD  Associate Professor of Radiology, Radiology, BS YALE UNIVERSITY 77, MD WASHINGTON UNIV IN ST. LOUIS 81

ALOK SENGUPTA  Instructor in Emergency Medicine in Medicine, Internal Medicine

ROBERT M SENIOR, MD  Dorothy R and Hubert C Moog Professor of Pulmonary Diseases in Medicine, Internal Medicine, BAoberlin college 57, MLA WASHINGTON UNIV IN ST. LOUIS 97, MD GEORGE WASHINGTON UNIVERSITY 61

ROBERT M SENIOR, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA OBERLIN COLLEGE 57, MLA WASHINGTON UNIV IN ST. LOUIS 97, MD GEORGE WASHINGTON UNIVERSITY 61

DEBRA L SEOANE, MD  Instructor in Clinical Surgery (General Surgery), Surgery, MD UNIVERSITY OF MIAMI 86

JOSEPH MICHAEL SERIA, MD  Instructor in Clinical Medicine, Internal Medicine, BS ST VINCENT COLLEGE 64, MD SAINT LOUIS UNIVERSITY 68

JAMES F SERTL, MD  Instructor in Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 62, MD SAINT LOUIS UNIVERSITY 66

MARTHA PAPAY SEWALL, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 83, MD UNIVERSITY OF MISSOURI 85

Enbal Shacham  Siteman Cancer Center

GARY D SHACKELFORD, MD  Professor Emeritus of Radiology, Radiology, BA NORTHWESTERN UNIVERSITY 64, MD WASHINGTON UNIV IN ST. LOUIS 68

PENELLOPE G SHACKELFORD, MD  Professor Emerita of Pediatrics, Pediatrics, BS UNIV OF WISCONSIN MADISON 64, MD WASHINGTON UNIV IN ST. LOUIS 68

CHERILYNN MARIA SHADDING  Research Instructor in Genetics, Genetics

JEFFERY SCOTT SHAFER  Instructor in Emergency Medicine in Medicine, Internal Medicine

ATUL S SHAH  Instructor in Clinical Medicine, Internal Medicine

GAURAV KIRIT SHAH, MD  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD UNIVERSITY OF ILLINOIS 93

PURVI SHAH, MD  Instructor in Pediatrics, Pediatrics, BA RICE UNIVERSITY 96, MD BAYLOR UNIVERSITY 00

SONIA MALHOTRA SHAHRAWAT, MD  Instructor in Anesthesiology, Anesthesiology, BS TUFTS UNIVERSITY 01, MD BHARATI VIDYAPEETH MED COLLEGE 00

ANISA SHAKER  Instructor in Medicine, Internal Medicine

COURTNEY SHANDS, III, MD  Instructor in Clinical Surgery (Urologic Surgery), Surgery, BA STANFORD UNIVERSITY 78, MD VANDERBILT UNIVERSITY 82

KARL SHANKER, DDS  Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA WASHINGTON UNIV IN ST. LOUIS 75, DDS UNIVERSITY OF MISSOURI 78

WILLIAM D SHANNON, PHD  Associate Professor of Biostatistics, Biostatistics, BS SCHOOL NOT LISTED 85, MS UNIVERSITY OF MASSACHUSETTS 89, PHD UNIVERSITY OF PITTSBURGH 95

WILLIAM D SHANNON, PHD  Associate Professor of Biostatistics in Medicine, Internal Medicine, BS SCHOOL NOT LISTED 85, MS UNIVERSITY OF MASSACHUSETTS 89, PHD UNIVERSITY OF PITTSBURGH 95

JIAN-SU SHAO, MD  Research Instructor in Medicine, Internal Medicine, BS EAST CHINA INST. OF TECH. 78, MD SHANGHAI MEDICAL UNIVERSITY 80

JIEYA SHAO, PHD  Research Instructor in Neurology, Neurology, BS NANKAI UNIVERSITY 96, PHD OKLAHOMA ST UNIVERSITY 02

JIN-YU SHAO, PHD  Associate Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS SCHOOL NOT LISTED 88, MS SCHOOL NOT LISTED 91, PHD DUKE UNIVERSITY 97

LARRY J SHAPIRO, MD  Dean of the School of Medicine, Executive Vice Chancellor for Medical Affairs, Vice Chancellor & Dean, BS WASHINGTON UNIV IN ST. LOUIS 68, MD WASHINGTON UNIV IN ST. LOUIS 71

LARRY J SHAPIRO, MD  Spencer T and Ann W Olin Distinguished Professor of Pediatrics, Pediatrics, BS WASHINGTON UNIV IN ST. LOUIS 68, MD WASHINGTON UNIV IN ST. LOUIS 71
JOHN B SHAPLEIGH, II, MD Instructor in Clinical Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 46

ANGELA M. SHARKEY, MD Professor of Pediatrics, Pediatrics, BA CREIGHTON UNIVERSITY 82, MD SAINT LOUIS UNIVERSITY 86

AKASH SHARMA, MD Instructor in Radiology, Radiology, BS ROSS UNIV SCHOOL OF MEDICINE 95, MD ROSS UNIV SCHOOL OF MEDICINE 98

ANSHUMAN SHARMA, MD Associate Professor of Anesthesiology, Anesthesiology, BA GOVERNMENT MEDICAL COLLEGE 87, MD INSTITUTE OF MEDICAL SCIENCE 90

ASEEM SHARMA, MBBS Assistant Professor of Radiology, Radiology, MBBS ALL-INDIA INST OF MEDICAL SCI 92

SHIVAK SHARMA, MD Instructor in Medicine, Internal Medicine, BS OHIO STATE UNIVERSITY 02, MD OHIO STATE UNIVERSITY 06

VIJAY SHARMA, PHD Associate Professor of Radiology, Radiology, BS SCHOOL NOT LISTED 80, MS SCHOOL NOT LISTED 83, PHD SCHOOL NOT LISTED 87

GERALD STEPHEN SHATZ, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 70, MD WASHINGTON UNIV IN ST. LOUIS 74

ANDREY S SHAW, MD Emil R. Unanue Professor of Immunobiology in Pathology and Immunology, Howard Hughes Medical Institute Investigator in Pathology and Immunology, Pathology & Immunology, BA COLUMBIA UNIVERSITY 79, MD COLUMBIA UNIVERSITY 84

ELEANOR MARIA SHAW, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 78, MD UNIVERSITY OF MISSOURI 83

PAUL JOSEPH SHAW, PHD Assistant Professor of Neurobiology, Anatomy & Neurobiology, BA NIAGARA UNIVERSITY 85, MA SAN JOSE STATE UNIVERSITY 90, PHD UNIVERSITY OF CHICAGO 96

KATHLEEN C SHEEHAN, PHD Research Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF NOTRE DAME 80, PHD LOUIS UNIVERSITY 86

VIDAL T. SHEEN, MD Instructor in Clinical Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY 91, MD UNIVERSITY OF LOUISVILLE 95

PAUL W SHEFFNER, MD Assistant Professor of Clinical Psychiatry, Psychiatry, MD WASHINGTON UNIV IN ST. LOUIS 74

DAVID M. SHEINBEIN, MD Assistant Professor of Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF CA BERKELEY 87, MD SAINT LOUIS UNIVERSITY 95

AMY LYNN SHELDahl, MD Instructor in Medicine, Internal Medicine, BS IOWA STATE UNIVERSITY 02, MD WASHINGTON UNIV IN ST. LOUIS 06

YVETTE I SHELINE, MD Professor of Neurology, Neurology, BA HARVARD RADCLIFF 74, MA YALE UNIVERSITY 75, MD BOSTON UNIVERSITY 79

YVETTE I SHELINE, MD Professor of Psychiatry, Psychiatry, BA HARVARD RADCLIFF 74, MA YALE UNIVERSITY 75, MD BOSTON UNIVERSITY 79

YVETTE I SHELINE, MD Professor of Radiology, Radiology, BA HARVARD RADCLIFF 74, MA YALE UNIVERSITY 75, MD BOSTON UNIVERSITY 79

MOUNIR M SHENOUDA Instructor in Clinical Medicine, Internal Medicine

SHALINI SHENOY, MBBS, MD Associate Professor of Pediatrics, Pediatrics, BS M.G.R. MEDICAL UNIVERSITY 81, MBBS KASTURBA MEDICAL COLLEGE 85


SURENDRA SHENOY, MD, PHD Professor of Surgery (General Surgery), Surgery, BS SCHOOL NOT LISTED 80, MD SCHOOL NOT LISTED 84, PHD INSTITUTE OF MEDICAL SCIENCE 89

JAMES BANKS SHEPERD, III, MD Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA AMHERST COLLEGE 92, MD COLUMBIA UNIVERSITY 97

JOHN JOSEPH SHERIDAN, MD Instructor in Clinical Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF NOTRE DAME 65, MD WASHINGTON UNIV IN ST. LOUIS 69
Nasir H. Siddiqi  Siteman Cancer Center, Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Interventional Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1992-1993: Resident, internal medicine, Advocate Christ Medical Center, Oak Lawn, Ill., 1993-1995: Resident, internal medicine, State University of New York, Syracuse, 1997-2001: Resident, diagnostic radiology, Medical College of Virginia, Richmond, 2001-, 1990: MBBS, King Edward Medical University, Lahore, Pakistan, Primary Specialty: Interventional treatments for liver and urological cancer, Board Certified.; 2001: American Board of Radiology, Diagnostic Radiology

2002: American Board of Radiology, Vascular and Interventional Radiology

LABROS SIDOSSIS, PHD, MS, MA Adjunct Research Associate Professor of Medicine, Internal Medicine, BS ARISTOTLE UNIVERSITY 87, MA UNIVERSITY OF TEXAS AUSTIN 92, PHD UNIVERSITY OF TEXAS GALVESTON 94, MS UNIVERSITY OF TEXAS AUSTIN 92, MS QUEENS COLLEGE 90

ANDREW M SIEDLECKI, MD Instructor in Medicine, Internal Medicine, BA WHEATON COLLEGE 98, MD UNIVERSITY OF SOUTH FLORIDA 03

Barry A Siegel  Siteman Cancer Center, Professor of Radiology and Chief, Division of Nuclear Medicine, Washington University School of Medicine, 1969-1970: Intern, medicine, Barnes Hospital, St. Louis, 1970-1973: Resident, diagnostic radiology, and National Institute of General Medical Sciences fellow, nuclear medicine, Mallinckrodt Institute of Radiology, Washington University, St. Louis, 1969: MD, Washington University, St. Louis, Primary Specialty: Nuclear medicine and diagnostic radiology, Board Certified.; 1992: American Board of Radiology

American Board of Radiology, Diagnostic Radiology
American Board of Radiology, Nuclear Radiology

BARRY ALAN SIEGEL, MD Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 66, MD WASHINGTON UNIV IN ST. LOUIS 69

BARRY ALAN SIEGEL, MD Professor of Radiology, Vice Chair for Nuclear Medicine in Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 66, MD WASHINGTON UNIV IN ST. LOUIS 69

Cary L Siegel  Siteman Cancer Center, Associate Professor of Radiology, Division of Diagnostic Radiology, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1987-1992: Resident, radiology, University of Texas Medical Branch, Galveston, 1992-1993: Fellow, abdominal imaging, University of Michigan, Ann Arbor, 1987: MD, University of Michigan, Ann Arbor, Primary Specialty: Genitourinary radiology, abdominal imaging, Board Certified.; 1992: American Board of Radiology

CARY LYNN SIEGEL, MD Associate Professor of Radiology, Radiology, BS UNIVERSITY OF MICHIGAN 83, MD UNIVERSITY OF MICHIGAN 87

MARILYN J SIEGEL, MD Professor of Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 65, MD STATE UNIVERSITY OF NEW YORK 69

MARILYN J SIEGEL, MD Professor of Radiology in Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 65, MD STATE UNIVERSITY OF NEW YORK 69

CARLA J SIGEFRIED, MD Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA UNIVERSITY OF MO KANSAS CITY 89, MD UNIVERSITY OF MO KANSAS CITY 89

CHRISTINE A SIGMAN, MD Instructor in Clinical Medicine, Internal Medicine, BA SAINT LOUIS UNIVERSITY 91, MD SAINT LOUIS UNIVERSITY 96

CHARLES D SIGNORELLI, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SCHOOL NOT LISTED 57, OD SCHOOL NOT LISTED 57

JENNIFER N SILVA, MD Instructor in Pediatrics, Pediatrics, BA UNION COLLEGE NEW YORK 97, MD ST. GEORGE'S UNIVERSITY 02

MATTHEW J SILVA, PhD Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS CORNELL UNIVERSITY 82, MD CORNELL UNIVERSITY 84, PHD MASS INST OF TECHNOLOGY (MIT) 96

TODD B SILVERMAN Instructor in Clinical Neurology, Neurology

BARBARA SUE SILVERSTEIN, PHD Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, BS UNIVERSITY OF MISSOURI 78, PHD SAINT LOUIS UNIVERSITY 92

RANDY B SILVERSTEIN, MD Instructor in Clinical Medicine, Internal Medicine, MD UNIVERSITY OF MISSOURI

DAVID ELAN SIMCKES, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA SCHOOL NOT LISTED 83, MD SCHOOL NOT LISTED 88

NATHAN M SIMON, MD Assistant Professor of Clinical Psychiatry, Psychiatry, BS YALE UNIVERSITY 49, MS YALE
BARRY SMECKMAN, MD, PHD  Professor of Pathology and Immunology, Pathology & Immunology, BA LAFAYETTE COLLEGE 83, MD HARVARD UNIVERSITY 89, PHD HARVARD UNIVERSITY 89

CARL HUGH SMITH, MD  Professor Emeritus of Pediatrics, Pediatrics, BA SWARTHMORE COLLEGE 55, MD YALE UNIVERSITY 59

DEBORAH S SMITH, PHD  Adjunct Research Assistant Professor of Surgery (Urologic Surgery), Surgery, BA UNIVERSITY OF MISSOURI 85, MA WASHINGTON UNIV IN ST. LOUIS 87, PHD WASHINGTON UNIV IN ST. LOUIS 89

EMILY LOUISE SMITH, MD  Assistant Professor of Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 64, MD WASHINGTON UNIV IN ST. LOUIS 68

JAMES B SMITH, MD  Associate Professor Emeritus of Clinical Psychiatry, Psychiatry, BA UNIVERSITY OF MISSOURI 63, MD UNIVERSITY OF MISSOURI 67

JAMES L. SMITH, MD  Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 01, MD INDIANA UNIVERSITY INDIANAPOLI 06

JENNIFER H. SMITH, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF CALIFORNIA 95, MD WASHINGTON UNIV IN ST. LOUIS 99

JOSHUA C SMITH  Instructor in Clinical Pediatrics, Pediatrics

MATTHEW VERNON SMITH  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery

MORTON EDWARD SMITH, MD  Associate Dean Emeritus for Post-Graduate Education, Assoc Dean Curriculum, BS UNIVERSITY OF MARYLAND 56, MD UNIVERSITY OF MARYLAND 60

MORTON EDWARD SMITH, MD  Lecturer in Pathology and Immunology, Pathology & Immunology, BS UNIVERSITY OF MARYLAND 56, MD UNIVERSITY OF MARYLAND 60

MORTON EDWARD SMITH, MD  Professor Emeritus of Ophthalmology and Visual Sciences, Lecturer in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MARYLAND 56, MD UNIVERSITY OF MARYLAND 60

NANCY BLOOM SMITH, DPT, BS  Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF VIRGINIA 76, MS WASHINGTON UNIV IN ST. LOUIS 79, DPT WASHINGTON UNIV IN ST. LOUIS 02, BS WASHINGTON UNIV IN ST. LOUIS 84

NANCY BLOOM SMITH, DPT, BS  Assistant Professor of Physical Therapy, Physical Therapy, BA UNIVERSITY OF VIRGINIA 76, MS WASHINGTON UNIV IN ST. LOUIS 79, DPT WASHINGTON UNIV IN ST. LOUIS 02, BS WASHINGTON UNIV IN ST. LOUIS 84

PETER GAILLARD SMITH, MD, PHD  Assistant Professor of Clinical Otolaryngology, Otolaryngology, BS CLEMSON UNIVERSITY 67, ME PURDUE UNIVERSITY 70, MD UNIVERSITY OF SOUTH CAROLINA 76, PHD PURDUE UNIVERSITY 72

RAYMOND P SMITH, MD  Instructor in Clinical Medicine, Internal Medicine, BA VASSAR COLLEGE 80, MD UNIVERSITY OF VIRGINIA 84

STACEY L SMITH, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA NORTHWESTERN UNIVERSITY 86, MD NORTHWESTERN UNIVERSITY 91

TIMOTHY W. SMITH, MD, PHD  Associate Professor of Medicine, Internal Medicine, BS DUKE UNIVERSITY 86, MD DUKE UNIVERSITY 93, PHD OXFORD UNIVERSITY 89

CHRISTOPHER D SMYSER, MD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF IOWA 98, MD UNIVERSITY OF IOWA 04

MATTHEW D SMYTH, MD  Associate Professor of Neurological Surgery, Neurological Surgery, BA CORNELL UNIVERSITY 92, MD UNIVERSITY OF CA SAN FRANCISCO 96

MATTHEW D SMYTH, MD  Associate Professor of Pediatrics, Pediatrics, BA CORNELL UNIVERSITY 92, MD UNIVERSITY OF CA SAN FRANCISCO 96

BARBARA JOY SNIDER, MD, PHD  Associate Professor of Neurology, Neurology, BA NORTHWESTERN UNIVERSITY 79, MD UNIVERSITY OF TEXAS SOUTHWEST 89, PHD UNIVERSITY OF TEXAS SOUTHWEST 89

JULES M SNITZER, DDENT  Instructor in Clinical Otolaryngology (DDS), Otolaryngology, MS SAINT LOUIS UNIVERSITY 60, DDENT WASHINGTON UNIV IN ST. LOUIS 55

CLAUD RANDALL SNOWDEN, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS ILLINOIS COLLEGE OF OPTOMETRY 72, OD ILLINOIS COLLEGE OF OPTOMETRY 74

