

Washington University School of Medicine

Digital Commons@Becker

---

Washington University School of Medicine  
Bulletins

Washington University Publications

---

1959

## Washington University School of Medicine bulletin, 1959

Follow this and additional works at: [https://digitalcommons.wustl.edu/med\\_bulletins](https://digitalcommons.wustl.edu/med_bulletins)

---

### Recommended Citation

Washington University School of Medicine bulletin, 1959. Central Administration, Publications. Bernard Becker Medical Library Archives. Washington University School of Medicine, Saint Louis, Missouri.  
[https://digitalcommons.wustl.edu/med\\_bulletins/60](https://digitalcommons.wustl.edu/med_bulletins/60)

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Washington University School of Medicine Bulletins by an authorized administrator of Digital Commons@Becker. For more information, please contact [vanam@wustl.edu](mailto:vanam@wustl.edu).

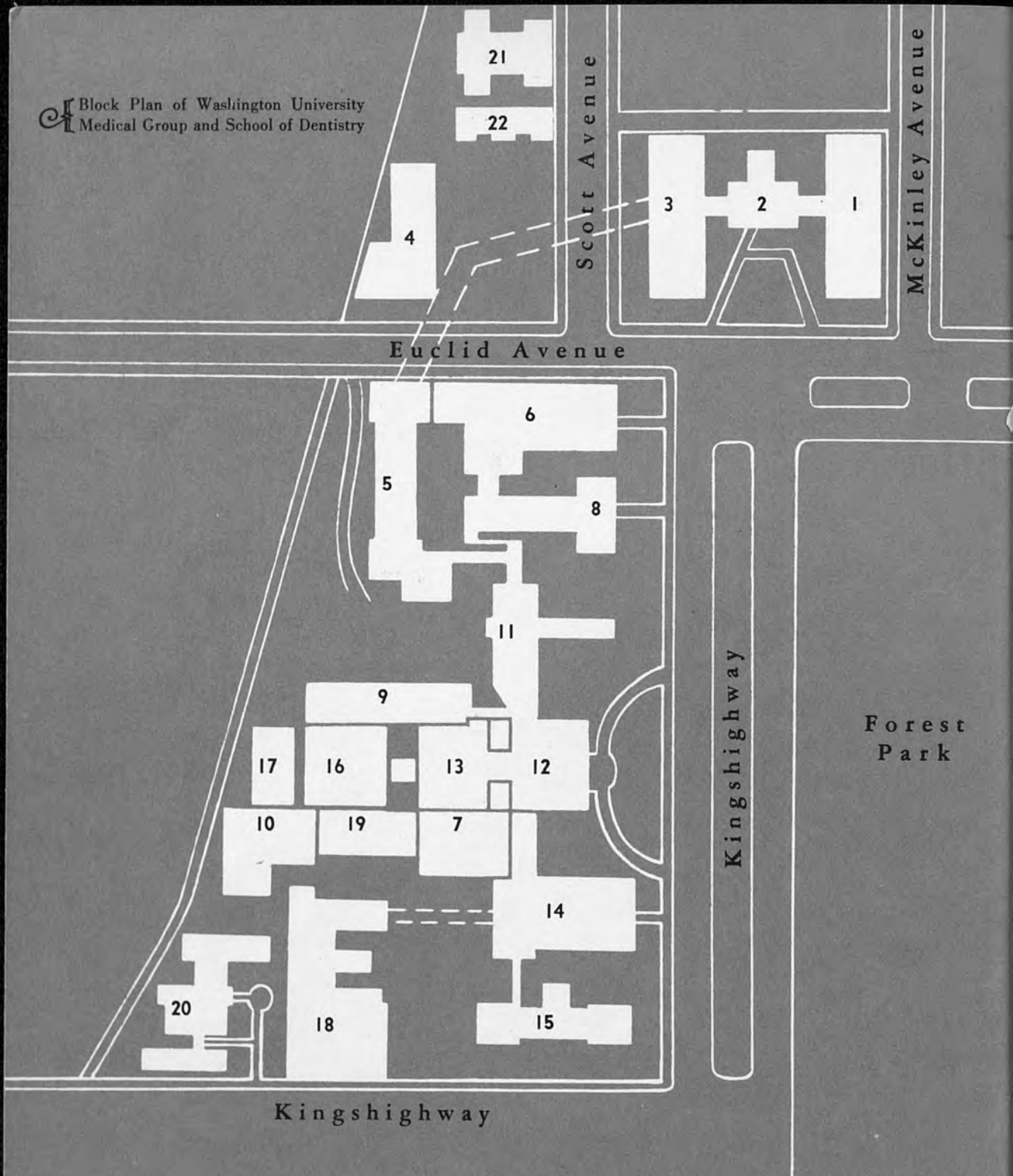


Bulletin  
of

WASHINGTON UNIVERSITY

SCHOOL OF MEDICINE

Block Plan of Washington University  
Medical Group and School of Dentistry



School of Medicine

- 1—South Building
  - a. Biological Chemistry
  - b. Physiology
  - c. Pharmacology
- 2—Research Building
  - a. Office of the Dean
  - b. Office of the Registrar
- 3—North Building
  - a. Library
  - b. Auditorium
  - c. Anatomy
- 4—Power House