ABRAHAM Z SNYDER, MD, PHD  Research Associate Professor of Neurology, Neurology, BA COLUMBIA UNIVERSITY 70, MD STATE UNIVERSITY OF NEW YORK 81, PHD ROCKEFELLER UNIVERSITY 77
ABRAHAM Z SNYDER, MD, PHD Research Associate Professor of Radiology, Radiology, BA COLUMBIA UNIVERSITY 70, MD STATE UNIVERSITY OF NEW YORK 81, PHD ROCKEFELLER UNIVERSITY 77

LAWRENCE H SNYDER, MD, PHD Associate Professor of Neurobiology, Anatomy & Neurobiology, MS UNIVERSITY OF ROCHESTER 92, MD UNIVERSITY OF ROCHESTER 92, PHD UNIVERSITY OF ROCHESTER 92

ERICA JEAN SODERGREN WEINSTOCK, PHD Research Associate Professor of Genetics, Genetics, BS UNIVERSITY OF ROCHESTER 70, PhD MASS INST OF TECHNOLOGY (MIT) 77

ALLEN D SOFFER, MD Instructor in Clinical Medicine, Internal Medicine, BA EMORY UNIVERSITY, MD UNIVERSITY OF MISSOURI 83

RICHARD S SOHN, MD Associate Professor of Neurology, Neurology, BS BROOKLYN COLLEGE 64, MD UNIVERSITY OF CHICAGO 68

NARESHKUMAR J SOLANKI Assistant Professor of Clinical Pediatrics, Pediatrics

STEVEN LEE SOLOMON, MD Assistant Professor of Clinical Radiology, Radiology, BA NORTHWESTERN UNIVERSITY 81, MD UNIVERSITY OF CHICAGO 85

RAND WASHBURN SOMMER, MD Associate Professor of Clinical Medicine, Internal Medicine, BS DAVIDSON COLLEGE 76, MD WASHINGTON UNIV IN ST. LOUIS 80

MITCHELL S. SOMMERS, PHD Chair, Danforth Human Studies Committee, Human Research Protection, BS GEORGETOWN UNIVERSITY 82, PHD UNIVERSITY OF MICHIGAN 90

SHENG-KWEI SONG, PHD Associate Professor of Radiology, Radiology, BS TAMKANG UNIVERSITY 81, MS UNIVERSITY OF ALABAMA 86, PHD WASHINGTON UNIV IN ST. LOUIS 90

TAMMY SHIM SONN, MD Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, BS UNIVERSITY OF CHICAGO 99, MD RUSH UNIVERSITY 04

CRAIG H SORCE, OD Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA SOUTHERN ILLINOIS UNIVERSITY 88, OD UNIVERSITY OF MISSOURI 92

Steven M Sorscher Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1985-1988: Intern and resident, internal medicine, University of Michigan, Ann Arbor, 1988-1991: Fellow, hematology/oncology, University of California, San Diego, 1991-1994: National Institutes of Health Physician-Scientist Award, University of California, 1981: BS, biology, Yale University, New Haven, Conn., 1985: MD, University of Michigan, Ann Arbor, Primary Specialty: Breast and gastrointestinal cancer, hereditary cancer syndromes, Board Certified:, 1989: American Board of Internal Medicine, Internal Medicine

1991, 2001: American Board of Internal Medicine, Medical Oncology

STEVEN M. SORSCHER, MD Assistant Professor of Medicine, Internal Medicine, BS YALE UNIVERSITY 81, MD UNIVERSITY OF MICHIGAN 85

FLORENTINA SOTO LUCAS Research Assistant Professor of Ophthalmology and Visual Sciences (Pending Executive Faculty Approval), Ophthalmology & Visual Sci

PABLO SOTO, MD, BS Assistant Professor of Medicine, Internal Medicine, BS PRINCETON UNIVERSITY 87, MD DUKE UNIVERSITY 91, BS PRINCETON UNIVERSITY 87, MD DUKE UNIVERSITY 91

PABLO SOTO, MD, BS Assistant Professor of Radiology, Radiology, BS PRINCETON UNIVERSITY 87, MD DUKE UNIVERSITY 91, BS PRINCETON UNIVERSITY 87, MD DUKE UNIVERSITY 91

HANI CHARLES SOUDAH, MD, PHD Assistant Professor of Clinical Medicine, Internal Medicine, MD SCHOOL NOT LISTED 83, PHD SCHOOL NOT LISTED 88

ROBERT ELLIS SOUTHDARD, MD Assistant Professor of Surgery (General Surgery) (Pending Executive Faculty Approval), Surgery, BS UNIVERSITY OF ALABAMA 97, MD UNIVERSITY OF SOUTH ALABAMA 01

WILLIAM F SOUTHWORTH, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 69, MD WASHINGTON UNIV IN ST. LOUIS 75

MICHAEL L SPEARMAN, MD Instructor in Clinical Medicine, Internal Medicine, BS KANSAS STATE UNIVERSITY 78, MD UNIVERSITY OF KANSAS MEDICAL 82

GERSHON J SPECTOR, MD Professor of Otolaryngology, Otolaryngology, BA JOHNS HOPKINS UNIVERSITY MEDIC 60, MD UNIVERSITY OF MARYLAND 64

Gershon J. Spector Siteman Cancer Center, Professor of Otolaryngology, Division of Head and Neck Surgical Oncology, Washington University School of Medicine, 1964-1965: Resident, surgery, Beth Israel Hospital and Harvard Medical School, Boston, 1965-1966: Resident, surgery, Sinai Hospital, Baltimore, 1966-1969: Resident, otolaryngology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, 1968-1969:, 1964: MD, University of Maryland, Baltimore, Primary Specialty: Head and neck
cancer, thyroid cancer, facial nerve surgery, Board Certified., 1970: American Board of Otolaryngology

WILLIAM MARSHAL SPEES, PHD Research Instructor in Radiology, Radiology, BS TRUMAN STATE UNIVERSITY 93, PHD WASHINGTON UNIV IN ST. LOUIS 99

JOHN SPERTUS Adjunct Professor of Medicine, Internal Medicine

TARA V. SPEVACK, PHD Instructor in Clinical Neurology, Neurology, BS MCGILL UNIVERSITY 87, MS UNIVERSITY OF FLORIDA 94, PHD UNIVERSITY OF FLORIDA 97

ROBERT D SPEWAK, MD Instructor in Clinical Pediatrics, Pediatrics, BA DRAKE UNIVERSITY 75, MD SAINT LOUIS UNIVERSITY 79

CRAIG A SPIEGEL, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 78, MD CASE WESTERN RESERVE UNIV 82

JOHN G SPIETH, PHD Research Associate Professor of Genetics, Genetics, BS PURDUE UNIVERSITY 70, PHD UNIVERSITY OF WASHINGTON 78

JOHN CHARLES SPITLER, MD Instructor in Anesthesiology, Anesthesiology, BS UNIVERSITY OF MISSOURI COLUMBIA 98, MD UNIVERSITY OF MISSOURI COLUMBIA 03

EDWARD LAWRENCE SPITZNAGEL, JR, PHD Professor of Biostatistics, Biostatistics, BS XAVIER UNIVERSITY 62, MS UNIVERSITY OF CHICAGO 63, PHD UNIVERSITY OF CHICAGO 65

THERESA M SPITZNAGLE, DPT Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS MARQUETTE UNIVERSITY 86, MHS WASHINGTON UNIV IN ST. LOUIS 94, DPT WASHINGTON UNIV IN ST. LOUIS 06

THERESA M SPITZNAGLE, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS MARQUETTE UNIVERSITY 86, MHS WASHINGTON UNIV IN ST. LOUIS 94, DPT WASHINGTON UNIV IN ST. LOUIS 06

ALAN R SPIVACK, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 60, MD SAINT LOUIS UNIVERSITY 64

MARK H SPURRIER, MD Instructor in Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA KANSAS STATE UNIVERSITY 76, MD WASHINGTON UNIV IN ST. LOUIS 80

MYTHILI SRINIVASAN, MD, PHD Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF MADRAS 81, MS MADURAI KAMARAJ UNIVERSITY 83, MD SAINT LOUIS UNIVERSITY 96, PHD SAINT LOUIS UNIVERSITY 91

CHOTCHAI SRISURO, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 67

DANIELLE R ST LEGER Instructor in Clinical Pediatrics, Pediatrics

ERIK CHRISTIAN STABELL, MD Instructor in Clinical Medicine, Internal Medicine, BA NEW COLLEGE CALIFORNIA 76, MD SCHOOL NOT LISTED 83

Philip D Stahl Siteman Cancer Center, Edward C. Mallinckrodt Jr. Professor and Chair of Cell Biology and Physiology, Washington University Medical School, 1968-1970: Postdoctoral fellow, molecular biology, Vanderbilt University, Nashville, Tenn., 1967: PhD, pharmacology, West Virginia University, Morgantown

PHILIP DAMIEN STAHL, PHD Edward Mallinckrodt Jr Professor of Cell Biology and Physiology, Head of Department of Cell Biology and Physiology, Cell Biology & Physiology, BS WEST LIBERTY ST COLLEGE 64, PHD WEST VIRGINIA UNIVERSITY 67

KLAUS J STAISCH, MD Associate Professor Emeritus of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD SCHOOL NOT LISTED 66

KATHERINE ANNE STAMATAKIS, PHS Assistant Professor of Surgery (General Surgery), Surgery, BS UNIVERSITY OF MO COLUMBIA 96, MS SAINT LOUIS UNIVERSITY IN ST. LOUIS 00, PHS UNIVERSITY OF MICHIGAN 04

Katherine A. Stamatakis Siteman Cancer Center, Assistant Professor of Surgery, Division of General Surgery, Washington University School of Medicine, 2004-2007: Fellowship, epidemiology, Johns Hopkins University, Baltimore, 2000: MPH, epidemiology, Saint Louis University, 2004: PhD, epidemiology, University of Michigan, Ann Arbor

DAVID M. STAMILIO, MD Associate Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS BUCKNELL UNIVERSITY 98, MS UNIVERSITY OF PENNSYLVANIA 03, MD HAHNEMANN UNIVERSITY 92

THADDEUS S. STAPPENBECK, MD, PHD Assistant Professor of Developmental Biology, Developmental Biology, BA NORTHWESTERN UNIVERSITY 87, MD NORTHWESTERN UNIVERSITY 95, PHD NORTHWESTERN UNIVERSITY 94

THADDEUS S. STAPPENBECK, MD, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BA NORTHWESTERN UNIVERSITY 87, MD NORTHWESTERN UNIVERSITY 95, PHD NORTHWESTERN UNIVERSITY 94

SUSAN L STARK, PHD Assistant Professor of Neurology, Neurology, BS ALMA COLLEGE 88, MS WASHINGTON UNIV IN ST. LOUIS 89, PHD UNIVERSITY OF MO COLUMBIA 98
SUSAN L STARK, PHD Assistant Professor of Occupational Therapy, Occupational Therapy, BS ALMA COLLEGE 88, MS WASHINGTON UNIV IN ST. LOUIS 89, PHD UNIVERSITY OF MO COLUMBIA 98

NORMAN P STEELE, MD Instructor in Clinical Pediatrics, Pediatrics, BA INDIANA UNIVERSITY BLOOMINGTON 68, MD INDIANA UNIVERSITY BLOOMINGTON 72

ALAN JOEL STEIN, MD Assistant Professor of Clinical Surgery (Urologic Surgery), Surgery, BS UNIV OF WISCONSIN MADISON 72, MD WAYNE STATE UNIVERSITY 76

KAREN SUE STEIN Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science

PAUL M STEIN, MD Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF ROCHESTER 67, MD SAINT LOUIS UNIVERSITY 71

PAUL S. STEIN, PHD Professor of Physical Therapy, Physical Therapy, BA HARVARD UNIVERSITY 64, MA UNIVERSITY OF CALIFORNIA 65, PHD STANFORD UNIVERSITY 70

PHYLLIS K STEIN, PHD Research Associate Professor of Medicine, Internal Medicine, BA BARNARD COLLEGE 62, M ED UNIVERSITY OF VIRGINIA 87, PHD UNIVERSITY OF VIRGINIA 90

RICHARD IAN STEIN, PHD Research Assistant Professor of Medicine, Internal Medicine, PHD ARIZONA STATE UNIVERSITY 00

JOSEPH H STEINBACH, PHD Professor of Neurobiology, Anatomy & Neurobiology, BA REED COLLEGE 68, PHD UNIVERSITY OF CA SAN DIEGO 73

JOSEPH H STEINBACH, PHD Russell and Mary Shelden Professor of Anesthesiology, Anesthesiology, BA REED COLLEGE 68, PHD UNIVERSITY OF CA SAN DIEGO 73

THOMAS H STEINBERG, MD Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA HARVARD UNIVERSITY 74, MD NEW YORK UNIVERSITY 78

THOMAS H STEINBERG, MD Associate Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 74, MD NEW YORK UNIVERSITY 78

ROBERT M STEINER, MD Instructor in Radiology, Radiology, BS WASHINGTON JEFFERSON COLLEGE 61, MD UNIVERSITY OF PITTSBURGH 65

WILLIAM F STENSON, MD Dr Nicholas V Costrini Professor of Medicine, Internal Medicine, BS PROVIDENCE COLLEGE 67, MD WASHINGTON UNIV IN ST. LOUIS 71

William F Stenson Siteman Cancer Center, Dr. Nicholas V. Costrini Professor of Gastroenterology and Inflammatory Bowel Disease, Washington University School of Medicine, 1971-1976: Intern and resident, medicine, Washington University, St. Louis, 1976-1978: Fellow, gastroenterology, Washington University, 1978-1979: Research fellow, immunology, Washington University, 1971: MD, Washington University, St. Louis, Primary Specialty: Gastrointestinal cancer, inflammatory bowel disease, gastroenterology, Board Certified,, 1976: American Board of Internal Medicine, Internal Medicine

1979: American Board of Internal Medicine, Gastroenterology

ANDREA L STEPHENS, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF CA SAN DIEGO 82, MS UNIVERSITY OF CA LOS ANGELES 83, MD UNIVERSITY OF CA LOS ANGELES 87

RANDALL S STERKEL, MD Instructor in Clinical Pediatrics, Pediatrics, BA DUKE UNIVERSITY 89, MD WASHINGTON UNIV IN ST. LOUIS 93

SHEILA STEWART-WIGGLESWORTH, PHD Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIVERSITY OF MINNESOTA 90, PHD SCHOOL NOT LISTED 96

SHEILA STEWART-WIGGLESWORTH, PHD Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF MINNESOTA 90, PHD SCHOOL NOT LISTED 96

Sheila A Stewart Siteman Cancer Center, Assistant Professor of Cell Biology and Physiology, Washington University School of Medicine, 1996-1998: Postdoctoral fellow, University of California, Los Angeles, 1998-2003: Postdoctoral fellow, Whitehead Institute for Biomedical Research, Cambridge, Mass., 1996: PhD, microbiology and immunology, University of California, Los Angeles

TODD J. STEWART, MD Assistant Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF WASHINGTON 89, MD UNIVERSITY OF WASHINGTON 95

TODD J. STEWART, MD Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF WASHINGTON 89, MD UNIVERSITY OF WASHINGTON 95

ARTHUR WALDO STICKLE, JR, MD Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, MD UNIVERSITY OF OKLAHOMA 43
ANITA R STIFFELMAN, MD  Associate Professor of Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 83, MD NEW YORK MEDICAL COLLEGE 87

WAYNE A STILLINGS, MD  Assistant Professor of Clinical Psychiatry, Psychiatry, BA OBERLIN COLLEGE 71, MD WASHINGTON UNIV IN ST. LOUIS 75

JENNIFER S STITH, PHD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF CALIFORNIA 76, MS UNIVERSITY OF SOUTHERN CALIF 79, PHD WASHINGTON UNIV IN ST. LOUIS 94

JENNIFER S STITH, PHD  Associate Director for Entry-Level Education in Physical Therapy, Division Director for Education in Physical Therapy, Physical Therapy, BS UNIVERSITY OF CALIFORNIA 76, MS UNIVERSITY OF SOUTHERN CALIF 79, PHD WASHINGTON UNIV IN ST. LOUIS 94

KEITH EVAN STOCKERL-GOLDSTEIN, MD  Associate Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 86, MD UNIVERSITY OF CA LOS ANGELES 91

JAMES ANDREW STOKES, MD  Instructor in Clinical Medicine, Internal Medicine, BA STANFORD UNIVERSITY 76, MD UNIVERSITY OF MISSOURI 84

CHRISTIAN D STONE, MD  Associate Professor of Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 90, MD UNIVERSITY OF CALIFORNIA 95

BRADLEY P STONER, MD, PHD  Associate Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 81, MA MCGILL UNIVERSITY 84, MD INDIANA UNIVERSITY BLOOMINGTON 87, PHD INDIANA UNIVERSITY BLOOMINGTON 89

JOHN A STOPPLE, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA GRINNELL COLLEGE 62, MD UNIV OF WISCONSIN MADISON 69

MARTHA STORANDT, PHD  Professor of Neurology (Psychology), Neurology, BA WASHINGTON UNIV IN ST. LOUIS 60, PHD WASHINGTON UNIV IN ST. LOUIS 66

GREGORY A STORCH, MD  Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 69, MD NEW YORK UNIVERSITY 73

GREGORY A STORCH, MD  Professor of Molecular Microbiology, Molecular Microbiology, BA HARVARD UNIVERSITY 69, MD NEW YORK UNIVERSITY 73

GREGORY A STORCH, MD  Ruth L. Siteman Professor of Pediatrics, Pediatrics, BA HARVARD UNIVERSITY 69, MD NEW YORK UNIVERSITY 73

STEPHEN P STORFER, MD  Instructor in Clinical Medicine, Internal Medicine, BA DARTMOUTH COLLEGE 80, MD SCHOOL NOT LISTED 86

GARY D STORMO, PHD  Joseph Erlanger Professor, Professor of Genetics, Genetics, BS CALIFORNIA INSTITUTE TECHNOLO 72, MA UNIVERSITY OF COLORADO BOULDER 75, PHD UNIVERSITY OF COLORADO BOULDER 81