- 5—Clinic Building
  - a. Clinics
  - b. Microbiology
  - c. Pathology
  - d. Preventive Medicine
- 6—McMillan Hospital and Oscar Johnson Institute
  - a. Ophthalmology
  - b. Otolaryngology
- 7—Edward Mallinckrodt Radiological Institute
- 8—St. Louis Maternity Hospital
  - Obstetrics and Gynecology

- 9—Renard Hospital
  - Psychiatry and Neurology
- 10—Wohl Hospital
  - Laboratories of Experimental Medicine and Surgery
- Barnes Hospital
  - 11—Medical Wing
  - 12—Administration Building
  - 13—Physical Medicine
  - 14—Rand-Johnson Memorial Surgical Wing
  - 15—Private Pavilion and Emergency Wards

- 16—Service Building
  - a. Cafeteria
  - b. Diagnostic Laboratories
- 17—Laundry
- 18—St. Louis Children's Hospital
  - Pediatrics
- 19—Barnard Free Skin and Cancer Hospital
- 20—School of Nursing and Nurses' Residence
- 21—School of Dentistry
- 22—Department of Occupational Therapy



WASHINGTON UNIVERSITY

School  
of Medicine

St. Louis, Missouri

July, 1959

PUBLICATIONS OF WASHINGTON UNIVERSITY

SERIES II

VOLUME LVII

NUMBER XIV

Published two times a month, January to June, inclusive, and once a month from July to December, inclusive, by Washington University, St. Louis 5, Missouri. Entered as second-class matter in the Post Office at St. Louis, Missouri. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on June 29, 1918.



## TABLE OF CONTENTS

	PAGE
Academic Divisions of Washington University	4
The Corporation of Washington University	5
Officers of the University Administration	5
Officers and Committees of the Faculty of the School of Medicine	6
Administrative Officers of the School of Medicine	7
Other Officers of the School of Medicine	7
Joint Medical Board at the Medical Center	7
History of the Medical Center	9
Aims and General Plan of Instruction	11
Medical School Buildings	13
Hospitals and Laboratories	13
Student Activities	15
Graduate Training	16
Library	17
Calendar	19
Entrance Requirements	20
Admission to Advanced Standing	21
Admission of Graduates in Medicine	21
Standing and Promotion	21
Requirements for Degrees	22
Fees and Other Expenses	24
Registration	25
Withdrawals and Refunds	25
Residence Hall	25
Veterans Administration	25
Student Research Fellowships	26
Fellowships and Scholarships	27
Prizes	31
Lectureships	32
Class Schedules	34
Table of Required Hours	41
Departments of the School of Medicine	43
Anatomy	46
Biological Chemistry	49

*TABLE OF CONTENTS*

	PAGE
Internal Medicine	51
Microbiology	64
Obstetrics and Gynecology	65
Ophthalmology	70
Otolaryngology	73
Pathology	76
Pediatrics	80
Pharmacology	85
Physiology	87
Preventive Medicine and Public Health	90
Psychiatry and Neurology	94
Radiology	103
Surgery	106
Division of Postgraduate Studies	117
Medical Jurisprudence	117
Teaching and Research Divisions	118
Division of Gerontology	118
Institute of Neurology	118
Division of Tumor Services	118
Cancer Research	119
Child Psychiatry	119
Division of Auxiliary Medical Services	120
Hospital Administration	120
Occupational Therapy	122
Physical Therapy	123
X-Ray Technology	123
Dietetics	124
Medical Technology	124
Anesthesia	125
Medical Alumni Association	126
Prizes Awarded at Commencement	127
Register of Students	130
Index of Staff Members	139

## ACADEMIC DIVISIONS

### OF WASHINGTON UNIVERSITY

ETHAN ALLEN HITCHCOCK SHEPLEY, A.B., LL.B., LL.D.  
Chancellor of the University

All schools except Medicine, Dentistry, and Nursing, are located on the Main Campus, at Lindell and Skinker Boulevards, St. Louis 5, Mo.

#### THE COLLEGE OF LIBERAL ARTS

Thomas S. Hall, Ph.D., Dean

Courses in the humanities, the social studies, and the natural sciences, leading to a Bachelor of Arts degree; curricula for prospective teachers; curriculum leading to the Bachelor of Music degree; pre-professional studies for students who plan to enter the professional schools of Business and Public Administration, Law, Medicine, Dentistry, Social Work, the Graduate School of Arts and Sciences, the School of Botany, and advanced work at this and other universities and colleges.

#### THE SCHOOL OF ENGINEERING

Don A. Fischer, B.S., LL.B., Dean

*The Sever Institute of Technology*

Gustav Mesmer, Ph.D., Director

Four-year prescribed course of study leading to the degree of Bachelor of Science in each of the following branches: Architectural, Chemical, Civil, Electrical, Geological, Industrial, Mechanical, Metallurgical Engineering, Engineering Physics, and Engineering Science. Provision is also made for alumni to qualify for the professional degree of Engineer in each of the engineering branches.

Through the Sever Institute of Technology, graduate instruction leading to the degrees of Master of Science in Engineering, Master of Engineering Administration, and Doctor of Science in Engineering.

#### THE SCHOOL OF ARCHITECTURE

Joseph R. Passonneau, B.Arch., M.S.C.E., Dean

A. Six-year curriculum leading to the degree of Bachelor of Science in Architectural Sciences at the end of the fourth year and the professional degree of Bachelor of Architecture at the end of the sixth year. B. Five-year curriculum leading to the professional degree of Bachelor of Architecture.