GINA M STORY, PHD  Assistant Professor of Anesthesiology, Anesthesiology, BS ALLEGHENY COLLEGE 95, PHD KENT ST UNIVERSITY 01

GINA M STORY, PHD  Assistant Professor of Neurobiology, Anatomy & Neurobiology, BS ALLEGHENY COLLEGE 95, PHD KENT ST UNIVERSITY 01

STEVEN M STRASBERG, MD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, MD UNIVERSITY OF TORONTO 63

STEVEN M STRASBERG, MD  Pruett Professor of Surgery (General Surgery), Surgery, MD UNIVERSITY OF TORONTO 63

Steven M Strasberg  Siteman Cancer Center, Pruett Professor of Surgery, Section of Hepatobiliary-Pancreatic and Gastrointestinal Surgery, Washington University School of Medicine, 1963-1964: Rotating intern, Toronto General Hospital, 1965-1969: Resident, surgery, University of Toronto, 1969-1971: Research fellow, surgery, Boston University, 1963: MD, University of Toronto, Primary Specialty: Hepatobiliary, pancreatic and upper gastrointestinal surgery, Board Certified:, 1968: Fellow, Royal College of Surgeons of Canada

ROBERT H STRASHUN, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BA YESHIVA UNIVERSITY 78, MA YESHIVA UNIVERSITY 78, MD NEW YORK UNIVERSITY 82

WILLIAM L STRAUBE  Research Associate Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF ILLINOIS 83, MEE WASHINGTON UNIV IN ST. LOUIS 92

SUSAN KAY STRECKER, DPT  Assistant Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF KANSAS 80, MA WASHINGTON UNIV IN ST. LOUIS 95, DPT WASHINGTON UNIV IN ST. LOUIS 07

SUSAN KAY STRECKER, DPT  Assistant Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF KANSAS 80, MA WASHINGTON UNIV IN ST. LOUIS 95, DPT WASHINGTON UNIV IN ST. LOUIS 07
SUSAN KAY STRECKER, DPT  Instructor in Occupational Therapy (Pending Dean's Approval), Occupational Therapy, BS UNIVERSITY OF KANSAS 80, MA WASHINGTON UNIV IN ST. LOUIS 95, DPT WASHINGTON UNIV IN ST. LOUIS 07

M. ANNE STREET, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS DEFIANCE COLLEGE 68, MA UNIVERSITY OF CONNECTICUT 70, MD UNIVERSITY OF ILLINOIS 76

JAMES W STRICKLAND, MD  Visiting Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS INDIANA UNIVERSITY BLOOMINGTON 58, MD INDIANA UNIVERSITY 62

JAMES F STRIETER, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS SCHOOL NOT LISTED 53, MBA SOUTHERN ILL UNIV EDWARDSVILLE 88, OD SCHOOL NOT LISTED 54

CATHERINE STRILEY  Research Assistant Professor of Psychiatry, Psychiatry

SETH A STROPE  Assistant Professor of Surgery (Urologic Surgery), Surgery

MALCOLM H STROUD, MD  Professor Emeritus of Otolaryngology, Otolaryngology, MD UNIVERSITY OF BIRMINGHAM 45

MICHAEL J. STRUBE, PHD  Professor of Physical Therapy, Physical Therapy, BS UNIVERSITY OF NEBRASKA 78, MS UNIVERSITY OF UTAH 80, PHD UNIVERSITY OF UTAH 82

ROBERT C STRUNK, MD  Professor of Pediatrics, Pediatrics, BA NORTHWESTERN UNIVERSITY 64, MS NORTHWESTERN UNIVERSITY 68, MD NORTHWESTERN UNIVERSITY 68

PATRICK MICHAEL STUART, PHD  Research Associate Professor of Molecular Microbiology, Molecular Microbiology, BS UNIVERSITY OF CALIFORNIA 74, MS CALIFORNIA STATE UNIVERSITY 80, PHD NORTHWESTERN UNIVERSITY 85

JUDITH M. STUCKI-SIMEON, MD  Instructor in Clinical Pediatrics, Pediatrics, MD UNIV OF WISCONSIN MADISON 87

XIONG SU, PHD  Research Assistant Professor of Medicine, Internal Medicine, BS BEIJING UNIVERSITY 98, PHD WASHINGTON UNIV IN ST. LOUIS 04

YI SU, PHD  Instructor in Radiology, Radiology, BS UNIVERSITY OF SCIENCE & TECH 99, PHD MAYO CLINIC 06

ROSA M SUAREZ-SOLAR, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF PUERTO RICO 90, MD SCHOOL NOT LISTED 91

BRIAN K SUAREZ, PHD  Associate Professor of Genetics, Genetics, BA SCHOOL NOT LISTED 67, MA UNIVERSITY OF CA LOS ANGELES 72, PHD UNIVERSITY OF CA LOS ANGELES 74

BRIAN K SUAREZ, PHD  Professor of Psychiatry, Psychiatry, BA SCHOOL NOT LISTED 67, MA UNIVERSITY OF CA LOS ANGELES 72, PHD UNIVERSITY OF CA LOS ANGELES 74

HAMSA SUBRAMANIAN  Instructor in Clinical Medicine, Internal Medicine, BS ST. JOSEPH'S CONVENT - TRICHY 86

ABBIE L SUDVARG  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

LISA SUFFIAN, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF MO KANSAS CITY 90, MD UNIVERSITY OF MO KANSAS CITY 96

TOSHIFUMI SUGATANI, DDENT, PHD  Research Instructor in Pediatrics (Pending Dean's Approval), Pediatrics, DDENT MEIJI UNIVERSITY 91, PHD MEIJI UNIVERSITY 03

SARAH ELIZABETH SULLIVAN, MD  Instructor in Pediatrics, Pediatrics, BA UNIV OF WISCONSIN MADISON 96, MD LOYOLA UNIVERSITY CHICAGO 04

SHELBY A SULLIVAN, MD  Instructor in Medicine, Internal Medicine, MD WASHINGTON UNIV IN ST. LOUIS 01

KAHARU SUMINO, MD  Assistant Professor of Medicine, Internal Medicine, BA SCHOOL NOT LISTED 88, MD SCHOOL NOT LISTED 92

BRIAN PATRICK SUMNER, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, OD ILLINOIS COLLEGE OF OPTOMETRY 78

Walton Sumner II  Siteman Cancer Center, Associate Professor of Medicine, Division of General Medical Sciences, Washington University School of Medicine, 1985: MD, University of Texas Health Science Center, Dallas

WALTON SUMNER, II, MD  Associate Professor of Medicine, Internal Medicine, BA RICE UNIVERSITY 81, MD SOUTHWESTERN UNIVERSITY 85

RAEL D SUNDY, MD  Assistant Professor of Neurology, Neurology, MD UNIVERSITY OF THE WITWATERSRA 90

YUN JU SUNG, PHD  Assistant Professor of Biostatistics, Biostatistics, PHD UNIVERSITY OF MINNESOTA 03

YUN JU SUNG, PHD  Assistant Professor of Psychiatry, Psychiatry, PHD UNIVERSITY OF MINNESOTA 03
HERBERT SUNSHINE, MD  Instructor in Clinical Surgery (Urologic Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 50, MD WASHINGTON UNIV IN ST. LOUIS 54

IN SOOK SUNWOO, MD  Instructor Emerita in Neurology, Neurology, MD SCHOOL NOT LISTED 59

KAMESWARAN SURENDRAN, PHD  Instructor in Developmental Biology, Developmental Biology, BS BELOIT COLLEGE 96, PHD WASHINGTON UNIV IN ST. LOUIS 02

RAMA SURESH, MBBS  Instructor in Medicine, Internal Medicine, MBBS UNIVERSITY OF MADRAS 93

Rama Suresh  Siteman Cancer Center, Instructor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1995-1998: Resident, State University of New York Upstate Medical University, Syracuse, 2002-2004: Fellow, hematology and oncology, Washington University, St. Louis, 1993: MD, Madras Medical College, Madras, India, Primary Specialty: Clinical oncology, breast cancer, gastrointestinal cancer, Board Certified., 1998: American Board of Internal Medicine, Internal Medicine

2004: American Board of Internal Medicine, Medical Oncology

JAGDISH C SURI, MD  Assistant Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, BS SCHOOL NOT LISTED 54, MD SCHOOL NOT LISTED 64

VINOD SURI  Instructor in Clinical Psychiatry (Child Psychiatry) (Full-Time at Hawthorn Children's Psychiatric Hospital), Psychiatry

NOAH SUSMAN, MD  Professor Emeritus of Clinical Radiology, Radiology, BA WASHINGTON UNIV IN ST. LOUIS 48, MD WASHINGTON UNIV IN ST. LOUIS 52

SIORBHAN SUTCLIFFE, PHD, MS  Assistant Professor of Surgery (General Surgery), Surgery, BS PRINCETON UNIVERSITY 98, M PH JOHNS HOPKINS UNIVERSITY 01, PHD JOHNS HOPKINS UNIVERSITY 05, MS JOHNS HOPKINS UNIVERSITY 04

RUDEE SUWANNASRI, MD  Instructor in Clinical Medicine, Internal Medicine, BS CHIANG MAI UNIVERSITY 71, MD CHIANG MAI UNIVERSITY 73

DRAGAN M SVRAKIC, MD, PHD  Professor of Psychiatry, Psychiatry, MD UNIVERSITY OF BELGRADE 78, PHD UNIVERSITY OF BASEL 89


ROBERT A SWARM, MD  Professor of Anesthesiology, Anesthesiology, BA OBERLIN COLLEGE 78, MD WASHINGTON UNIV IN ST. LOUIS 83


1993: American Board of Anesthesiology, Pain Management

Wojciech A Swat  Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Section of Immunology and Molecular Pathology, Washington University School of Medicine, 1993: Postdoctoral fellow, Basel Institute for Immunology, Basel, Switzerland, 1994-1998: Research fellow, medicine, Children's Hospital Boston, 1994-1998: Research fellow, genetics, Harvard Medical School, Boston, 1989: MSc, molecular biology, University of Wroclaw, Wroclaw, Poland, 1992: PhD, immunology, Polish Academy of Sciences, Wroclaw

WOJCIECH A. SWAT, PHD  Associate Professor of Pathology and Immunology, Pathology & Immunology, MS UNIVERSITY OF WARSAW 89, PHD UNIVERSITY OF BASEL 92

FREDERICK SWEET, PHD  Professor of Reproductive Biology in Obstetrics and Gynecology, Obstetrics & Gynecology, BS BROOKLYN COLLEGE 60, PHD UNIVERSITY OF ALBERTA 68

STUART C SWEET, MD, PHD  Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MICHIGAN 91, MD UNIVERSITY OF MICHIGAN 90, PHD UNIVERSITY OF MICHIGAN 89

AMANDA SWEETLAND  Instructor in Clinical Pediatrics, Pediatrics

ELZBIETA ANNA SWIETLICKI, PHD  Research Instructor in Medicine, Internal Medicine, MS SCHOOL NOT LISTED 75, PHD SCHOOL NOT LISTED 81

Susan C Sylvia  Siteman Cancer Center, Clinical Psychologist and Program Director, Medical Crisis Coping Center, St. Louis Children's Hospital, Primary Specialty: Pediatric psychology

SUZAN C. SYLVIAS  Instructor in Clinical Pediatrics, Pediatrics

SAMER D TABBAL, MD  Assistant Professor of Neurology, Neurology, BS AMERICAN UNIVERSITY OF BEIRUT 89, MD AMERICAN UNIVERSITY OF BEIRUT 93
PAUL H TAGHERT, PHD  Professor of Neurobiology, Anatomy & Neurobiology, BA REED COLLEGE 75, PHD UNIVERSITY OF WASHINGTON 81

YUAN-CHUAN TAI, PHD  Associate Professor of Radiology, Radiology, BS NATIONAL TSING HUA UNIVERSITY 88, MEE UNIVERSITY OF TEXAS ARLINGTON 92, PHD UNIVERSITY OF CA LOS ANGELES 98

Yuan-Chuan Tai  Siteman Cancer Center, Associate Professor of Radiology, Division of Radiological Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 2000-2001: Postdoctoral fellow, molecular imaging, University of California, Los Angeles, 1992: MS, electrical engineering, University of Texas, Arlington, 1998: PhD, biomedical physics, University of California, Los Angeles

CHANDRAKANT TAILOR, MD  Assistant Professor of Clinical Radiology, Radiology, MD MEDICAL COLLEGE OF INDIA 70

AKIKO TAKEDA, PHD  Research Assistant Professor of Pathology and Immunology, Pathology & Immunology, PHD QUEEN'S UNIVERSITY 81

BENJAMIN R TAN, MD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF THE PHILIPPINES 85, MD UNIVERSITY OF THE PHILIPPINES 90

Benjamin R Tan  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Medical Oncology, Washington University School of Medicine, 1991-1994: Resident, internal medicine, Sinai Hospital of Baltimore, 1994-1997: Clinical fellow, hematology and medical oncology, Washington University, St. Louis, 1997-1998: Research fellow, hematology and medical oncology, Washington University, 1990: MD, University of the Philippines, Manila, Primary Specialty: Gastrointestinal cancer, Board Certified:, 1996: American Board of Internal Medicine, Internal Medicine

1997: American Board of Internal Medicine, Medical Oncology

DAVID TAN, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BS UNION COLLEGE NEBRASKA 92, MD LOMA LINDA UNIVERSITY 97

JENS ANDREAS TAN, MD  Instructor in Anesthesiology, Anesthesiology, MD UNIVERSITY OF TORONTO 01

NADINE D. TANENBAUM, MD  Assistant Professor of Medicine, Internal Medicine, MD UNIVERSITY OF MIAMI 98

CHANGGUO TANG, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS PEKING UNIVERSITY 70, MA PEKING UNIVERSITY 81, PHD MASS INST OF TECHNOLOGY (MIT) 90

KONGSAK TANPHAICHITR, MD  Professor of Clinical Medicine, Internal Medicine, MD SIRIRAJ MEDICAL SCHOOL 70

RICHARD S TAO, MD  Instructor in Emergency Medicine in Medicine, Internal Medicine, BA INDIANA STATE UNIVERSITY 91, MIM INDIANA STATE UNIVERSITY 99, MD INDIANA STATE UNIVERSITY 95

LAWRENCE R TARBOX, PHD, AA  Research Assistant Professor of Radiology, Radiology, BA BRIGHAM YOUNG UNIVERSITY 78, PHD UNIVERSITY OF UTAH 89, AA BARSTOW COMMUNITY COLLEGE 73

PHILLIP IRWIN TARR, MD  Melvin E Carnahan Professor of Pediatrics, Pediatrics, BA BROWN UNIVERSITY 75, MD YALE UNIVERSITY 80

PHILLIP IRWIN TARR, MD  Professor of Molecular Microbiology, Molecular Microbiology, BA BROWN UNIVERSITY 75, MD YALE UNIVERSITY 80

SANDRA L TATE, MD  Instructor in Clinical Neurology, Neurology, BA SCHOOL NOT LISTED, MD SOUTHERN ILLINOIS UNIVERSITY 87


MARIE E TAYLOR, MD  Assistant Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF WASHINGTON 73, MD UNIVERSITY OF WASHINGTON 82


JEFFREY H TECKMAN, MD  Adjunct Assistant Professor of Pediatrics, Pediatrics, BA MIAMI UNIVERSITY 85, MD WASHINGTON UNIV IN ST. LOUIS 89

SHARLENE A TEEFEOY, MD  Professor of Radiology, Radiology, BN MERCY COLLEGE OF DETROIT 73, MD UNIVERSITY OF HAWAII 80

Sharlene A Teefey  Siteman Cancer Center, Professor of Radiology, Division of Diagnostic Radiology, Section of Abdominal Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1980-1984: Resident, radiology, Mayo Graduate School of Medicine, Rochester, Minn., 1984-1985: Fellow, abdominal imaging, Mayo Graduate School of Medicine, 1980:
MD, University of Hawaii, Honolulu, Primary Specialty: Abdominal imaging, ultrasound, Board Certified; American Board of Radiology

STEVEN L TEITELBAUM, MD Messing Professor of Pathology and Immunology, Pathology & Immunology, BA COLUMBIA UNIVERSITY 60, MD WASHINGTON UNIV IN ST. LOUIS 64

Steven L Teitelbaum Siteman Cancer Center, Wilma and Roswell Messing Professor of Pathology, Division of Anatomic Pathology, Washington University School of Medicine, 1964: MD, Washington University, St. Louis, Primary Specialty: Bone pathology, Board Certified; 1970: American Board of Pathology, Anatomic Pathology and Clinical Pathology

RENE TEMPELHOFF, MD Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF LYON 74

RENE TEMPELHOFF, MD Professor of Neurological Surgery, Neurological Surgery, MD UNIVERSITY OF LYON 74

ALAN ROBERT TEMPLETON, PHD Professor of Genetics, Genetics, BA WASHINGTON UNIV IN ST. LOUIS 69, MA UNIVERSITY OF MICHIGAN 72, PHD UNIVERSITY OF MICHIGAN 72

MARÍSSA MORNİNG TENENBAUM, MD Assistant Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS UNIV OF WISCONSIN MADISON 98, MD WASHINGTON UNIV IN ST. LOUIS 02

HAIBING TENG, PHD Research Assistant Professor of Medicine, Internal Medicine, BS THE FOURTH MILITARY MEDICAL UNIVERSITY OF CHINA 75, MS THIRD MILITARY MEDICAL UNIVERSITY OF CHINA 82, PHD UNIVERSITY OF MIAMI FLORIDA 91

ARNOLD S TEPPER, MD Instructor in Clinical Medicine, Internal Medicine, BS SCHOOL NOT LISTED 66, MD UNIVERSITY OF MISSOURI 70

RAGHU P TERKONDA, MD Assistant Professor of Anesthesiology, Anesthesiology, BS UNIVERSITY OF MISSOURI 83, MD UNIVERSITY OF MISSOURI 87