#### THE SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

Ross M. Trump, Ph.D., Dean

1. Two-year program, at the junior and senior level, leading to the degree of Bachelor of Science in the field of Business Administration or Public Administration. 2. Four-year program, open to freshmen, which leads to the degree of Bachelor of Science in Retailing. 3. Graduate work leading to the degrees of Master of Business Administration, Master of Public Administration, Master of Science in Retailing, Accounting, Finance, or Marketing, and Doctor of Business Administration.

#### THE GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

Benjamin E. Youngdahl, A.M., LL.D., Dean

Two-year graduate professional curriculum leading to the degree of Master of Social Work; an additional professional two-year program leading to the degree of Doctor of Social Work.

#### THE HENRY SHAW SCHOOL OF BOTANY

Henry N. Andrews, Jr., Ph.D., Dean

Affiliated with the Missouri Botanical Garden, Graduate work in Botany leading to the degrees of Master of Arts and Doctor of Philosophy administered by the Graduate School of Arts and Sciences.

#### THE SCHOOL OF LAW

Milton D. Green, A.B., J.D., LL.M., Jur.Sc.D., Dean

Three-year curriculum leading to the degree of Bachelor of Laws.

#### THE SCHOOL OF MEDICINE

Edward W. Dempsey, Ph.D., Dean  
(660 South Kingshighway, St. Louis 10, Mo.)

Four-year curriculum leading to the degree of Doctor of Medicine; postgraduate courses. Through the Division of Auxiliary Medical Services, instruction leading to the degrees of Master of Hospital Administration, Bachelor of Science in Occupational Therapy, and Bachelor of Science in Physical Therapy; a course in X-ray Technology leading to a certificate; in cooperation with Barnes Hospital, courses for Laboratory Technicians, Medical Dietitians, and Nurse Anesthetists leading to certificates.

#### THE SCHOOL OF DENTISTRY

Leroy R. Boling, Ph.D., Dean  
(4559 Scott Avenue, St. Louis 10, Mo.)

Four-year curriculum leading to the degree of Doctor of Dental Surgery, and courses for graduate students who may or may not be candidates for the degree of Master of Science in one of the dental specialties.

#### THE SCHOOL OF NURSING

Louise Knapp, R.N., B.S., A.M., Director  
(416 South Kingshighway, St. Louis 10, Mo.)

Advanced programs for graduate nurses leading to the degrees of Bachelor of Science and Master of Science in Nursing.

#### THE SCHOOL OF FINE ARTS

Kenneth E. Hudson, B.F.A., Dean

Specialized four-year programs leading to the Certificate of Attainment or the degree of Bachelor of Fine Arts in Painting, Sculpture, Illustration, Advertising Design, Fashion Illustration, Dress Design, the Crafts, and Art Teacher Education.

#### UNIVERSITY COLLEGE

Ernest Brandenburg, Ph.D., Dean

An adult education and evening division offering a wide range of classes for students who are unable to attend during the day, including courses which lead to the degrees of Bachelor of Science and Bachelor of Science in Education.

#### THE SUMMER SCHOOL

Adolph Unruh, Ph.D., Director

Courses from almost every division of the University, under the regular teaching staff, as well as special classes given by instructors who are invited to the campus for this purpose.

#### THE GRADUATE SCHOOL OF ARTS AND SCIENCES

Lewis E. Hahn, Ph.D., Dean

*Graduate Institute of Education*

Robert J. Schaefer, Ph.D., Director

Work leading to the degrees of Master of Arts and Doctor of Philosophy; graduate professional degrees of Master of Science in Health and Physical Education, Master of Science in Speech and Hearing, Master of Science in Counseling and Personnel, and Master of Music. Through the Graduate Institute of Education, the graduate professional degrees of Master of Arts in Education and Doctor of Education; and the Advanced Graduate Certificate in Education.

THE CORPORATION  
OF WASHINGTON UNIVERSITY

---

THE BOARD OF DIRECTORS

WILLIAM MARKHAM AKIN	JOHN STARK LEHMANN
CHARLES WALTER BRYAN, JR.	MORTON D. MAY
DAVID RANDOLPH CALHOUN, JR.	JOHN MERRILL OLIN
DANIEL KAYSER CATLIN	SPENCER TRUMAN OLIN
EDWIN MONTILLA CLARK	ALEXANDER WESSEL SHAPLEIGH
JAMES MARSH DOUGLAS	ERWIN PETER STUPP
ADRIAN WOODS FRAZIER	DAVID PHILIP WOHL
MEREDITH CABELL JONES	HOWARD ISAAC YOUNG
WEBB LOUIS KAMMERER	

*Alumni Directors*

EDWARD E. HAVERSTICK, JR.	<i>Liberal Arts</i>
ALFRED LOUIS JOHNSON	<i>Business</i>
ROBERT LOUIS ARONSON	<i>Law</i>
SAMUEL BECKER GRANT	<i>Medicine</i>
EARL EMANUEL SHEPARD	<i>Dentistry</i>
WILLIAM VICTOR WEIR	<i>Engineering</i>

*Honorary Directors*

ARTHUR HOLLY COMPTON	BEN MOREELL
EDWARD MALLINCKRODT, JR.	