JESSIE L TERNBERG, MD, PHD Professor Emeritus of Surgery in Pediatrics, Pediatrics, BA GRINNELL COLLEGE 46, MD WASHINGTON UNIV IN ST. LOUIS 53, PHD UNIVERSITY OF TEXAS AUSTIN 50

JESSIE L TERNBERG, MD, PHD Professor Emeritus of Surgery (Pediatric Surgery), Surgery, BA GRINNELL COLLEGE 46, MD WASHINGTON UNIV IN ST. LOUIS 53, PHD UNIVERSITY OF TEXAS AUSTIN 50

WANDA T TERRELL, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 75, MD WASHINGTON UNIV IN ST. LOUIS 79

KRISTEN A TERRILL Instructor in Clinical Pediatrics, Pediatrics

PAUL M TESSER, MD, PHD Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Science, BS MASS INST OF TECHNOLOGY (MIT) 81, MD STATE UNIV OF NY STONYBROOK 91, PHD STATE UNIV OF NY STONYBROOK 90

BRADLEY TERRILL THACH, MD Professor of Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 64, MD WASHINGTON UNIV IN ST. LOUIS 68

ROBERT EDWARDS THACH, PHD Professor of Biochemistry and Molecular Biophysics, Biochemistry & Molec Biophysics, BA PRINCETON UNIVERSITY 61, PHD HARVARD UNIVERSITY 64

W. THOMAS THACH, JR, MD Professor of Neurobiology, Anatomy & Neurobiology, BA PRINCETON UNIVERSITY 59, MD HARVARD UNIVERSITY 64

W. THOMAS THACH, JR, MD Professor of Neurology, Neurology, BA PRINCETON UNIVERSITY 59, MD HARVARD UNIVERSITY 64

W. THOMAS THACH, JR, MD Professor of Physical Therapy, Physical Therapy, BA PRINCETON UNIVERSITY 59, MD HARVARD UNIVERSITY 64

LARISSA BRYKA THACKRAY Research Instructor in Pathology and Immunology, Pathology & Immunology

PREMAL H THAKER, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA VILLANOVA UNIVERSITY 95, MS UNIVERSITY OF TEXAS HOUSTON 04, MD ALLEGHENY COLLEGE 97

Premal H. Thaker Siteman Cancer Center, Assistant Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology, Washington University School of Medicine, 1997-1999: Intern and resident, obstetrics and gynecology, Allegheny University Hospital-City Avenue, Philadelphia, 1999-2002: Resident, obstetrics and gynecology, University of Pennsylvania, Philadelphia, 2002-2006: Fellow, gynecologic oncology, University of Pennsylvania, Philadelphia, 2004: MS, cancer biology, University of Texas Graduate School of Biomedical Sciences, Houston, Primary Specialty: Gynecologic cancer

SHILPA THAKUR Instructor in Clinical Medicine, Internal Medicine

ISOLDE E THALMANN, PHD Research Professor Emeritus of Otolaryngology, Otolaryngology, BS WASHINGTON UNIV IN ST. LOUIS 68, MA WASHINGTON UNIV IN ST. LOUIS 73, PHD CALIFORNIA WESTERN 82

RUEDIGER THALMANN, MD Lecturer in Otolaryngology, Professor Emeritus of Otolaryngology, Otolaryngology, MD
WILLIAM GENE TOTTY, MD  Professor of Radiology, Radiology, BA DAVID LIPSCOMB UNIVERSITY 69, MD UNIVERSITY OF TENNESSEE 75

DWIGHT A TOWLER, MD, PHD  Professor of Developmental Biology, Developmental Biology, BA MOORHEAD STATE UNIVERSITY 83, MD WASHINGTON UNIV IN ST. LOUIS 89, PHD WASHINGTON UNIV IN ST. LOUIS 89

DWIGHT A TOWLER, MD, PHD  Professor of Medicine, Internal Medicine, BA MOORHEAD STATE UNIVERSITY 83, MD WASHINGTON UNIV IN ST. LOUIS 89, PHD WASHINGTON UNIV IN ST. LOUIS 89

ROBERT R TOWNSEND, MD, PHD  Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS CENTENARY COLLEGE 72, MS TULANE UNIVERSITY 76, MD TULANE UNIVERSITY 76, PHD JOHNS HOPKINS UNIVERSITY 82

ROBERT R TOWNSEND, MD, PHD  Associate Professor of Medicine, Internal Medicine, BS CENTENARY COLLEGE 72, MS TULANE UNIVERSITY 76, MD TULANE UNIVERSITY 76, PHD JOHNS HOPKINS UNIVERSITY 82

ELIZABETH A TRACY, MD  Instructor in Clinical Medicine, Internal Medicine, BS MARQUETTE UNIVERSITY 82, MD UNIV OF WISCONSIN MILWAUKEE 86

SCOTT A. TRAIL, MD  Instructor in Clinical Pediatrics, Pediatrics, BA SAINT LOUIS UNIVERSITY 85, MD UNIVERSITY OF MO COLUMBIA 90

ERICA J TRAXEL, MD  Assistant Professor of Surgery (Urologic Surgery), Surgery, BS TEXAS A&M UNIVERSITY 98, MD BEAUFORT TECHNICAL COLLEGE 02

NORMAN EDWIN TREVATHAN, III, MD  Adjunct Professor of Neurology, Neurology, BS DAVID LIPSCOMB UNIVERSITY 77, MS EMORY UNIVERSITY 82, MD EMORY UNIVERSITY 82

JEANNE M TRIMMER, MD  Instructor in Clinical Pediatrics, Pediatrics, BS NORTHWESTERN UNIVERSITY 86, MD NORTHWESTERN UNIVERSITY 88

SANDEEP KUMAR TRIPATHY, MD, PHD  Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 90, MD UNIVERSITY OF CHICAGO 98, PHD UNIVERSITY OF CHICAGO 95

Sandeep K. Tripathy  Siteman Cancer Center, Instructor of Medicine, Division of Gastroenterology, Washington University School of Medicine, 1998-2001: Intern and resident, internal medicine, Washington University, St. Louis, 2001-2004: Fellow, gastroenterology, Washington University, 1995. PhD, pathology, University of Chicago, 1998. MD, University of Chicago, Primary Specialty: Gastroenterology, Board Certified.; 2001: American Board of Internal Medicine, Internal Medicine

2006: American Board of Internal Medicine, Gastroenterology

CYNTHIA TROIANO, DOST  Instructor in Clinical Medicine, Internal Medicine, BA NORTHWESTERN UNIVERSITY 81, DOST SCHOOL NOT LISTED 86

HEATHER L. TRUE, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS UNIV OF WISCONSIN MADISON 92, MS UNIVERSITY OF ILLINOIS 95, PHD UNIVERSITY OF ILLINOIS 98

ELBERT P TRULOCK, III, MD  Rosemary and I Jerome Flance Professor of Pulmonary Medicine in Medicine, Internal Medicine, BS EMORY UNIVERSITY 68, MD EMORY UNIVERSITY 78

LINDA MEI-LIN TSAI, MD  Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA NORTHWESTERN UNIVERSITY 90, MD NORTHWESTERN UNIVERSITY 95

GARLAND R TSCHUDIN, MD  Instructor in Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MISSOURI 71, MD UNIVERSITY OF MISSOURI 75

GLADYS TSE, MD, BS  Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA SAINT LOUIS UNIVERSITY 97, MD SOUTHERN ILLINOIS UNIVERSITY 01, BS SAINT LOUIS UNIVERSITY 97, BS SAINT LOUIS UNIVERSITY 97

GEORGE S TSENG, MD  Assistant Professor of Anesthesiology, Anesthesiology, BA BOSTON UNIVERSITY 92, MD BOSTON UNIVERSITY 92

ZHUDE TU, PHD, MS  Research Assistant Professor of Radiology, Radiology, BS BEIJING NORMAL UNIVERSITY 88, MS BEIJING NORMAL UNIVERSITY 91, PHD BEIJING NORMAL UNIVERSITY 95, MS UNIVERSITY OF ST THOMAS 00

GARTH D TUBBS  Assistant Professor Emeritus of Occupational Therapy, Occupational Therapy, BS SCHOOL NOT LISTED 53

DAVID J TUCKER, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF NOTRE DAME 77, MD SAINT LOUIS UNIVERSITY 81

DOLORES R TUCKER, MD  Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BS SAINT MARY'S COLLEGE 58, MD WASHINGTON UNIV IN ST. LOUIS 74

ROBERT L. TUGGEY, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BS ROCHESTER
THOMAS H TUNG, MD  Associate Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS DUKE UNIVERSITY 86, MD UNIVERSITY OF MARYLAND 90

JOHN W TURK, MD, PHD  Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 70, MD WASHINGTON UNIV IN ST. LOUIS 76, PHD WASHINGTON UNIV IN ST. LOUIS 76

JOHN W TURK, MD, PHD  Professor of Pathology and Immunology, Pathology & Immunology, BA WASHINGTON UNIV IN ST. LOUIS 70, MD WASHINGTON UNIV IN ST. LOUIS 76, PHD WASHINGTON UNIV IN ST. LOUIS 76

MICHAEL P TURMELLE, MD  Assistant Professor of Pediatrics, Pediatrics, BA BOWDOIN COLLEGE 94, MD JOHNS HOPKINS UNIVERSITY 98

YUMIRLE PADRON TURMELLE, MD, AA  Assistant Professor of Pediatrics, Pediatrics, BA UNIVERSITY OF MIAMI 95, MD UNIVERSITY OF FLORIDA 00, AA MIAMI DADE COMMUNITY COLLEGE 93

HERMAN TURNER, DDENT  Instructor in Clinical Otolaryngology, Otolaryngology, MS GEORGETOWN UNIVERSITY 51, DDENT SAINT LOUIS UNIVERSITY 46

JACQUELINE SUE TURNER, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA MASS INST OF TECHNOLOGY (MIT) 79, MD TULANE UNIVERSITY 83

PETER G TUTEUR, MD  Associate Professor of Medicine, Internal Medicine, BA JOHNS HOPKINS UNIVERSITY MEDIC 62, MD UNIVERSITY OF ILLINOIS 66

Peter G Tuteur  Siteman Cancer Center, Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine, 1966-1969: Resident, internal medicine, Michael Reese Hospital and Medical Center, Chicago, 1969-1971: Research fellow, cardiopulmonary physiology, University of Pennsylvania, Philadelphia, 1966: MD, University of Illinois, Urbana-Champaign, Primary Specialty: Lung cancer, Board Certified: 1972: American Board of Internal Medicine, Internal Medicine

1972: American Board of Internal Medicine, Pulmonary Disease

SARAH ANN TYCAST, MD  Instructor in Pediatrics, Pediatrics, BA STANFORD UNIVERSITY 98, MD SAINT LOUIS UNIVERSITY 03

ROBERT LAWRENCE Tychsen, MD  Professor of Neurobiology, Anatomy & Neurobiology, BS GEORGETOWN UNIVERSITY 75, MD GEORGETOWN UNIVERSITY 79

ROBERT LAWRENCE Tychsen, MD  Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS GEORGETOWN UNIVERSITY 75, MD GEORGETOWN UNIVERSITY 79

ROBERT LAWRENCE Tychsen, MD  Professor of Ophthalmology and Visual Sciences in Pediatrics, Pediatrics, BS GEORGETOWN UNIVERSITY 75, MD GEORGETOWN UNIVERSITY 79

STACY LYNNE TYLKA, DPT  Instructor in Orthopaedic Surgery, Orthopaedic Surgery, BS SAINT LOUIS UNIVERSITY 02, DPT WASHINGTON UNIV IN ST. LOUIS 09

STACY LYNNE TYLKA, DPT  Instructor in Physical Therapy, Physical Therapy, BS SAINT LOUIS UNIVERSITY 02, DPT WASHINGTON UNIV IN ST. LOUIS 09

ELLEN TWINING TYSON  Assistant Professor Emerita of Occupational Therapy, Occupational Therapy, BA SYRACUSE UNIVERSITY 49, MA SYRACUSE UNIVERSITY 50

APRIL L TYUS  Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 95

ROSALIE MAY UCHANSKI, PHD  Assistant Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS UNIVERSITY OF ILLINOIS CHICAGO 78, MS MASS INST OF TECHNOLOGY (MIT) 81, PHD MASS INST OF TECHNOLOGY (MIT) 88

ROSALIE MAY UCHANSKI, PHD  Research Assistant Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF ILLINOIS CHICAGO 78, MS MASS INST OF TECHNOLOGY (MIT) 81, PHD MASS INST OF TECHNOLOGY (MIT) 88

JOHN H UHLEMANN, MD  Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BA GRINNELL COLLEGE 67, MD WASHINGTON UNIV IN ST. LOUIS 71

Emil R Unanue  Siteman Cancer Center, Professor of Pathology and Immunology, Washington University School of Medicine, 1962-1965: Research fellow, experimental pathology, Scripps Clinic and Research Foundation, La Jolla, Calif., 1966-1968: Research fellow, immunology, National Institute for Medical Research, London, 1960: MD, University of Havana, Havana, Cuba

EMIL RAPHAEL UNANUE, MD  Paul and Ellen Lacy Professor of Pathology and Immunology, Pathology & Immunology, BS INSTITUTE OF SECONDARY EDUCATI 52, MD HAVANA UNIVERSITY 60

RAVINDRA UPPALURI, MD, PHD  Assistant Professor of Otolaryngology, Otolaryngology, BA CARLETON COLLEGE 83, MD
UNIVERSITY OF MINNESOTA 95, PHD UNIVERSITY OF MINNESOTA 95

Ravindra Uppaluri  Siteman Cancer Center, Assistant Professor of Otolaryngology, Division of Head and Neck Surgical Oncology, Washington University School of Medicine, 1995-1996: Intern, Washington University, St. Louis, 1996-2000: Resident, Washington University, 1990: MD, University of Minnesota, Minneapolis, 1993: PhD, molecular genetics, University of Minnesota, Primary Specialty: Head and neck cancer; chronic sinus disease; parotid and thyroid malignancies; melanoma, Board Certified:, 2001: American Board of Otolaryngology

ZSOLT URBAN, PHD  Assistant Professor of Genetics, Genetics, MS ATTILA JOZSEF UNIVERSITY 97, PHD SEMMELWEIS UNIVERSITY OF MED 97

ZSOLT URBAN, PHD  Assistant Professor of Medicine, Internal Medicine, MS ATTILA JOZSEF UNIVERSITY 97, PHD SEMMELWEIS UNIVERSITY OF MED 97

ZSOLT URBAN, PHD  Assistant Professor of Pediatrics, Pediatrics, MS ATTILA JOZSEF UNIVERSITY 97, PHD SEMMELWEIS UNIVERSITY OF MED 97

GEOFFREY L UY, MD, BA  Assistant Professor of Medicine, Internal Medicine, BA CORNELL UNIVERSITY 96, MA WASHINGTON UNIV IN ST. LOUIS 01, MD WASHINGTON UNIV IN ST. LOUIS 01, BA CORNELL UNIVERSITY 96

AKSHAYA J VACHHARAJANI, MBBS, MD  Assistant Professor of Pediatrics, Pediatrics, MBBS TOPIWALA NATIONAL MED COLLEGE 84, MD UNIVERSITY OF BOMBAY 86

LORA MAUREEN VALENTE, PHD  Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, PHD WASHINGTON UNIV IN ST. LOUIS 06

LORA MAUREEN VALENTE, PHD  Associate Professor of Otolaryngology, Otolaryngology, PHD WASHINGTON UNIV IN ST. LOUIS 06

LORA MAUREEN VALENTE, PHD  Director of Audiology Studies in Audiology and Communication Sciences, Prgm in Aud & Commun.Science, PHD WASHINGTON UNIV IN ST. LOUIS 06

MICHAEL VALENTE, PHD  Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BA ADELPHI UNIV 70, MS ADELPHI UNIV 72, PHD UNIVERSITY OF ILLINOIS 75

MICHAEL VALENTE, PHD  Professor of Otolaryngology (Audiology), Otolaryngology, BA ADELPHI UNIV 70, MS ADELPHI UNIV 72, PHD UNIVERSITY OF ILLINOIS 75

ALBERT LEE VAN AMBURG, III, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 68, MD WASHINGTON UNIV IN ST. LOUIS 72

DOROTHY J. VAN BUREN, PSYD  Research Assistant Professor of Psychiatry, Psychiatry, PSYD LOUISIANA ST UNIVERSITY 87

LINDA R VAN DILLEN, PHD  Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF MISSOURI 79, MS WASHINGTON UNIV IN ST. LOUIS 85, PHD WASHINGTON UNIV IN ST. LOUIS 94

MICHELE VAN EERDEWEGH, MD  Instructor in Clinical Psychiatry, Psychiatry, MD SCHOOL NOT LISTED 70

DAVID C VAN ESSEN, PHD  Head of the Department of Anatomy and Neurobiology, Edison Professor of Neurobiology, Anatomy & Neurobiology, BS CALIFORNIA INSTITUTE TECHNOLO 67, PHD HARVARD UNIVERSITY 71

GEORGE FREDERIC VAN HARE, III, MD  Louis Larrick Ward Professor of Pediatrics, Pediatrics, BS BATES COLLEGE 76, MD UNIVERSITY OF CONNECTICUT 80

GREGORY PAUL VAN STAVERN, MD  Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS LA SALLE UNIVERSITY 89, MD PENNSYLVANIA STATE UNIVERSITY 93

RENEE BAILEY VAN STAVERN, MD  Associate Professor of Neurology, Neurology, BA TEXAS A&M UNIVERSITY 91, MD UNIV TEXAS HEALTH SCIENCE CTR 97

JEFFREY A. VANDER KOOI, MD  Instructor in Clinical Psychiatry, Psychiatry, BS UNIVERSITY OF IOWA 97, MD UNIVERSITY OF IOWA 02

ANDREA VANNUCCI, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD UNIVERSITY OF MILAN 89

PATRICIA VANVALKENBURGH, PHD  Instructor in Medicine, Internal Medicine, BS HANOVER COLLEGE 90, PHD OHIO STATE UNIVERSITY 96