*Officers of the Board of Directors*

JAMES MARSH DOUGLAS	<i>Chairman</i>
DANIEL KAYSER CATLIN	<i>First Vice Chairman</i>
ALEXANDER WESSEL SHAPLEIGH	<i>Second Vice Chairman</i>
JOHN HENRY ERNEST	<i>Treasurer</i>
JAMES JOHNSTONE RITTERSKAMP, JR.	<i>Secretary</i>
THOMAS EDWARD BLACKWELL	<i>Consultant</i>

---

OFFICERS OF THE UNIVERSITY ADMINISTRATION

Ethan Allen Hitchcock Shepley	<i>Bridge Chancellor</i>
Carl Tolman	<i>Vice Chancellor, Dean of Faculties</i>
James Johnstone Ritterskamp, Jr.	<i>Vice Chancellor, Business Affairs</i>
Everett Harold Hopkins	<i>Vice Chancellor, University Development</i>
John Henry Ernest	<i>Comptroller</i>
John Cleveland Talbot	<i>Special Assistant to the Chancellor</i>

# OFFICERS AND COMMITTEES OF THE FACULTY OF THE SCHOOL OF MEDICINE

---

## EXECUTIVE FACULTY

Ethan A. H. Shepley	<i>Bridge Chancellor</i>
Carl Tolman	<i>Vice Chancellor, Dean of Faculties</i>
Edward W. Dempsey	<i>Dean</i>

Carl F. Cori	Oliver H. Lowry	W. Stanley Hartroft
Alexis F. Hartmann	Robert E. Shank	Carl V. Moore
Willard M. Allen	Hugh M. Wilson	Frank R. Bradley
Theodore E. Walsh	Edward W. Dempsey	Hugh Chaplin, Jr.
Edwin F. Gildea	Carl A. Moyer	Fred C. Reynolds
Harvey L. White	Arthur Kornberg	William Sleator, Jr. <sup>1</sup>
	Bernard Becker	

## GENERAL FACULTY

The General Faculty is composed of members of the staff holding appointment as Professor, Associate Professor, or Assistant Professor.

## STANDING COMMITTEES<sup>2</sup>

### MEDICAL EDUCATION

Carl V. Moore (Chairman)	Carl F. Cori	Carl A. Moyer
Willard M. Allen	Edward W. Dempsey	Hugh Chaplin, Jr.

### ADMISSIONS AND SCHOLARSHIPS

Hugh Chaplin (Chairman)	Sam L. Clark, Jr.	W. B. Parker
F. Edmund Hunter	Eli Robins	

### FELLOWSHIPS AND AWARDS

Edward W. Dempsey (Chairman)	W. Stanley Hartroft	Carl Harford
A. Duncan Chiquoine		

### PROMOTIONS

Alexis F. Hartmann (Chairman)	Robert E. Shank	W. Stanley Hartroft
Carl F. Cori		

<sup>1</sup> For the academic year 1958-59.

<sup>2</sup> The Dean is ex officio a member of all standing committees.



## ADMINISTRATIVE OFFICERS

### SCHOOL OF MEDICINE

---

Edward W. Dempsey

*Dean*

A.B., Marietta College, 1932; Sc.M., Brown University, 1934; Ph.D., 1937; M.A. (hon.), Harvard University, 1946.

Oliver Howe Lowry

*Assistant to the Dean*

B.S., Northwestern University, 1932; Ph.D., University of Chicago, 1937; M.D., 1937.

Hugh Chaplin, Jr.

*Associate Dean*

A.B., Princeton University, 1943; M.D., Columbia University, 1947.

John Courtright Herweg

*Assistant Dean*

B.S., Drury College, 1943; M.D., Washington University, 1945.

William Bahlmann Parker

*Registrar and Secretary to  
the Executive Faculty*

A.B., University of Missouri, 1921.

---

### OTHER OFFICERS

#### OF THE SCHOOL OF MEDICINE

*Physician in Charge of Student Health  
Service at the Medical Center*

Morris Kenton King, A.B., M.D.

*Administrative Assistant to the Dean*

Helen Kaiser

*Administrative Secretary to the Dean*

Louise Jacoby, A.B.

*Assistant Registrar*

Dorothy I. Miller

*Director of News Bureau*

Patricia S. Ilten, A.B.

*Librarian*

Marqua E. Weathers, A.B.

---

### THE MEDICAL CENTER

Barnes Hospital, St. Louis Children's Hospital, St. Louis Maternity Hospital, McMillan Hospital, David P. Wohl, Jr., Memorial Hospital, Renard Hospital, and Barnard Free Skin and Cancer Hospital.

#### JOINT MEDICAL BOARD

Frank R. Bradley *Chairman*

Willard M. Allen

Alexis F. Hartmann

Carl A. Moyer

Bernard Becker

W. Stanley Hartroft

James Owen

Ann Campbell

John E. Hobbs

Harry E. Panhorst

Edward W. Dempsey

Lilly Hoekstra

Robert E. Shank

Robert Dodd

Frank McDowell

Theodore E. Walsh

Edwin F. Gildea

Carl V. Moore

Hugh M. Wilson



*Renard Hospital*



*McMillan Hospital and Oscar Johnson Institute for  
Medical Research*



*Edward Mallinckrodt Institute of Radiology*



*St. Louis Children's Hospital*

## HISTORY

### OF THE MEDICAL CENTER

---

Washington University School of Medicine was formed in 1899 by the union of the first two medical schools established west of the Mississippi River, the Missouri Medical College and the St. Louis Medical College, popularly known as McDowell's College and Pope's College because of the close identification of the two schools with their respective Deans, McDowell of the Missouri Medical College and Pope of the St. Louis Medical College.

These pioneer colleges set high standards for medical education during the heyday of the medical diploma mills, when there were four times as many medical schools operating in the city of St. Louis as there now are in the entire state of Missouri. From their beginnings each school sought university affiliation. The St. Louis Medical College was established as the Medical Department of St. Louis University, became independent in 1855, and affiliated with Washington University in 1891, although it retained its name until the union with the Missouri Medical College in 1899. The Missouri Medical College was established as the Medical Department of Kemper College, was later the medical department of the University of Missouri; it finally became independent in 1857. In 1899, the Missouri Medical College affiliated with the St. Louis Medical College, and thus formed the Medical Department of Washington University.

Both colleges were particularly fortunate in attracting men of energy, integrity, and skill. Members of their faculties were well known at home and abroad. Charles A. Pope at thirty-six became the youngest president in the first hundred years of the American Medical Association, and his successor as professor of surgery at the St. Louis Medical College, E. H. Gregory, was elected president in 1886. John T. Hodgen, a graduate of the Missouri Medical College and later dean and professor of surgical anatomy at the St. Louis Medical College, was president of the American Medical Association in 1880. Hodgen originated the splint for hip fractures. The Hodgen splint is still used today.

Both colleges continued to raise their requirements, so that at the time they became associated in 1899, each required its students to complete satisfactorily a four-year graded course for the M.D. degree.

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. A similar survey by the American Medical Association and Flexner's survey, the famous Bulletin Number Four on the state of medical education in the United States and Canada, 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 Dr. Pritchett, 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. Mr. Brookings was shocked and immediately went to New York to see Flexner, demanding proof that the conditions were as bad as described. Abraham Flexner returned to St. Louis with Mr. Brookings, and the two men went through the School. In less than two hours Mr. Brookings was convinced that drastic action was necessary if the School were to be of highest caliber.

The meeting in 1909 of Robert S. Brookings and Abraham 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 S. 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, makes the following general 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 the leading departments the ablest men it could secure, who shall give their time to teaching and research, providing each with a staff of permanent assistants, who likewise shall give their time to instruction and research, and has associated with this staff groups of the strongest men in the medical profession in St. Louis."

When Robert A. Barnes died in 1892, he left a will which directed that the trustees of his estate should use \$100,000 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 two million dollars, a sum which permitted the building of a hospital and left an endowment greater than the original fund. The trustees were studying hospital construction at the time Mr. 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 the patient superior care and provide the essential clinical experience consistent with modern medical teaching methods.

During the spring of 1912 construction was begun on the medical school and hospital buildings which 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 and Kingshighway during the summer of 1914, and late in the fall of the same year the activities of the Washington University Hospital were transferred to the 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 of Mr. Brookings have been realized. Local, national, and international recognition has come to the School and to members of the faculty. Three members of the faculty have been given the St. Louis Award, and research done at the School has resulted in four Nobel Prizes. Two of the Nobel Laureates are still on the faculty.

In the ensuing years the medical center has continued to grow, and now its facilities are unexcelled. With the increase in the physical plant there has also occurred a great increase in the size of the faculty; the expansion has been made without compromise in the standards which marked the early development of the medical center. As a result, significant achievements in both research and clinical areas have been recorded steadily.

---

#### AIMS AND GENERAL PLAN OF INSTRUCTION

The efforts of the School are directed toward providing able students with a stimulating and challenging milieu in which they may pursue the study of medicine. Because Washington University is a private institution, its School of Medicine is not bound by any arbitrary restrictions in its admissions policy; indeed, the School seeks the most able applicants without reference to geographic, racial, or religious origin. A large scholarship program, which continues to grow, helps to make it possible for the School to lend support to able students whose personal resources might otherwise prevent them from obtaining a medical education. At any given time, the student body includes representatives from most of the fifty states and from the territories and foreign countries as well.

The educational policies are such as to offer the student not only a factual background, but more importantly, the opportunity to acquire a long-term approach to medicine. In a field which is developing as rapidly as is medicine, education only begins in medical school and must be considered a continuing project. It is hoped



that this important concept will be inculcated in each student during his four years in the Medical School.

The educational exposure available makes it possible for students to develop the foundation for a career in medical practice or in medical education and research. The student research program enables any student interested to become acquainted with original laboratory investigation; a significant group avails itself of this opportunity, and a number of original contributions results from student research each year.

The course of study for candidates for the degree of Doctor of Medicine in all medical schools is designed as a basic preparation for the practice of medicine. As interpreted in this School, the basic preparation for a career in any field of medicine must include first of all an introduction to the principles of the medical sciences. There are reasons for strong emphasis on this point of view.

The phenomenal advances that characterize modern medicine and promise its continued progress for human betterment are the outgrowth of systematic experiments rather than merely of individual observation, experience, and skill. A fusion of accumulated systematic knowledge, the medical sciences, with the arts of medical practice constitutes medicine of today and tomorrow. Orderly information in terms of the scientific principles involved, acquired by those having an inclination to apply them to practical problems, furnishes an attitude of mind as well as a factual background that are essential to the study of clinical medicine.