SWARUP VARADAY, MBBS  Instructor in Anesthesiology, Anesthesiology, MBBS ANDHRA UNIVERSITY 89

EDWARD F VASTOLA, MD  Professor Emeritus of Neurology, Neurology, BS YALE UNIVERSITY 45, MD COLUMBIA UNIVERSITY 47
SURESH VEDANTHAM, MD  Professor of Radiology, Radiology, BA NORTHWESTERN UNIVERSITY 88, MD UNIVERSITY OF CHICAGO 92

SURESH VEDANTHAM, MD  Professor of Surgery (General Surgery), Surgery, BA NORTHWESTERN UNIVERSITY 88, MD UNIVERSITY OF CHICAGO 92

VIJAYA M VEMULAKONDA, MD, JD  Assistant Professor of Surgery (Urologic Surgery), Surgery, BS GEORGE WASHINGTON UNIVERSITY 93, MD UNIVERSITY OF MISSISSIPPI MED 00, JD HARVARD UNIVERSITY 96

EMMANUEL A VENKATESAN  Instructor in Clinical Medicine, Internal Medicine


1999: Royal College of Physicians, London, Urology

THOMAS J VERALDI, DDENT  Instructor in Clinical Otolaryngology, Otolaryngology, BS MORAVIAN COLLEGE 76, MS WASHINGTON UNIV IN ST. LOUIS 88, DDENT WASHINGTON UNIV IN ST. LOUIS 79

LAIRD HENRY VERMONT  Instructor in Clinical Pediatrics, Pediatrics

GARRY M. VICKAR  Instructor in Clinical Psychiatry, Psychiatry

TOM O VIDEEN, PHD  Research Professor of Neurology, Neurology, BA CARLETON COLLEGE 70, PHD UNIVERSITY OF WASHINGTON 81

TOM O VIDEEN, PHD  Research Professor of Radiology, Radiology, BA CARLETON COLLEGE 70, PHD UNIVERSITY OF WASHINGTON 81

WAYNE A VIERS, MD  Associate Professor of Clinical Otolaryngology, Otolaryngology, BS PHILLIPS UNIVERSITY 52, MD UNIVERSITY OF OKLAHOMA 56

Teresa J Vietti  Siteman Cancer Center, Professor Emeritus of Pediatrics, Division of Hematology and Oncology, Washington University School of Medicine, 1953-1954: Intern, pediatrics, St. Louis Children's Hospital, 1954-1956: Assistant resident and chief resident, St. Louis Children's Hospital, 1956-1958: Resident, hematology, Children's Hospital, Detroit, 1953: MD, Baylor University, Houston, Board Certified:, American Board of Pediatrics, Pediatrics

American Board of Pediatrics, Pediatric Hematology-Oncology

TERESA JANE VIETTI, MD  Professor Emeritus of Pediatrics, Professor Emeritus of Radiology, Pediatrics, BA RICE UNIVERSITY 49, MD BEAUFORT TECHNICAL COLLEGE 53

RAVI VIJ, MBBS  Associate Professor of Medicine, Internal Medicine, BS DELHI UNIVERSITY 91, MBBS MAULANA AZAD MEDICAL COLLEGE 91

ANITHA VIJAYAN, MD  Associate Professor of Medicine, Internal Medicine, MD UNIVERSITY OF THE WEST INDIES 90

HARIS G. VIKIS, PHD  Research Assistant Professor of Surgery (General Surgery), Surgery, BS QUEEN'S UNIVERSITY 97, PHD UNIVERSITY OF MICHIGAN 03

Haris G. Vikis  Siteman Cancer Center, Research Assistant Professor of Surgery, Division of General Surgery, Washington University School of Medicine, 2003-2004: Postdoctoral fellow, neurobiology, Salk Institute for Biological Research, La Jolla, Calif., 2003: PhD, biochemistry, University of Michigan, Ann Arbor

HERBERT W VIRGIN, IV, MD, PHD  Head of the Department of Pathology and Immunology, Mallinckrodt Professor of Pathology and Immunology, Pathology & Immunology, BA HARVARD UNIVERSITY 77, MD HARVARD UNIVERSITY 85, PHD HARVARD UNIVERSITY 85

HERBERT W VIRGIN, IV, MD, PHD  Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 77, MD HARVARD UNIVERSITY 85, PHD HARVARD UNIVERSITY 85

HERBERT W VIRGIN, IV, MD, PHD  Professor of Molecular Microbiology, Molecular Microbiology, BA HARVARD UNIVERSITY 77, MD HARVARD UNIVERSITY 85, PHD HARVARD UNIVERSITY 85

RAVI K VISWANATHAN  Instructor in Medicine (Pending Dean's Approval), Internal Medicine

ANDREI G VLASSENKO, MD, PHD  Research Assistant Professor of Radiology, Radiology, MD MOSCOW MED STOMATOLOHY INST 87, PHD INSTITUTE OF NEUROLOGY 91

KATIE DIEU THU VO, MD, BS  Associate Professor of Radiology, Radiology, BA WELLESLEY COLLEGE 86, MD CORNELL UNIVERSITY 91, BS MASS INST OF TECHNOLOGY (MIT) 86
WILLARD B WALKER, MD  Associate Professor Emeritus of Clinical Surgery (General Surgery), Surgery, BA WASHINGTON UNIV IN ST. LOUIS 93, MD WASHINGTON UNIV IN ST. LOUIS 46

LEONARD LEWIS WALL, MD, PhD, BS  Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF KANSAS 72, MS MONASH UNIVERSITY 01, MD UNIVERSITY OF KANSAS 83, PHD OXFORD UNIVERSITY 83, BS OXFORD UNIVERSITY 74

MICHAEL HAROLD WALL, MD  Associate Professor of Anesthesiology, Anesthesiology, MD DARTMOUTH COLLEGE 87

MICHAEL HAROLD WALL, MD  Associate Professor of Surgery (Cardiothoracic Surgery), Surgery, MD DARTMOUTH COLLEGE 87

COLLEEN M WALLACE, MD  Instructor in Pediatrics, Pediatrics, BS UNIVERSITY OF NOTRE DAME 97, MD WASHINGTON UNIV IN ST. LOUIS 01

DAVID WALLACE, MD  Instructor in Clinical Medicine, Internal Medicine, BA SAINT ANSELM COLLEGE 80, MD SAINT LOUIS UNIVERSITY 84

JEROLD W WALLIS, MD  Associate Professor of Radiology, Radiology, BS YALE UNIVERSITY 76, MS STANFORD UNIVERSITY 81, MD STANFORD UNIVERSITY 81

JOHN WILLIAM WALLIS, PhD  Research Instructor in Genetics, Genetics, BS UNIVERSITY OF CALIFORNIA 75, MS WASHINGTON UNIV IN ST. LOUIS 98, PHD UNIVERSITY OF CALIFORNIA 83

DAVID A WALLS, MD  Instructor in Clinical Medicine, Internal Medicine, BA SOUTHERN ILLINOIS UNIVERSITY 79, MD SOUTHERN ILLINOIS UNIVERSITY 82

JAMES W WALSH, MD  Assistant Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 50, MD WASHINGTON UNIV IN ST. LOUIS 54

MATTHEW JOHN WALTER, MD  Assistant Professor of Genetics, Genetics, BS THE AMERICAN UNIVERSITY 90, MD SAINT LOUIS UNIVERSITY 95

MATTHEW JOHN WALTER, MD  Assistant Professor of Medicine, Internal Medicine, BS THE AMERICAN UNIVERSITY 90, MD SAINT LOUIS UNIVERSITY 95

Matthew J. Walter  Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Bone Marrow Transplantation, Washington University School of Medicine, 1995-1998: Intern and resident, medicine, Johns Hopkins University, Baltimore, Md., 1998-2004: Clinical and research fellow, hematology and oncology, Washington University, St. Louis, 1999-2000: Chief resident, Johns Hopkins University, 1995: MD, Saint Louis University, Board Certified: 1998: American Board of Internal Medicine, Internal Medicine

2002: American Board of Internal Medicine, Hematology

2002 American Board of Internal Medicine, Medical Oncology

WILLIAM LEE WALTER, MD  Assistant Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA DE PAUL UNIVERSITY 50, MD OHIO STATE UNIVERSITY 54

RICHARD COBURN WALTERS, MD  Instructor in Clinical Medicine (Dermatology), Internal Medicine, BS UNIVERSITY OF ILLINOIS 69, MD WASHINGTON UNIV IN ST. LOUIS 73

DONALD E WALTER, JR, OD  Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF HOUSTON 71, OD UNIVERSITY OF HOUSTON 72

STEPHEN R WALTMAN, MD  Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS MASS INST OF TECHNOLOGY (MIT) 61, MBA WASHINGTON UNIV IN ST. LOUIS, MD YALE UNIVERSITY 64

BRUCE J WALZ, MD  Associate Professor of Clinical Radiation Oncology, Radiation Oncology, BA WASHINGTON UNIV IN ST. LOUIS 62, MD WASHINGTON UNIV IN ST. LOUIS 66

JENNIFER ANNE WAMBACH, MD  Instructor in Pediatrics, Pediatrics, BS VANDERBILT UNIVERSITY 97, MD VANDERBILT UNIVERSITY 01

ANDREA WANG-GILLAM, MD, BS  Assistant Professor of Medicine, Internal Medicine, BS OUACHITA BAPTIST UNIVERSITY 93, MD UNIVERSITY OF AR LITTLE ROCK 01, BS OUACHITA BAPTIST UNIVERSITY 93

DAVID WANG, PHD  Assistant Professor of Molecular Microbiology, Molecular Microbiology, BS STANFORD UNIVERSITY 92, PHD MASS INST OF TECHNOLOGY (MIT) 98

DAVID WANG, PHD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS STANFORD UNIVERSITY 92, PHD MASS INST OF TECHNOLOGY (MIT) 98

Hanlin L Wang  Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Division of Anatomic Pathology, Washington University School of Medicine, 1998-2000: Resident, pathology, University of Chicago, 2000-2001: Fellow,
gastrointestinal pathology, University of Chicago, 1985: MD, Wuhan University, Wuhan, China, 1992: PhD, biomedical sciences, Mayo Clinic, Rochester, Minn., Board Certified, American Board of Pathology, Anatomical and Clinical Pathology

I-WEN WANG, MD, PHE Assistant Professor of Surgery (Cardiothoracic Surgery), Surgery, BE CASE WESTERN RESERVE UNIV 86, ME CASE WESTERN RESERVE UNIV 91, MD CASE WESTERN RESERVE UNIV 92, PHE CASE WESTERN RESERVE UNIV 96

JEAN S WANG Assistant Professor of Medicine, Internal Medicine
JEAN S WANG Assistant Professor of Surgery (General Surgery), Surgery
JEN-CYHONG WANG, PHD Research Assistant Professor of Psychiatry, Psychiatry, BS NATIONAL CHUNG HSING U 74, MS NATIONAL TAIWAN UNIVERSITY 76, PHD UNIVERSITY OF ARIZONA 86

LAWRENCE L. WANG, MD, PHD Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA HARVARD UNIVERSITY 93, MD WASHINGTON UNIV IN ST. LOUIS 01, PHD WASHINGTON UNIV IN ST. LOUIS 01

LIHONG WANG, PHD Professor of Radiology, Radiology, BS HUAZHONG UNIVERSITY OF SCIENCE 84, MS HUAZHONG UNIVERSITY OF SCIENCE 87, PHD RICE UNIVERSITY 92

Lihong V. Wang Siteman Cancer Center

XIAOLI WANG, MD, PHD Research Instructor in Pathology and Immunology, Pathology & Immunology, MS SCHOOL NOT LISTED 89, MD THIRD MILITARY MEDICAL UNIV 77, PHD UNIVERSITY OF ARKANSAS 01

XIAOWEI WANG, PHD Assistant Professor of Radiation Oncology, Radiation Oncology, BS NANKAI UNIVERSITY 93, PHD TUFTS UNIVERSITY 00

YIAN WANG, MD, PHD Professor of Surgery (General Surgery), Surgery, MD BEIJING MEDICAL UNIVERSITY 82, PHD SCHOOL NOT LISTED 90

Yian Wang Siteman Cancer Center, Associate Professor of Surgery, Division of General Surgery, Washington University School of Medicine, 1982: BS/MD, Beijing Medical College, 1990: PhD, Medical College of Ohio, Toledo, Ohio

MARK EDWARD WARCHOL, PHD Associate Professor of Audiology and Communication Sciences, Prgm in Aud & Commun.Science, BS UNIVERSITY OF WASHINGTON 81, PHD NORTHWESTERN UNIVERSITY 89

MARK EDWARD WARCHOL, PHD Research Associate Professor of Neurobiology, Anatomy & Neurobiology, BS UNIVERSITY OF WASHINGTON 81, PHD NORTHWESTERN UNIVERSITY 89

MARK EDWARD WARCHOL, PHD Research Professor of Otolaryngology, Otolaryngology, BS UNIVERSITY OF WASHINGTON 81, PHD NORTHWESTERN UNIVERSITY 89

BETH ANN WARD, MD Assistant Professor of Neurology, Neurology, BA MIAMI UNIVERSITY 95, MD NORTHWESTERN UNIVERSITY 00

BARBARA B. WARNER, MD Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF DAYTON 76, MS UNIVERSITY OF MASSACHUSETTS 81, MD UNIVERSITY OF CINCINNATI 85

BRAD W. WARNER, MD Jessie L. Ternberg, M.D., Ph.D. Distinguished Professor of Pediatric Surgery in Surgery (Pediatric Surgery), Surgery, BS UNIVERSITY OF MO KANSAS CITY 82, MD UNIVERSITY OF MO KANSAS CITY 82

BRAD W. WARNER, MD Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF MO KANSAS CITY 82, MD UNIVERSITY OF MO KANSAS CITY 82

DAVID K. WARREN, MD Assistant Professor of Medicine, Internal Medicine, BS PENNSYLVANIA STATE UNIVERSITY 90, MPH SAINT LOUIS UNIVERSITY 05, MD UNIVERSITY OF PITTSBURGH 94

JAMES C WARREN, MD, PHD Professor Emeritus of Obstetrics and Gynecology, Obstetrics & Gynecology, BA SCHOOL NOT LISTED 50, MD UNIVERSITY OF KANSAS 54, PHD UNIVERSITY OF NEBRASKA 61

WESLEY CHARLES WARREN, PHD Research Associate Professor of Genetics, Genetics, BS OKLAHOMA ST UNIVERSITY 84, MS CLEMSON UNIVERSITY 86, PHD UNIVERSITY OF MISSOURI 90

GARY MICHAEL WASSERMAN, MD Assistant Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MO KANSAS CITY 78, MD UNIVERSITY OF MISSOURI 80

MARK S WASSERMAN, MD, BS Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MISSOURI 80, MD UNIVERSITY OF MISSOURI 84, BS UNIVERSITY OF MISSOURI

TODD H WASSERMAN, MD Professor of Radiation Oncology, Radiation Oncology, MD UNIVERSITY OF ROCHESTER 72

SCOTT P WASSERSTROM, MD Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 90, MA WASHINGTON UNIV IN ST. LOUIS 95, MD WASHINGTON UNIV IN ST. LOUIS 95

AMY L. WATERMAN, PHD Assistant Professor of Medicine, Internal Medicine, BA INDIANA UNIVERSITY BLOOMINGTON 92,
MA WASHINGTON UNIV IN ST. LOUIS 96, PHD WASHINGTON UNIV IN ST. LOUIS 01

JOHN WATSON Instructor in Clinical Surgery (Cardiothoracic Surgery), Surgery

MARK A WATSON, MD, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF PENNSYLVANIA 85, MD WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

MICHAEL S WATSON, PHD Adjunct Professor of Pediatrics, Pediatrics, BS THE AMERICAN UNIVERSITY 74, MS UNIVERSITY OF ALABAMA 78, PHD UNIVERSITY OF ALABAMA 81

ROGER J WAXELMAN, MD Instructor in Clinical Pediatrics, Pediatrics, BA WASHINGTON UNIV IN ST. LOUIS 65, MD UNIVERSITY OF MISSOURI 69

ANDREW M. WAYNE, MD Instructor in Clinical Neurology, Neurology, BS UNIVERSITY OF CA RIVERSIDE 89, MD UNIVERSITY OF MISSOURI 93

Jason D Weber Siteman Cancer Center, Assistant Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine, 1997-2001: Postdoctoral associate, Howard Hughes Medical Institute, St. Jude Children's Research Hospital, Memphis, Tenn., 1997: PhD, cell and molecular biology, Saint Louis University

JASON DEAN WEBER, PHD Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS BRADLEY UNIVERSITY 93, PHD SAINT LOUIS UNIVERSITY 97

JASON DEAN WEBER, PHD Associate Professor of Medicine, Internal Medicine, BS BRADLEY UNIVERSITY 93, PHD SAINT LOUIS UNIVERSITY 97

KELLY SCOTT WEBER Research Instructor in Pathology and Immunology, Pathology & Immunology

MARC E WEBER, MD, JD Assistant Professor of Clinical Pediatrics, Pediatrics, BA FRANKLIN & MARSHALL 00, MD UNIVERSITY OF TENNESSEE 74, JD SAINT LOUIS UNIVERSITY 00

H. JAMES WEDNER, MD Professor of Medicine, Internal Medicine, BS CORNELL UNIVERSITY 63, MD CORNELL UNIVERSITY 67

RAYMOND WEE, MD Instructor in Ophthalmology and Visual Sciences (Pending Dean's Approval), Ophthalmology & Visual Sci, MD WASHINGTON UNIV IN ST. LOUIS 08

LING WEI, MD Adjunct Research Assistant Professor of Neurology, Neurology, MD BEIJING MEDICAL UNIVERSITY 77

CONRAD CHRISTIA WEIHL, MD, PHD Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF ILLINOIS 93, MD UNIVERSITY OF CHICAGO 01, PHD UNIVERSITY OF CHICAGO 98

GARY J WEIL, MD Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 71, MD HARVARD UNIVERSITY 75

GARY J WEIL, MD Professor of Molecular Microbiology, Molecular Microbiology, BA HARVARD UNIVERSITY 71, MD HARVARD UNIVERSITY 75