The technical knowledge that has created modern medicine will surely continue to grow. Medical students must, therefore, form the habit of keeping up with new developments, of preparing themselves for the continued study of the medical sciences; without that habit and preparation, the subsequent progress of medicine will bring obsolescence to the individual. These ideas pervade the spirit of the medical science courses given during the first and second years.

Before entering upon the examination and study of patients who exhibit and illustrate the phenomena of health and disease treated by the medical sciences, the student must become acquainted with and acquire practice in techniques of clinical examination. This beginning experience is gained mainly from the conjoint courses given by teachers from several clinical departments during the second year.

With this preparation the student is ready, when he enters the third-year class, to begin the observation and study—first hand—of a variety of manifestations of health and disease as seen and cared for in clinics and hospitals. This clinical instruction occupies the third and fourth years. It consists mainly of a series of clerkships in wards and hospitals and outpatient services, supplemented by systematic courses of lectures and clinical conferences.

It is this planned sequence of scientific and practical training, combined with individual experience of student with patients, under guidance of clinical teachers who are also physicians and surgeons, that characterizes the basic professional course in medicine.

Because every medical student, irrespective of the field or specialty of medicine in

which he may desire or expect to practice, must become first a broadly trained doctor of medicine, nearly all courses of the undergraduate medical curriculum are obligatory. At the same time all students are encouraged to cultivate their individual interests and talents by special study of subjects or topics of their own selection. For this purpose several half days are left free in the class schedules, during which able students may do additional work in subjects of their greatest interest. A large number of student research fellowships are awarded each year to qualified applicants for summer work. Certain junior clerkships are offered during the summer so that students who elect to do so may satisfy course requirements in these subjects during the summer and may then devote an equal amount of time to research or other elective activities in the school year. In the senior year six weeks are set aside for elective courses or for research, and some students who wish to arrange for eighteen weeks of uninterrupted free time for research may do so. The opportunity for special study is afforded in every department of the School.

The academic year is thirty-six weeks in length, except for seniors. The first year is divided into semesters, the second and third years into three twelve-week terms. The senior year consists of four twelve-week terms. The program is an intensive one and demands the full time and best efforts of students. They are discouraged from attempting outside work or employment during the sessions, especially the first two years.

---

#### MEDICAL SCHOOL BUILDINGS

The School is located along the eastern edge of Forest Park in the center of the city and is served by convenient public transportation; its site thus combines the advantages of pleasant surroundings and easy accessibility.

The laboratories and lecture rooms of the preclinical departments are housed in two wings of the main building of the School and in the building which also provides the facilities for the Washington University Clinics. The so-called North Building contains the new Medical School library, an auditorium, and the facilities of the Department of Anatomy. The Cancer Research Wing, added in 1950, houses the administrative offices, a student lounge, the bookstore, and numerous research laboratories. In the South Building are the Departments of Biochemistry, Physiology, and Pharmacology. The Departments of Microbiology, Pathology, and Preventive Medicine each occupy a floor in the Washington University Clinic Building, where are also located the Student Health Service and the outpatient departments of the affiliated hospitals.

---

#### THE HOSPITALS AND LABORATORIES

Adjacent to the Medical School building proper are the following hospital facilities:

*The Barnes Hospital.* This unit, which constituted the first hospital structure in the center, has grown from 150 beds to its present total of 444. Included are the medical and surgical wards, representing about half of the total number of beds, as well as

the floors on which are available beds for semiprivate and private patients. In the extensive operating suite, all of the general surgical procedures as well as those relating to neurosurgery, thoracic surgery, urologic surgery, plastic surgery, orthopedic surgery, and gynecologic surgery are performed. A large central diagnostic laboratory, under the direction of the Medical School staff, provides diagnostic service to all of the medical center. In the Barnes Hospital there is also a large cafeteria for the professional staff and the medical students.

*The McMillan Hospital, including the Oscar Johnson Institute for Medical Research.* This building is owned by the School of Medicine, but like all the hospitals within the medical center proper with the exception of St. Louis Children's Hospital, it is operated by the Director of Barnes Hospital. In it are 156 beds for the treatment of patients whose diseases fall in the fields of ophthalmology or otolaryngology. A small number of general medical patients are also admitted to the McMillan Hospital. The operating rooms and outpatient clinics of both the Departments of Ophthalmology and Otolaryngology are situated in the McMillan Hospital. The Oscar Johnson Institute, occupying the top five floors of the building, provides unexcelled research facilities for the above two departments, and for the Division of Neurology as well.

*The St. Louis Maternity Hospital.* Now owned by the University, this hospital became affiliated with the University in 1923, and moved to its present quarters in the medical center in 1927. Its 100 beds are devoted to ward, semiprivate, and private obstetrical patients, and there are corresponding facilities for newborns, including a unit for premature infants. There are, in addition, 37 beds for gynecologic patients. The building also houses the research facilities of the Department of Obstetrics and Gynecology.

*The St. Louis Children's Hospital.* With the newly completed facilities there are now 200 beds for the care of infants and children. Also available are new outpatient facilities and extensive clinical and research laboratories for the Department of Pediatrics.

*Edward Mallinckrodt Institute of Radiology.* This unit, one of the largest and best equipped in the world, houses the diagnostic, therapeutic, and research activities of the Department of Radiology. The Institute, which is University owned, is connected on most of its floors with the adjoining Barnes and Barnard Hospitals, and through them with the other hospitals of the center, thus providing easy access for all inpatients. Many important advances, including the development of cholecystography by Dr. Everts A. Graham and his associates, have been made at the Mallinckrodt Institute.