KATHERINE N WEILBAECHER, MD Associate Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA HARVARD UNIVERSITY 87, MD STANFORD UNIVERSITY 92

KATHERINE N WEILBAECHER, MD Associate Professor of Medicine, Internal Medicine, BA HARVARD UNIVERSITY 87, MD STANFORD UNIVERSITY 92

KATHERINE N WEILBAECHER, MD Associate Professor of Pathology and Immunology, Pathology & Immunology, BA HARVARD UNIVERSITY 87, MD STANFORD UNIVERSITY 92

Katherine N Weilbaecher Siteman Cancer Center, Associate Professor of Medicine, Division of Oncology, Section of Molecular Oncology, Washington University School of Medicine, 1992-1994: Intern and resident, internal medicine, Stanford University Hospital, Stanford, Calif., 1994-1998: Fellow, medical oncology, Dana-Farber Cancer Institute, Boston, 1994-1998: Clinical fellow, internal medicine, Brigham and Women's Hospital and H, 1992: MD, Stanford University, Stanford, Calif., Primary Specialty: Breast cancer, Board Certified; 1995: American Board of Internal Medicine, Internal Medicine

1997: American Board of Internal Medicine, Medical Oncology

SCOTT J WEINER, MD, PHD Instructor in Clinical Pediatrics, Pediatrics, BA HARVARD UNIVERSITY 84, MD WASHINGTON UNIV IN ST. LOUIS 93, PHD WASHINGTON UNIV IN ST. LOUIS 93

CARLA JOY WEINHEIMER Research Assistant Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 84, MS WASHINGTON UNIV IN ST. LOUIS 97

DAVID L WEINSTEIN, MD Associate Professor of Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF MICHIGAN 81, MD SAINT LOUIS UNIVERSITY 85

GEORGE MATTHEW WEINSTOCK, PHD Professor of Genetics, Genetics, BS UNIVERSITY OF MICHIGAN 70, PHD MASS INST OF TECHNOLOGY (MIT) 77
LEONARD B WEINSTOCK, MD Assistant Professor of Clinical Surgery (General Surgery), Surgery, BA UNIVERSITY OF VERMONT 77, MD UNIVERSITY OF ROCHESTER 81

LEONARD B WEINSTOCK, MD Associate Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF VERMONT 77, MD UNIVERSITY OF ROCHESTER 81

BENJAMIN DAVID WEINTRAUB Instructor in Clinical Pediatrics, Pediatrics

STEVEN JAY WEINTRAUB, MD Instructor in Medicine, Internal Medicine, BA STATE UNIV OF NY BINGHAMPTON 78, MS UNIVERSITY OF VIRGINIA 81, MD UNIVERSITY OF VIRGINIA 85

EDMOND WEISBART Assistant Professor of Clinical, Internal Medicine

JUDITH L. WEISENBERG, MD Assistant Professor of Neurology, Neurology, BS BARNARD COLLEGE 98, MD UNIVERSITY OF MINNESOTA 02

ALAN N WEISS, MD Professor of Medicine, Internal Medicine, BA OHIO STATE UNIVERSITY 63, MD OHIO STATE UNIVERSITY 66

CALVIN H WEISS, DDENT Instructor in Clinical Otolaryngology (DDS), Otolaryngology, BA UNIVERSITY OF MISSOURI 43, DDENT SAINT LOUIS UNIVERSITY 46

DON WEISS, MD Instructor in Clinical Pediatrics, Pediatrics, BS DICKINSON COLLEGE 79, MS SAINT LOUIS UNIVERSITY 96, MD SCHOOL NOT LISTED 86

EDWARD P WEISS, PHD Adjunct Research Assistant Professor of Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 89, MS SOUTHERN ILLINOIS UNIVERSITY 92, PHD UNIVERSITY OF MARYLAND 03

HOWARD I WEISS, MD Assistant Professor of Clinical Neurology Neurology, MD TULANE UNIVERSITY 72

MICHAEL D WEISS Assistant Professor of Clinical Orthopaedic Surgery, Orthopaedic Surgery

PETER DOUGLAS WEISS, MD Instructor in Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 75, MD CASE WESTERN RESERVE UNIV 80

STUART WEISS, MD Professor of Clinical Neurology, Neurology, BA WASHINGTON UNIV IN ST. LOUIS 50, MD WASHINGTON UNIV IN ST. LOUIS 54

JOHN SUTTON WELCH, MD, PHD Research Instructor in Medicine, Internal Medicine, BS BRIGHAM YOUNG UNIVERSITY 95, MD SAN DIEGO ST UNIVERSITY 04, PHD UNIVERSITY OF CA SAN DIEGO 02

MICHAEL J WELCH, PHD Professor of Developmental Biology, Developmental Biology, BA CAMBRIDGE UNIVERSITY 61, MA CAMBRIDGE UNIVERSITY 64, PHD UNIVERSITY OF LONDON 65

MICHAEL J WELCH, PHD Professor of Radiology, Radiology, BA CAMBRIDGE UNIVERSITY 61, MA CAMBRIDGE UNIVERSITY 64, PHD UNIVERSITY OF LONDON 65

Michael J Welch Siteman Cancer Center, Associate Director of Oncologic Imaging, Alvin J. Siteman Cancer Center, and Professor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1965-1967: Postdoctoral research associate, Brookhaven National Laboratory, Upton, N.Y., 1964: MA, natural sciences, Cambridge University, Cambridge, England, 1965: PhD, radiochemistry, University of London

R. ROBINSON WELCH, PHD Assistant Professor of Psychiatry, Psychiatry, BA POINT LOMA NAZARENE COLLEGE 80, M ED UNIVERSITY OF MISSOURI 82, PHD UNIVERSITY OF MISSOURI 88

JASON R WELLEN, MD Assistant Professor of Surgery (General Surgery), Surgery, BS EMORY UNIVERSITY 98, MD ST GEORGE'S UNIVERSITY 02

SAMUEL A WELLS, JR, MD Professor of Surgery (General Surgery), Surgery, MD EMORY UNIVERSITY 61

ZILA WELNER, MD Associate Professor of Clinical Psychiatry (Child Psychiatry), Psychiatry, MD SCHOOL NOT LISTED 61

MICHAEL C WENDL, D SC, PHD Research Assistant Professor of Genetics, Genetics, BS WASHINGTON UNIV IN ST. LOUIS 89, MS WASHINGTON UNIV IN ST. LOUIS 90, D SC WASHINGTON UNIV IN ST. LOUIS 94, PHS WASHINGTON UNIV IN ST. LOUIS 94

PAMELA M. WENDL, DPT Assistant Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS NORTH PARK COLLEGE 91, MS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 07

PAMELA M. WENDL, DPT Assistant Professor of Physical Therapy, Physical Therapy, BS NORTH PARK COLLEGE 91, MS WASHINGTON UNIV IN ST. LOUIS 93, DPT WASHINGTON UNIV IN ST. LOUIS 07

ALVIN S WENNEKER, MD Professor of Clinical Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 49, MD WASHINGTON UNIV IN ST. LOUIS 53

ROSEMARY KATHLE WENSLEY Instructor in Emergency Medicine in Medicine, Internal Medicine
RALF WESSEL, PHD  Assistant Professor of Neurobiology, Anatomy & Neurobiology, MS TU MUNICH UNIVERSITY 89, PHD
SCHOOL NOT LISTED 92

DANIEL EDWARD WESSELL, MD, PHD, MS  Assistant Professor of Radiology, Radiology, BS NORTH CAROLINA ST
UNIVERSITY 86, MEE NORTH CAROLINA ST UNIVERSITY 91, MD UNIVERSITY OF NORTH CAROLINA 01, PHD UNIVERSITY
OF NORTH CAROLINA 00, MS NORTH CAROLINA ST UNIVERSITY 93

JULIA LYN WEST  Instructor in Audiology and Communication Sciences, Prgm in Aud & Commun.Science

PETER WESTERVELT, MD, PhD  Associate Professor of Medicine, Internal Medicine, BA COLBY COLLEGE 85, MD
WASHINGTON UNIV IN ST. LOUIS 92, PHD WASHINGTON UNIV IN ST. LOUIS 92

Peter Westervelt  Siteman Cancer Center, Associate Professor of Medicine and Chief, Section of Bone Marrow Transplantation,
Washington University School of Medicine, 1992-1994: Intern and resident, internal medicine, Washington University, St. Louis,
1994-1999: Fellow, hematology and oncology, Washington University, 1992: MD/PhD, molecular biology and biochemistry,
Washington University, St. Louis, Primary Specialty: Bone marrow transplantation, Board Certified;, 1997: American Board of
Internal Medicine, Internal Medicine

2001: American Board of Internal Medicine, Medical Oncology

DARREN E WETHERS, MD  Instructor in Clinical Medicine, Internal Medicine, BS MOREHOUSE COLLEGE 84, MD
NORTHWESTERN UNIVERSITY MED 88

RICHARD D WETZEL, PHD  Professor of Neurological Surgery, Neurological Surgery, BA CONCORDIA UNIVERSITY 60, MD
CONCORDIA UNIVERSITY 63, PHD SAINT LOUIS UNIVERSITY 74

RICHARD D WETZEL, PHD  Professor of Neurology, Neurology, BA CONCORDIA UNIVERSITY 60, MD CONCORDIA
UNIVERSITY 63, PHD SAINT LOUIS UNIVERSITY 74

RICHARD D WETZEL, PHD  Professor of Psychiatry, Psychiatry, BA CONCORDIA UNIVERSITY 60, MD CONCORDIA
UNIVERSITY 63, PHD SAINT LOUIS UNIVERSITY 74

STEPHEN ALAN WEXLER, MD  Associate Professor of Clinical Ophthalmology and Visual Sciences, Ophthalmology & Visual
Sci, BS UNIVERSITY OF MICHIGAN 77, MD UNIVERSITY OF MICHIGAN 82

PHILIP J WEYMAN, MD  Associate Professor of Clinical Radiology, Radiology, BA YALE UNIVERSITY 68, MD YALE
UNIVERSITY 72

ALEXANDER WEYMANN, MD  Instructor in Pediatrics, Pediatrics, MD WITTEN HERDECKE UNIVERSITY 99

ALISON J WHelan, MD  Professor of Medicine, Internal Medicine, BA CARLETON COLLEGE 81, MD WASHINGTON UNIV IN
ST. LOUIS 86

ALISON J WHelan, MD  Senior Associate Dean for Education, Assoc Dean Curriculum, BA CARLETON COLLEGE 81, MD
WASHINGTON UNIV IN ST. LOUIS 86

ANDREW J WHITE, MD  Assistant Professor of Pediatrics, Pediatrics, BA BRANDEIS UNIVERSITY 86, MS UNIVERSITY OF
CHICAGO 89, MD UNIVERSITY OF TEXAS SOUTHWEST 94

BRAD C WHITE, MD  Instructor in Clinical Surgery (Urologic Surgery), Surgery, BS ILLINOIS STATE UNIVERSITY 86, MD
LOYOLA UNIVERSITY CHICAGO 93

BRUCE I WHITE, MD  Instructor in Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, MD WASHINGTON UNIV IN
ST. LOUIS 64

DOUGLAS WILLIAM WHITE, MD, PHD  Instructor in Medicine, Internal Medicine, MD UNIVERSITY OF IOWA 00, PHD
UNIVERSITY OF IOWA 00

FRANCES V WHITE, MD  Associate Professor of Pathology and Immunology, Pathology & Immunology, BA PRINCETON
UNIVERSITY 75, MS UNIVERSITY OF NORTH CAROLINA 78, MD UNIVERSITY OF NORTH CAROLINA 89

NEIL HARRIS WHITE, MD  Professor of Medicine, Internal Medicine, BS STATE UNIV OF NY AT ALBANY 71, MD ALBERT
EINSTEIN COLLEGE OF MED 75

NEIL HARRIS WHITE, MD  Professor of Pediatrics, Pediatrics, BS STATE UNIV OF NY AT ALBANY 71, MD ALBERT
EINSTEIN COLLEGE OF MED 75

NICOLE IZETTA WHITE, MD  Instructor in Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF MO COLUMBIA 00, MD
INDIANA STATE UNIVERSITY 04

KAREN WHITESIDE  Instructor in Clinical Pediatrics, Pediatrics

JOHN BAIR WHITFIELD  Adjunct Instructor in Psychiatry, Psychiatry

BRUCE R WHITING, PHD, MS  Research Assistant Professor of Radiology, Radiology, BS CARNEGIE MELLON UNIVERSITY
72, MS CARNEGIE MELLON UNIVERSITY 73, PHD CARNEGIE MELLON UNIVERSITY 77, MS CARNEGIE MELLON
MICHAEL PETER WHYTE, MD  Professor of Genetics, Genetics, BA NEW YORK UNIVERSITY 68, MD STATE UNIVERSITY OF NEW YORK 72

MICHAEL PETER WHYTE, MD  Professor of Medicine, Internal Medicine, BA NEW YORK UNIVERSITY 68, MD STATE UNIVERSITY OF NEW YORK 72

MICHAEL PETER WHYTE, MD  Professor of Pediatrics, Pediatrics, BA NEW YORK UNIVERSITY 68, MD STATE UNIVERSITY OF NEW YORK 72

BURTON M WICE, PHD  Research Assistant Professor of Medicine, Internal Medicine, BA UNIVERSITY OF MISSOURI 75, PHD WASHINGTON UNIV IN ST. LOUIS 92

CYNTHIA A WICHELMAN, MD  Assistant Professor of Emergency Medicine in Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 82, MD STANFORD UNIVERSITY 88

CYNTHIA A WICHELMAN, MD  Course Director for the Mini-Medical School, Continuing Medical Education, BA UNIVERSITY OF CALIFORNIA 82, MD STANFORD UNIVERSITY 88

KAREN MORI WICKLINE, MD  Associate Professor of Pediatrics, Pediatrics, BS UNIVERSITY OF HAWAII 78, MD SAINT LOUIS UNIVERSITY 86

SAMUEL A WICKLINE, MD  Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA POMONA COLLEGE 74, MD UNIVERSITY OF HAWAII 80

SAMUEL A WICKLINE, MD  Professor of Medicine, Internal Medicine, BA POMONA COLLEGE 74, MD UNIVERSITY OF HAWAII 80

RICHARD HARRIS WIEDER, MD  Assistant Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF ILLINOIS 82, MD UNIVERSITY OF ILLINOIS 86

JOHN F WIEDNER, MD  Instructor in Clinical Medicine, Internal Medicine, BA KNOX COLLEGE 82, MD SCHOOL NOT LISTED 85

KIMBERLY N WIELE, MD  Assistant Professor of Radiology, Radiology, BA UNIVERSITY OF MO KANSAS CITY 81, MD UNIVERSITY OF MO KANSAS CITY 81

Kimberly N Wiele  Siteman Cancer Center, Assistant Professor of Radiology, Division of Diagnostic Radiology, Section of Breast Imaging, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1981-1985: Resident, diagnostic radiology, Saint Louis University, 1981: MD, University of Missouri, Kansas City, Primary Specialty: Diagnostic radiology and breast imaging, Board Certified: 1987: American Board of Diagnostic Radiology

DEBORAH A WIENSKI, MD  Instructor in Clinical Medicine, Internal Medicine, BA SMITH COLLEGE 79, MD TUFTS UNIVERSITY 83

WALTER G WIEST, PHD  Professor Emeritus of Biochemistry in Obstetrics and Gynecology, Obstetrics & Gynecology, BA BRIGHAM YOUNG UNIVERSITY 48, MS UNIV OF WISCONSIN MADISON 51, PHD UNIV OF WISCONSIN MADISON 52

ALAN P WILD, MD  Instructor in Clinical Otolaryngology, Otolaryngology, BS TULANE UNIVERSITY 74, MD TULANE UNIVERSITY 83

TANYA M WILDES, MD  Instructor in Medicine, Internal Medicine, BS ILLINOIS WESLEYAN UNIVERSITY 98, MD WASHINGTON UNIV IN ST. LOUIS 02

TROY S WILDES, MD  Assistant Professor of Anesthesiology, Anesthesiology, BS ILLINOIS WESLEYAN UNIVERSITY 98, MD WASHINGTON UNIV IN ST. LOUIS 02

KATHERINE ANNE WILDMAN, PHD  Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS CORNELL UNIVERSITY 98, PHD UNIVERSITY OF MICHIGAN 03

SCOTT A WILDMAN, PHD  Research Assistant Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS CLARKSON UNIVERSITY 94, MS CLARKSON UNIVERSITY 97, PHD UNIVERSITY OF MICHIGAN 01

JENNIFER LYNN WILER, MD  Assistant Professor of Emergency Medicine in Medicine (Pending Executive Faculty Approval), Internal Medicine, MD STATE UNIV OF NY BUFFALO 03

DENISE WILFLEY, PHD  Professor of Medicine, Internal Medicine, PHD UNIVERSITY OF MISSOURI COLUMBI 89

DENISE WILFLEY, PHD  Professor of Pediatrics, Pediatrics, PHD UNIVERSITY OF MISSOURI COLUMBI 89

DENISE WILFLEY, PHD  Professor of Psychiatry, Psychiatry, PHD UNIVERSITY OF MISSOURI COLUMBI 89

CONSUELO WILKINS, MD  Associate Professor of Medicine, Internal Medicine, BS HOWARD UNIVERSITY 92, MS WASHINGTON UNIV IN ST. LOUIS 02, MD HOWARD UNIVERSITY 96
CONSUELO WILKINS, MD Associate Professor of Psychiatry, Psychiatry, BS HOWARD UNIVERSITY 92, MS WASHINGTON UNIV IN ST. LOUIS 02, MD HOWARD UNIVERSITY 96

ROBERT S WILKINSON, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA RICE UNIVERSITY 68, MA UNIVERSITY OF TEXAS AUSTIN 70, PHD UNIVERSITY OF TEXAS AUSTIN 74