*David P. Wohl, Jr., Memorial Hospital.* Opened by the University in 1954, the Wohl Hospital contains 71 beds for the care of medical and surgical patients, and also provides excellent new laboratories and offices for the Departments of Medicine and Surgery. Within the building are located a large amphitheatre, several small classrooms, and a student lounge.

*Barnard Free Skin and Cancer Hospital.* This new building, opened in 1954, provides 40 beds for the treatment of indigent patients suffering from skin diseases and

tumors. The Barnard Hospital has had a long and notable history, and its recent affiliation with the University medical center constitutes an important step in the development of both institutions.

*Renard Hospital.* The Renard Hospital, opened in 1955, provides 100 beds for patients with psychiatric diseases and also affords new laboratories and offices for the Department of Psychiatry and Neurology.

*The Irene Walter Johnson Institute of Rehabilitation,* opened in 1959, will provide facilities for disabled persons in the St. Louis metropolitan area and an active research program relating to chronic diseases. Personnel will be trained in rehabilitation procedures and new methods of treatment will be developed.

*The David P. Wohl, Jr. Memorial - Washington University Clinics* building is under construction and is expected to be completed by the fall of 1960. Five floors of the building will be used for relocation of the present Washington University Clinics and five floors will be devoted to facilities for research. In addition a 225-seat amphitheatre will be located on the first floor.

In addition to the above named facilities which comprise the Washington University Medical Center proper, there are available for teaching purposes patients in the various hospitals operated by the city of St. Louis; included are two general hospitals, the St. Louis City Hospital with 1,037 beds, the Homer G. Phillips Hospital with 680 beds, and the Koch Hospital for tuberculosis.

All members of the staffs of the various hospitals in the Washington University Medical Center hold University appointments, and the Medical School nominates members of its faculty to the staffs of the various municipal hospitals.

---

## STUDENT ACTIVITIES

Although the demands of the medical curriculum impose a greater load on students than they usually face in undergraduate colleges, there are opportunities for extra-curricular activities, among which the following are of interest:

- (a) *Student Representative Council.* This body is the official student government organization and is composed of the officers of the four classes. The Council works closely with the Associate Dean and has responsibility for such matters as the examination honor system, the student curriculum report (an annual compilation which presents student opinion regarding course material, teaching methods, etc.), and other matters of interest or concern to the students.
- (b) *Washington University Medical Society.* This society, whose membership includes the faculty and all students, holds five meetings yearly, at which members present investigative work being carried on at the Medical School. In addition, in the Spring of each year, the Student Research Assembly is held for the purpose of enabling seniors to report on original research completed at any time during their four years in the School.

- (c) *Athletic Facilities.* Excellent facilities for indoor and outdoor sports are available on the main University Campus. Students are furnished tickets free of charge for the many intercollegiate athletic events which take place throughout the year.
  - (d) *Social Fraternities.* Several national fraternities are represented by chapters at the School. Each year distinguished scientists are invited to present the two guest lectureships sponsored by these organizations.
  - (e) Within the University community, many excellent concerts, lectures, and other cultural activities take place and are open to students in the School of Medicine. In the city of St. Louis, likewise, are accessible the City Art Museum, the Missouri Botanical Garden, the Museum of the Missouri Historical Society, and others. The St. Louis Symphony Orchestra offers a series of twenty concerts during the season, and tickets at special student rates are available through the University.
- 

#### GRADUATE TRAINING

Although not required by all states for licensure, an internship in an approved hospital is considered essential preparation for the practice of medicine, and most graduates seek additional experience by serving as residents and later as fellows for periods up to five years.

In order to aid students in obtaining desirable intern appointments, an active counseling program is maintained by the Associate Dean. Thus, in their junior year, students are provided with general background information regarding the type of organization of the internships available. Since many more openings exist than there are candidates in any given year, students are able to exert a considerable measure of selection.

An open file is maintained in the Associate Dean's Office wherein are kept brochures and other descriptive data regarding internships throughout the country; included are evaluations of their own appointments, obtained from recent graduates.

The School participates in the National Internship Matching Program, which is now in its fourth year of operation. It has represented a valuable advance in this area and offers distinct advantages to applicants.

The class of 1959, as did its predecessors, obtained excellent appointments; more than 70% were placed in leading University Hospitals in the United States, and the remainder accepted positions in other fine civilian and military hospitals.

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



## THE LIBRARY

---

The Library reading room, air-conditioned and lighted by recessed fluorescent ceiling lights, is located on the second floor of the north building of the Medical School. Two conference rooms are provided for the use of the students. Three levels of stacks, which are open to students and faculty alike, are situated below the reading room. The Library contains (May 1, 1959) 84,044 bound periodicals and monographs, and receives currently 970 medical periodicals.

The Library has acquired by gifts and by purchase a number of private collections, among them the manuscripts, letters, and other valuable material of the pioneer American physiologist, William Beaumont.

Library hours are 8:30 a. m. to 11:00 p. m. on week days, 8:30 a. m. to 5:00 p. m. on Saturdays, and 1:00 p. m. to 5:00 p. m. on Sundays.