GEORGE T WILKINS, JR, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 56, MD UNIVERSITY OF ILLINOIS 57

DENISE MICHELLE WILLERS, MD Assistant Professor of Obstetrics and Gynecology, Obstetrics & Gynecology, BS DRAKE UNIVERSITY 96, MD SOUTHERN ILLINOIS UNIVERSITY 00

KRISTINE G WILLIAMS, MD Assistant Professor of Pediatrics, Pediatrics, BA GEORGETOWN UNIVERSITY 89, MPH SAINT LOUIS UNIVERSITY 01, MD GEORGETOWN UNIVERSITY 94

MICHAEL P WILLIAMS, PHD Adjunct Instructor in Medicine, Internal Medicine, BS UNIVERSITY OF MO KANSAS CITY 73, PHD UNIVERSITY OF MISSOURI 80

MONIQUE MARIE WILLIAMS, MD Assistant Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 95, MD WASHINGTON UNIV IN ST. LOUIS 99

MONIQUE MARIE WILLIAMS, MD Instructor in Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 95, MD WASHINGTON UNIV IN ST. LOUIS 99

NANCY J WILLIAMS, MD Instructor in Clinical Medicine, Internal Medicine, BA DARTMOUTH COLLEGE 82, MD UNIVERSITY OF KANSAS 87

WENDELL WILLIAMS, MD Instructor in Clinical Medicine, Internal Medicine, BS HOWARD UNIVERSITY 78, MD BEAUFORT TECHNICAL COLLEGE 82

GEORGE A WILLIAMS, III, MD Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF NOTRE DAME 67, MA COLUMBIA UNIVERSITY 68, MD UNIV OF WISCONSIN MADISON 72

R. JEROME WILLIAMS, JR, MD Associate Professor of Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 73, MD DUKE UNIVERSITY 77

MARCIA CHRISTIN WILLING, MD, D SC Professor of Pediatrics, Pediatrics, BS GOUCHER COLLEGE 73, MS UNIVERSITY OF MICHIGAN 76, MD UNIVERSITY OF VIRGINIA 82, D SC GEORGE WASHINGTON UNIVERSITY 81

CHRISTINE E WILMSEN CRAIG, MD Instructor in Clinical Medicine, Internal Medicine, BA MIAMI UNIVERSITY 92, MD UNIVERSITY OF MISSOURI 96

DAVID B WILSON, MD, PHD Associate Professor of Developmental Biology, Developmental Biology, BA KALAMAZOO COLLEGE 80, MD WASHINGTON UNIV IN ST. LOUIS 86, PHD WASHINGTON UNIV IN ST. LOUIS 86

DAVID B WILSON, MD, PHD Associate Professor of Pediatrics, Pediatrics, BA KALAMAZOO COLLEGE 80, MD WASHINGTON UNIV IN ST. LOUIS 86, PHD WASHINGTON UNIV IN ST. LOUIS 86

MATTHEW STEWART WILSON Instructor in Clinical Psychiatry, Psychiatry

MONITA ELAINE WILSON, PHD Research Assistant Professor of Medicine, Internal Medicine, BS SOUTHERN ILLINOIS UNIVERSITY 81, MS SOUTHERN ILLINOIS UNIVERSITY 84, PHD BRANDEIS UNIVERSITY 92

RICHARD K WILSON, PHD Professor of Genetics, Genetics, BA MIAMI UNIVERSITY 81, PHD UNIVERSITY OF OKLAHOMA 86

RICHARD K WILSON, PHD Professor of Molecular Microbiology, Molecular Microbiology, BA MIAMI UNIVERSITY 81, PHD UNIVERSITY OF OKLAHOMA 86

Richard K Wilson Siteman Cancer Center, Professor of Genetics, Washington University School of Medicine, 1986-1990: Postdoctoral fellow, biology, California Institute of Technology, Pasadena, 1986: PhD, chemistry, University of Oklahoma, Norman

DAVID WILLIAM WINDUS, MD Professor of Medicine, Internal Medicine, BS IOWA STATE UNIVERSITY 74, MD CREIGHTON UNIVERSITY 78

PATRICK M WINTER, PHD Research Assistant Professor of Medicine, Internal Medicine, BS WASHINGTON UNIV IN ST. LOUIS 94, PHD SOUTHWESTERN UNIVERSITY 00

KAREN WINTERS, MD Assistant Professor of Medicine, Internal Medicine, BS ILLINOIS STATE UNIVERSITY 75, MD SOUTHERN ILLINOIS UNIVERSITY 83

KAREN WINTERS, MD Director of the Student and Employee Health Service - Medical Campus, Student Health, BS ILLINOIS STATE UNIVERSITY 75, MD SOUTHERN ILLINOIS UNIVERSITY 83

Franz J Wippold Siteman Cancer Center, Professor of Radiology and Chief, Section of Neuroradiology, Mallinckrodt Institute of

1995: American Board of Radiology, Neuroradiology

FRANZ J WIPPOLD, II, MD
Professor of Radiology, Radiology, BA WESTMINSTER COLLEGE 73, MD SAINT LOUIS UNIVERSITY 77

KEITH FREDERIC WOEILTJE, MD, PHD
Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF DALLAS 84, MD TEXAS SOUTHERN UNIVERSITY 91, PHD TEXAS SOUTHERN UNIVERSITY 91

MARY KAYE WOJCZYNSKI
Research Instructor in Genetics (Pending Dean Approval), Genetics

ANNA WOLANIUK, MD, PHD
Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS UNIVERSITY OF LODZ 74, MD MEDICAL ACADEMY LODZ 79, PHD MEDICAL ACADEMY LODZ 75

MICHAEL L WOLF, OD
Adjunct Instructor in Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BS UNIVERSITY OF MISSOURI 79, OD UNIVERSITY OF MISSOURI 87

MITCHEL L WOLF, MD
Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA Yeshiva University 64, MD SCHOOL NOT LISTED 68

TIMOTHY J WOLF
Instructor in Occupational Therapy, Occupational Therapy

EDWARD M WOLFE, MD
Instructor in Clinical Medicine (Dermatology), Internal Medicine, BA HOBART COLLEGE 56, MD WASHINGTON UNIV IN ST. LOUIS 60

BRETT D WOLFF, MD
Assistant Professor of Anesthesiology, Anesthesiology, BA INDIANA UNIVERSITY BLOOMINGTON 81, MD INDIANA UNIVERSITY BLOOMINGTON 85

GERALD WOLFF, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BA HARVARD UNIVERSITY 55, MD WASHINGTON UNIV IN ST. LOUIS 61

HAROLD D WOLFF, MD, BS
Associate Professor of Clinical Psychiatry, Psychiatry, BA WASHINGTON UNIV IN ST. LOUIS 52, MD IOWA STATE UNIVERSITY 55, BS UNIVERSITY OF MISSOURI 53

PATRICIA ANN WOLFF, MD
Professor of Clinical Pediatrics, Pediatrics, BA UNIVERSITY OF MINNESOTA 68, MD UNIVERSITY OF MINNESOTA 72

EDWIN D WOLFGRAM, MD
Assistant Professor of Clinical Psychiatry, Psychiatry, BS IOWA STATE UNIVERSITY 54, MD UNIVERSITY OF IOWA 59

KATHLEEN Y. WOLIN, PHD
Assistant Professor of Surgery (General Surgery), Surgery, BS TUFTS UNIVERSITY 99, PHD HARVARD UNIVERSITY 05

NATHAN E WOLINS, PHD
Research Instructor in Medicine, Internal Medicine, PHD GEORGE WASHINGTON UNIVERSITY 94

MICHAEL WONG, MD, PHD
Associate Professor of Neurobiology, Anatomy & Neurobiology, BA PRINCETON UNIVERSITY 87, MD UNIVERSITY OF TEXAS SOUTHWEST 95, PHD UNIVERSITY OF TEXAS SOUTHWEST 95

MICHAEL WONG, MD, PHD
Associate Professor of Neurology, Neurology, BA PRINCETON UNIVERSITY 87, MD UNIVERSITY OF TEXAS SOUTHWEST 95, PHD UNIVERSITY OF TEXAS SOUTHWEST 95

MICHAEL WONG, MD, PHD
Associate Professor of Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 87, MD UNIVERSITY OF TEXAS SOUTHWEST 95, PHD UNIVERSITY OF TEXAS SOUTHWEST 95

MING-FONG AGNES WONG, MD, PHD
Adjunct Associate Professor of Ophthalmology and Visual Sciences, Ophthalmology & Visual Sci, BA BOSTON UNIVERSITY 90, MD MCGILL UNIVERSITY 94, PHD UNIVERSITY OF TORONTO 01

ALBERT S WOO, MD
Assistant Professor of Surgery (Plastic and Reconstructive Surgery), Surgery, BS BROWN UNIVERSITY 95, MD BROWN UNIVERSITY 99

JOHN A WOOD, MD
Associate Professor of Clinical Medicine, Internal Medicine, MD UNIVERSITY OF OKLAHOMA 68

PAMELA K WOODARD, MD
Associate Professor of Radiology, Radiology, BA DUKE UNIVERSITY 86, MD DUKE UNIVERSITY 90

TERRY A WOODFORD-THOMAS, PHD
Adjunct Research Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS EASTERN ILLINOIS UNIVERSITY 75, MS PURDUE UNIVERSITY 77, PHD VA POLYTECHNIC INST & STATE U 82

MICHELE C WOODLEY, MD
Assistant Professor of Clinical Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 80, MD STATE UNIV OF NY STONYBROOK 86
JASON C. WOODS, PHD Assistant Professor of Radiology (Pending Executive Faculty Approval), Radiology, BS RHODES COLLEGE 97, MA WASHINGTON UNIV IN ST. LOUIS 99, PHD WASHINGTON UNIV IN ST. LOUIS 02

GERALD WOOL, MD Associate Professor of Clinical Pediatrics, Pediatrics, BA PRINCETON UNIVERSITY 58, MD WASHINGTON UNIV IN ST. LOUIS 62

Karen L Wooley Siteman Cancer Center, James S. McDonnell Distinguished University Professor in Arts and Sciences, Department of Chemistry, Washington University, 1993: PhD, polymer and organic chemistry, Cornell University, Ithaca, N.Y.

THOMAS A WOOLSEY, MD George H and Ethel R Bishop Scholar in Neuroscience in Neurological Surgery, Professor of Experimental Neurological Surgery, Neurological Surgery, BS UNIV OF WISCONSIN MADISON 65, MD JOHNS HOPKNS UNIVERSITY MEDIC 69

THOMAS A WOOLSEY, MD George H and Ethel R Bishop Scholar in Neuroscience in Neurology, Professor of Experimental Neurology, Neurology, BS UNIV OF WISCONSIN MADISON 65, MD JOHNS HOPKNS UNIVERSITY MEDIC 69

THOMAS A WOOLSEY, MD Professor of Anatomy and Neurobiology, Anatomy & Neurobiology, BS UNIV OF WISCONSIN MADISON 65, MD JOHNS HOPKNS UNIVERSITY MEDIC 69

THOMAS A WOOLSEY, MD Professor of Physiology, Cell Biology & Physiology, BS UNIV OF WISCONSIN MADISON 65, MD JOHNS HOPKNS UNIVERSITY MEDIC 69

PARKER H WORD, MD Instructor Emeritus in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BS VIRGINIA STATE UNIVERSITY 41, MD HOWARD UNIVERSITY 44

DAVID F WOZNIAK, PHD Research Professor of Psychiatry, Psychiatry, BA HOBART COLLEGE 73, MA CONNECTICUT COLLEGE 77, PHD WASHINGTON UNIV IN ST. LOUIS 84

Ricardo J Wray Siteman Cancer Center, Assistant Professor of Community Health, Divison of Behavioral Science/Health Education, School of Public Health, Saint Louis University, 1991: MS, communication, Cornell University, Ithaca, N.Y., 2000: PhD, communication, University of Pennsylvania, Philadelphia

MEGAN ELIZABETH WREN, MD Associate Professor of Medicine, Internal Medicine, BA WASHINGTON UNIV IN ST. LOUIS 81, MD WASHINGTON UNIV IN ST. LOUIS 85

JEFFREY M WRIGHT, MD Assistant Professor of Clinical Medicine, Internal Medicine, BS VANDERBILT UNIVERSITY 75, MD WASHINGTON UNIV IN ST. LOUIS 79

JEFFREY M WRIGHT, MD Assistant Professor of Clinical Pediatrics, Pediatrics, BS VANDERBILT UNIVERSITY 75, MD WASHINGTON UNIV IN ST. LOUIS 79


NEILL MARSHALL WRIGHT, MD Associate Professor of Neurological Surgery, Neurological Surgery, BA UNIVERSITY OF CALIFORNIA 89, MD UNIVERSITY OF CALIFORNIA 93

NEILL MARSHALL WRIGHT, MD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF CALIFORNIA 89, MD UNIVERSITY OF CALIFORNIA 93

RICK WAYNE WRIGHT, MD Associate Professor of Orthopaedic Surgery, Orthopaedic Surgery, BS UNIVERSITY OF MISSOURI 84, MD UNIVERSITY OF MISSOURI 88

ALLISON WRIGHT WILLIS, MD Assistant Professor of Neurology (Pending Executive Faculty Approval), Neurology, BA NORTHWESTERN UNIVERSITY 97, MD UNIVERSITY OF ILLINOIS 02

GREGORY FREDERI WU, MD, PHD Assistant Professor of Neurology, Neurology, BS WASHINGTON UNIV IN ST. LOUIS 93, MD UNIVERSITY OF IOWA 01, PHD UNIVERSITY OF IOWA 01

XIAOBO WU, MD Research Instructor in Medicine, Internal Medicine, MD TONGJI UNIVERSITY 86

HEATHER E. WEBBER, MD Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, BA UNIVERSITY OF MO KANSAS CITY 96, MD UNIVERSITY OF MO KANSAS CITY 98

KATHIE R WUELLNER, MD Associate Professor of Clinical Pediatrics, Pediatrics, BS UNIVERSITY OF ILLINOIS 73, MD SAINT LOUIS UNIVERSITY 78

CHRISTOPHER WUERTZ, MD Assistant Professor of Clinical Psychiatry, Psychiatry, MD UNIVERSITY OF ILLINOIS 84

HAYLEY WURZEL Instructor in Clinical Pediatrics, Pediatrics, BS BROWN UNIVERSITY 95

XIAOMING XIA, PHD Research Assistant Professor of Anesthesiology, Anesthesiology, BS FUDAN UNIVERSITY 84, MS
YOUNAN XIA, PHD Professor of Biochemistry and Molecular Biophysics, Biochem & Molec Biophysics, BS UNIVERSITY OF SCIENCE & TECH 87, MHS UNIVERSITY OF PENNSYLVANIA 93, PHD HARVARD UNIVERSITY 96

YOUNAN XIA, PHD Professor of Radiology, Radiology, BS UNIVERSITY OF SCIENCE & TECH 87, MHS UNIVERSITY OF PENNSYLVANIA 93, PHD HARVARD UNIVERSITY 96

Younan Xia Siteman Cancer Center

HONG XIAN, PHD Research Associate Professor of Medicine, Internal Medicine, MS WESTERN ILLINOIS UNIVERSITY 89, PHD WASHINGTON UNIV IN ST. LOUIS 94

HONG XIAN, PHD Research Associate Professor of Psychiatry, Psychiatry, MS WESTERN ILLINOIS UNIVERSITY 89, PHD WASHINGTON UNIV IN ST. LOUIS 94

YAN XIE Research Instructor in Medicine, Internal Medicine

CHENGJIE XIONG, PHD Research Associate Professor of Biostatistics, Biostatistics, BS XINJIANG UNIVERSITY 83, MS PEKING UNIVERSITY 89, PHD KANSAS STATE UNIVERSITY 97

CHENGJIE XIONG, PHD Research Associate Professor of Neurology, Neurology, BS XINJIANG UNIVERSITY 83, MS PEKING UNIVERSITY 89, PHD KANSAS STATE UNIVERSITY 97

MAI XU, MD, PHD Research Instructor in Radiology, Radiology, MS CHINA MEDICAL UNIVERSITY 83, MD CHINA MEDICAL UNIVERSITY 81, PHD CHINA MEDICAL UNIVERSITY 92

DMITRIY A YABLONSKY, D SC, PHD Professor of Radiology, Radiology, MS KHARKOV STATE UNIVERSITY 70, D SC INSTITUTE FOR PHYSICS AND ENG 81, PHD INSTITUTE FOR PHYSICS AND ENG 73

CHRISTINA MARIE YADOA Instructor in Clinical Pediatrics, Pediatrics

KATHRYN AYAKO YAMADA, PHD Research Professor of Medicine, Internal Medicine, BA UNIVERSITY OF CALIFORNIA 78, PHD GEORGETOWN UNIVERSITY 82

KELVIN A YAMADA, MD Associate Professor of Neurology, Neurology, BA POMONA COLLEGE 80, MD BEAUFORT TECHNICAL COLLEGE 83

KELVIN A YAMADA, MD Associate Professor of Pediatrics, Pediatrics, BA POMONA COLLEGE 80, MD BEAUFORT TECHNICAL COLLEGE 83

KEN YAMAGUCHI, MD Sam and Marilyn Fox Distinguished Professor of Orthopaedic Surgery, Orthopaedic Surgery, BA UNIVERSITY OF CALIFORNIA 83, MS UNIVERSITY OF CALIFORNIA 85, MD GEORGE WASHINGTON UNIVERSITY 89

YAN YAN, MD, PHD Research Assistant Professor of Biostatistics, Biostatistics, MHS JOHNS HOPKINS UNIVERSITY 95, MD NANJING MEDICAL UNIVERSITY 83, PHD JOHNS HOPKINS UNIVERSITY 98

YAN YAN, MD, PHD Research Assistant Professor of Surgery (General Surgery), Surgery, MHS JOHNS HOPKINS UNIVERSITY 95, MD NANJING MEDICAL UNIVERSITY 83, PHD JOHNS HOPKINS UNIVERSITY 98

DESHAN YANG, PHD Instructor in Radiation Oncology, Radiation Oncology, BS TSINGHUA UNIVERSITY, CHINA 92, MS ILLINOIS INSTITUTE OF TECHNOL 01, PHD UNIV OF WISCONSIN MADISON 05

JOHN HONG-SUK YANG, MD Assistant Professor of Medicine, Internal Medicine, BA COLUMBIA COLLEGE 84, MD UNIVERSITY OF MISSOURI 90

QIN YANG, MD, PHD Assistant Professor of Radiation Oncology, Radiation Oncology, MD WEST CHINA UNIVERSITY 83, PHD HEIDELBERG UNIVERSITY 97

KEVIN E YARASHESKI, PHD Professor of Cell Biology and Physiology, Cell Biology & Physiology, BA EAST STRoudSBURG CMNTY COLLEGE 80, MA KENT ST UNIVERSITY 84, PHD KENT ST UNIVERSITY 86

KEVIN E YARASHESKI, PHD Professor of Medicine, Internal Medicine, BA EAST STRoudSBURG CMNTY COLLEGE 80, MA KENT ST UNIVERSITY 84, PHD KENT ST UNIVERSITY 86

KEVIN E YARASHESKI, PHD Professor of Physical Therapy, Physical Therapy, BA EAST STRoudSBURG CMNTY COLLEGE 80, MA KENT ST UNIVERSITY 84, PHD KENT ST UNIVERSITY 86

NABEEEL RASHEED YASEEN, MD, PHD Associate Professor of Pathology and Immunology, Pathology & Immunology, MD BAGHDAD UNIVERSITY 83, PHD BROWN UNIVERSITY 94

MONA YASSIN, MD Instructor in Clinical Pediatrics, Pediatrics, MD SCHOOL NOT LISTED 79

WILLIAM D YATES, MD Instructor in Clinical Surgery (General Surgery), Surgery, BA NORTHWESTERN UNIVERSITY 83, MD NORTHWESTERN UNIVERSITY 85
XIAOBIN YI, MD  Assistant Professor of Anesthesiology, Anesthesiology, MD HUNAN MEDICAL UNIVERSITY 85
FRANK C-P YIN, MD, PHD  Professor of Medicine, Internal Medicine, BS MASS INST OF TECHNOLOGY (MIT) 65, MS MASS INST OF TECHNOLOGY (MIT) 67, MD UNIVERSITY OF CALIFORNIA 73, PHD UNIVERSITY OF CALIFORNIA 70
LOURDES YLAGAN, MD  Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS QUEENS COLLEGE 88, MD OHIO STATE UNIVERSITY 93
Lourdes R Ylagan  Siteman Cancer Center, Assistant Professor of Pathology and Immunology, Division of Anatomic and Molecular Pathology, Washington University School of Medicine, 1993-1994: Intern, University of Florida, Gainesville, 1994-1998: Resident, anatomic and clinical pathology, New York University, New York, 1998-1999: Fellow, gynecological pathology, Albert Einstein College of Medicine, New York, 1999-2000: Fellow, cytop, 1993: MD, Ohio State University, Columbus, Primary Specialty: Diagnostic cytopathology and gynecologic pathology, Board Certified:, American Board of Pathology, Anatomic Pathology and Clinical Pathology
American Board of Pathology, Cytopathology
WAYNE M YOKOYAMA, MD  Professor of Pathology and Immunology, Pathology & Immunology, BA UNIVERSITY OF ROCHESTER 74, MD UNIVERSITY OF HAWAII 78
MING YOU, MD, PHD  Professor of Genetics, Genetics, MD BEIJING MEDICAL UNIVERSITY 82, PHD SCHOOL NOT LISTED 89
MING YOU, MD, PHD  Professor of Surgery (General Surgery), Surgery, MD BEIJING MEDICAL UNIVERSITY 82, PHD SCHOOL NOT LISTED 89
Ming You  Siteman Cancer Center, Professor of Surgery, Division of General Surgery, Washington University School of Medicine, 1982: BS/MD, Beijing Medical College, 1989: PhD, pathology, Medical College of Ohio, Toledo
ZHONGSHENG YOU, PHD  Assistant Professor of Cell Biology and Physiology, Cell Biology & Physiology, BS ZHEJIANG MEDICAL UNIVERSITY 94, MS SHANGHAI INST OF BIOCHEMISTRY 97, PHD UNIVERSITY OF CA SAN DIEGO 02
ZHONGSHENG YOU, PHD  Assistant Professor of Medicine, Internal Medicine, BS ZHEJIANG MEDICAL UNIVERSITY 94, MS SHANGHAI INST OF BIOCHEMISTRY 97, PHD UNIVERSITY OF CA SAN DIEGO 02
Zhongsheng You  Siteman Cancer Center, Assistant Professor of Cell Biology and Physiology, Washington University School of Medicine, 2002-2009: Postdoctoral fellow, molecular and cell biology, Salk Institute, La Jolla, Calif., 1997: MS, Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China, 2002: PhD, University of California, San Diego
ALEXANDER H YOUNG, MD  Assistant Professor of Anesthesiology, Anesthesiology, BA UNIVERSITY OF MISSISSIPPI 86, MD UNIVERSITY OF ARKANSAS 90
JULIA CATHERINE YOUNG  Instructor in Clinical Pediatrics, Pediatrics
ROBERT A YOUNG, MD, JD  Instructor in Clinical Surgery (Plastic and Reconstructive Surgery), Surgery, BA UNIVERSITY OF MICHIGAN 73, MS OHIO STATE UNIVERSITY 75, MD OHIO STATE UNIVERSITY 78, JD SAINT LOUIS UNIVERSITY 97
HAIFAA TAWIFIQ YOUNIS, MD  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology, MD BAGHDAD UNIVERSITY 84
CECILIA H YU, MD  Assistant Professor of Clinical Pediatrics, Pediatrics, BS BROWN UNIVERSITY 87, MD UNIVERSITY OF TEXAS SOUTHWEST 92
DONG YU, PHD  Assistant Professor of Molecular Microbiology, Molecular Microbiology, BS FUDAN UNIVERSITY 91, PHD UNIVERSITY OF CONNECTICUT 98
YIK YEUNG LAWRE YU, PHD  Research Instructor in Pathology and Immunology, Pathology & Immunology, BA SOUTHERN ILLINOIS UNIVERSITY 87, MA SOUTHERN ILLINOIS UNIVERSITY 89, PHD UNIVERSITY OF TEXAS SOUTHWEST 95
LIYA YUAN, PHD  Research Instructor in Neurological Surgery, Neurological Surgery, MS TONGJI UNIVERSITY 87, PHD TONGJI UNIVERSITY 94
PIN YUE, PHD, MS  Research Instructor in Medicine, Internal Medicine, BS BEIJING AGRICULTURAL UNIVERSITY 89, MS BEIJING AGRICULTURAL UNIVERSITY 92, PHD UNIVERSITY OF MISSOURI 00, MS UNIVERSITY OF MISSOURI 00
ROGER D. YUSEN, MD  Associate Professor of Medicine, Internal Medicine, BS UNIVERSITY OF ILLINOIS 86, MPH SAINT LOUIS UNIVERSITY 02, MD UNIVERSITY OF ILLINOIS 90
JEFFREY M. ZACKS, PHD  Assistant Professor of Radiology, Radiology, MA STANFORD UNIVERSITY 96, PHD STANFORD UNIVERSITY 99
CRAIG MITCHELL ZAIDMAN, MD  Instructor in Neurology, Neurology, MD UNIVERSITY OF VIRGINIA 01
ALAN ZAJARIAS, MD  Assistant Professor of Medicine, Internal Medicine, MD NATIONAL AUTONOMOUS U OF MEX 00
SANDRA G.H. ZAKROFF  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology
JOHN F. ZALEWSKI Instructor in Clinical Medicine, Internal Medicine

LUIS H ZAYAS, PHD, MS Professor of Psychiatry, Psychiatry, BA SCHOOL NOT LISTED 73, MA COLUMBIA UNIVERSITY 84, PHD COLUMBIA UNIVERSITY 86, MS COLUMBIA UNIVERSITY 75

ALLYSON R ZAZULIA, MD Associate Professor of Neurology, Neurology, BS UNIVERSITY OF MARYLAND 90, MD GEORGETOWN UNIVERSITY 94

ALLYSON R ZAZULIA, MD Associate Professor of Radiology, Radiology, BS UNIVERSITY OF MARYLAND 90, MD GEORGETOWN UNIVERSITY 94

JOEL ZEFFREN Instructor in Clinical Medicine, Internal Medicine

JOHN M ZEMPEL, MD, PHD Assistant Professor of Neurology, Neurology, BS UNIV OF WISCONSIN MADISON 85, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

JOHN M ZEMPEL, MD, PHD Assistant Professor of Pediatrics, Pediatrics, BS UNIV OF WISCONSIN MADISON 85, MD WASHINGTON UNIV IN ST. LOUIS 95, PHD WASHINGTON UNIV IN ST. LOUIS 95

CHENBO ZENG, PHD Research Instructor in Radiology, Radiology, PHD IOWA STATE UNIVERSITY 96

Chenbo Zeng Siteman Cancer Center, Research Instructor of Radiology, Mallinckrodt Institute of Radiology, Washington University School of Medicine, 1988: MS, biochemistry, Jilin University, Changchun, China, 1996: PhD, biochemistry, Iowa State University, Ames

XUHUI ZENG, PHD, BS Research Instructor in Anesthesiology, Anesthesiology, BS SCHOOL NOT LISTED 92, MS SCHOOL NOT LISTED 95, PHD SCHOOL NOT LISTED, BS HUASHONG UNIVERSITY OF SCIENCE 92, PHD HUASHONG UNIVERSITY OF SCIENCE 99

MEINHART H ZENK, PHD Adjunct Professor of Anesthesiology, Anesthesiology, PhD TU MUNICH UNIVERSITY 59

JUNRAN ZHANG, PHD Assistant Professor of Radiation Oncology, Radiation Oncology, BS SHANXI MEDICAL UNIVERSITY 91, MS SHANXI MEDICAL UNIVERSITY 94, PHD SHANGHAI MEDICAL INSTITUTE 97

Junran Zhang Siteman Cancer Center, Instructor of Radiation Oncology, Washington University School of Medicine, 2000-2005: Postdoctoral fellow, radiation oncology, Harvard Medical School, Boston, 1991: MD, Shanxi Medical University, Shanxi, China, 1994: MS, environmental toxicology, Shanxi Medical University, 1997: PhD, environmental toxicology, Shanghai Medical University, Shanghai, China

LIJUAN ZHANG, PHD Assistant Professor of Pathology and Immunology, Pathology & Immunology, BS NINGBO UNIVERSITY 82, MS CHINESE ACADEMY OF SCIENCES 86, PHD UNIVERSITY OF AL BIRMINGHAM 95

QUNYUAN ZHANG, PHD Research Assistant Professor of Genetics, Genetics, BS SCHOOL NOT LISTED 96, MS SCHOOL NOT LISTED 95, PHD SCHOOL NOT LISTED 01

WEIXIONG ZHANG, PHD, MS Professor of Genetics, Genetics, BS TSINGHUA UNIVERSITY, CHINA 84, ME TSINGHUA UNIVERSITY, CHINA 86, PHD UNIVERSITY OF CA LOS ANGELES 94, MS UNIVERSITY OF CA LOS ANGELES 92

YONG ZHANG, BS Research Instructor in Medicine, Internal Medicine, BS SCHOOL NOT LISTED 83, M ED ANHUI UNIVERSITY 78, BS SCHOOL NOT LISTED 98

ZHANBIN ZHANG, PHD Research Instructor in Radiology, Radiology, BA BEIJING NORMAL UNIVERSITY 89, MS BEIJING NORMAL UNIVERSITY 92, PHD BEIJING NORMAL UNIVERSITY 99

GUOYAN ZHAO, PHD Research Instructor in Pathology and Immunology, Pathology & Immunology, BS SCHOOL NOT LISTED 98, MS SHANGHAI JIAO TONG UNIVERSITY 94, PHD SHANGHAI JIAO TONG UNIVERSITY 94

SHIYING ZHAO, PHD Adjunct Associate Professor of Radiology, Radiology, BA UNIVERSITY OF SCIENCE & TECH 82, MME SHANGHAI JIAO TONG UNIVERSITY 84, PHD UNIVERSITY OF SOUTH CAROLINA 91

JIE ZHENG, PHD Assistant Professor of Radiology, Radiology, BS BEIJING UNIVERSITY 86, MS UNIVERSITY OF CINCINNATI 92, PHD UNIVERSITY OF CINCINNATI 94

DONG ZHOU, PHD, MS, BS Research Instructor in Radiology, Radiology, BS SCHOOL NOT LISTED 90, MS SCHOOL NOT LISTED 95, PHD WASHINGTON UNIV IN ST. LOUIS 04, BS SHANDONG UNIVERSITY 90, MS SHANDONG UNIVERSITY 95

JIAN-MING ZHU, PHD, MS Assistant Professor of Radiation Oncology, Radiation Oncology, BS ZHEJIANG MEDICAL UNIVERSITY 83, MS CHINESE ACADEMY OF SCIENCES 86, PHD UNIVERSITY OF MANITOBA 97, MS UNIVERSITY OF SASKATCHEWAN 92

YANLI ZHU, MD Research Instructor in Neurological Surgery, Neurological Surgery, MS BEIJING UNIVERSITY 96, MD HARVIN UNIVERSITY 07

ROBERT E ZIEGLER, MD, PHD Assistant Professor of Clinical Medicine (Dermatology), Internal Medicine, BA UNIVERSITY OF COLORADO BOULDER 72, MD DUKE UNIVERSITY 80, PHD DUKE UNIVERSITY 80
ISRAEL ZIGHELBOIM, MD  Assistant Professor of Obstetrics and Gynecology (Pending Executive Faculty Approval), Obstetrics & Gynecology, MD CENTRAL UNIVERSITY VENEZUELA 99

DEBORAH ZIMMERMAN, MD  Instructor in Clinical Medicine, Internal Medicine, BS UNIVERSITY OF MICHIGAN 78, MD UNIVERSITY OF MISSOURI 83

DARRYL THOMAS ZINCK  Instructor in Clinical Obstetrics and Gynecology, Obstetrics & Gynecology

GREGORY JOSEPH ZIPFEL, MD  Assistant Professor of Neurological Surgery, Neurological Surgery, BS UNIVERSITY OF ILLINOIS 91, MD NORTHWESTERN UNIVERSITY MED 95

GREGORY JOSEPH ZIPFEL, MD  Assistant Professor of Neurology, Neurology, BS UNIVERSITY OF ILLINOIS 91, MD NORTHWESTERN UNIVERSITY MED 95


ANDREW A ZISKIND, MD  Professor of Medicine, Internal Medicine, MBA LOYOLA COLLEGE 99, MD UNIVERSITY OF PENNSYLVANIA 84

IMRAN ZOBERI, MD  Assistant Professor of Radiation Oncology, Radiation Oncology, BS UNIVERSITY OF SOUTH DAKOTA 92, MD WASHINGTON UNIV IN ST. LOUIS 96

Imran Zoberi  Siteman Cancer Center, Assistant Professor of Radiation Oncology, Washington University School of Medicine, 1996-1997: Intern, internal medicine, Washington University, St. Louis, 1997-2001: Resident, radiation oncology, Washington University, 1996: MD, Washington University School of Medicine, Primary Specialty: Breast cancer; prostate, kidney and bladder cancer; thyroid cancer; gynecologic cancers; and brain tumors, Board Certified:, American Board of Radiology, Radiation Oncology

CHARLES F ZORUMSKI, MD  Professor of Neurobiology, Anatomy & Neurobiology, BA SAINT LOUIS UNIVERSITY 74, MD SAINT LOUIS UNIVERSITY 78

CHARLES F ZORUMSKI, MD  Samuel B. Guze Professor of Psychiatry, Head of the Department of Psychiatry, Psychiatry, BA SAINT LOUIS UNIVERSITY 74, MD SAINT LOUIS UNIVERSITY 78

DEQUAN ZOU, D SC, MS  Research Associate Professor of Physical Therapy, Physical Therapy, BS HARBIN ENGINEERING UNIVERSITY 82, ME HARBIN ENGINEERING UNIVERSITY 84, D SC WASHINGTON UNIV IN ST. LOUIS 93, MS WASHINGTON UNIV IN ST. LOUIS 91

DEQUAN ZOU, D SC, MS  Research Associate Professor of Radiology, Radiology, BS HARBIN ENGINEERING UNIVERSITY 82, ME HARBIN ENGINEERING UNIVERSITY 84, D SC WASHINGTON UNIV IN ST. LOUIS 93, MS WASHINGTON UNIV IN ST. LOUIS 91

WEI ZOU  Research Instructor in Pathology and Immunology, Pathology & Immunology

ANDREW C. ZUCKERMAN  Instructor in Clinical Pediatrics, Pediatrics

DARRYL ADAM ZUCKERMAN, MD  Assistant Professor of Radiology, Radiology, BA NEW YORK UNIVERSITY 79, MD STATE UNIV OF NY SYRACUSE 83

DARRYL ADAM ZUCKERMAN, MD  Assistant Professor of Surgery (General Surgery), Surgery, BA NEW YORK UNIVERSITY 79, MD STATE UNIV OF NY SYRACUSE 83

GARY R ZUCKERMAN, DOST  Associate Professor of Medicine, Internal Medicine, BS SCHOOL NOT LISTED 58, DOST SCHOOL NOT LISTED 63

JOHN MICHAEL ZYLKA, MD, PHD, MS  Instructor in Clinical Medicine, Internal Medicine, BA ST VINCENT COLLEGE 87, MBA LINDENWOOD COLLEGE 99, MD SCHOOL NOT LISTED 81, PHD UNIVERSITY OF MINNESOTA 76, MS WEST VIRGINIA UNIVERSITY 70

--------------------------------------------------------------------------------

(1) - Notes:///86256C54006BFAB9/550FC89DC5564C0586256E6A005A0F56/05303C821315410A862575F60063F68B

(2) - Notes:///86256C54006BFAB9/550FC89DC5564C0586256E6A005A0F56/7D4CAB8D4E6D30E486256CDE006336CF