*A view of the main floor of the Library. At the far end is one of several conference rooms available for use by small groups of students.*



1959

SEPTEMBER							
S	M	T	W	T	F	S	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30				
OCTOBER							
S	M	T	W	T	F	S	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	
NOVEMBER							
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30						
DECEMBER							
S	M	T	W	T	F	S	
		1	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			

1960

JANUARY							
S	M	T	W	T	F	S	
						1 8	2 9
3	4	5	6	7			
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	
31							
MAY							
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31					
SEPTEMBER							
S	M	T	W	T	F	S	
						1 8	2 9
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		
FEBRUARY							
S	M	T	W	T	F	S	
						1 8	2 9
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29						
JUNE							
S	M	T	W	T	F	S	
						1 8	2 9
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30			
MARCH							
S	M	T	W	T	F	S	
						1 8	2 9
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30	31			
AUGUST							
S	M	T	W	T	F	S	
						1 8	2 9
3	4	5	6	7	8		
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	
APRIL							
S	M	T	W	T	F	S	
						1 8	2 9
3	4	5	6	7	8		
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	
OCTOBER							
S	M	T	W	T	F	S	
						1 8	2 9
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						
NOVEMBER							
S	M	T	W	T	F	S	
						1 8	2 9
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
27	28	29	30				
DECEMBER							
S	M	T	W	T	F	S	
						1 8	2 9
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

1961

JANUARY							FEBRUARY							MARCH							APRIL							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6	7				1	2	3	4				1	2	3	4							1	
8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11	2	3	4	5	6	7	8	
15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18	9	10	11	12	13	14	15	
22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22	
29	30	31					26	27	28					26	27	28	29	30	31		23	24	25	26	27	28	29	
MAY							JUNE							JULY							AUGUST							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
	1	2	3	4	5	6					1	2	3							1				1	2	3	4	5
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31			
														30	31													

## CALENDAR

---

### 1959-60

---

Registration for all new students, Wednesday, September 9, 1959.

---

Registration for all former students, Friday, September 11, 1959.

---

Examinations for Advanced Standing and Removal of Conditions,  
Wednesday, September 9, and Thursday, September 10, 1959.

---

Academic year begins Monday, September 14, 1959.

First Trimester ends Saturday, December 5, 1959.

---

Holiday, Thanksgiving Day, Thursday, November 26, 1959.

---

Second Trimester begins Monday, December 7, 1959; ends Saturday, March 12, 1960.

---

Christmas Recess, Saturday, December 19, 1959, at 1:00 p. m., to  
Monday, January 4, 1960, at 8:00 a. m.

---

Registration for second half-year, Monday, February 1, 1960.

---

Third Trimester begins Monday, March 14, 1960; ends Saturday, June 4, 1960.

---

Holidays, Good Friday, April 15, 1960, and Saturday, April 16, 1960.

---

Senior Research Program, Friday, April 22, 1960.

---

Holiday, Decoration Day, Monday, May 30, 1960.

---

Final Examinations for first, second, and third classes begin Monday, June 6, 1960.

---

Commencement, Monday, June 6, 1960.

---

### 1960-61

---

Summer term for seniors begins June 20, 1960; ends September 10, 1960.

---

Registration for all new students, Wednesday, September 7, 1960.

---

Registration for all former students, Friday, September 9, 1960.

---

First Trimester begins Monday, September 12, 1960; ends Saturday, December 3, 1960.

---

Second Trimester begins Monday, December 5, 1960; ends Saturday, March 11, 1961.

---

Christmas Recess, Wednesday, December 21, 1960, through Tuesday, January 3, 1961.

---

Third Trimester begins Monday, March 13, 1961; ends Saturday, June 3, 1961.

---

Commencement, Monday, June 5, 1961.

---

## ENTRANCE REQUIREMENTS

---

Entrance requirements to the School of Medicine are:

- (1) Character, attitude, and interest suitable to carrying out the duties of a physician.
- (2) Intellectual ability and achievement, indicated by satisfactory scholastic work prior to entering medical school.
- (3) Completion of at least three years of college courses in an approved college or university, with minimum subject requirements as follows:

English	6 semester hours
Chemistry	15 semester hours, including quantitative analysis and 4 hours of organic
Physics	8 semester hours
Biology	8 semester hours, at least 4 hours of which must be in zoology
- (4) Applicants are expected to have taken the Medical College Admissions Test of the Association of American Medical Colleges.

Because of the great importance of chemistry in all areas of the medical sciences, applicants are urged to pay special attention to their training in this subject. The requirement of 15 semester hours should be regarded as a bare minimum, and extra work in chemistry would be very profitable.

Although a background in biological subjects is valuable, the student is urged to emphasize courses which will not be repeated in medical school. For example, an undergraduate course in physiology, biochemistry, or bacteriology, if it duplicates material to be given later, would be less valuable than a solid course in zoology or genetics.

It is believed that students pursuing the course in medicine should have a well-rounded general education in addition to the specific requirements indicated above; thus the Committee on Admissions suggests that applicants obtain as much exposure to courses in other fields of knowledge as possible. Students who have majored in nonscientific fields are considered as acceptable as science majors as long as they have acquitted themselves well in the premedical courses.

The rest of the college work should be chosen with the object of developing the intellectual talents of the individual, rather than as required preprofessional preparation. The college work should include courses in language and literature, history, and the social sciences, or other subjects which may afford the foundation for cultural development. Unless that foundation is laid early, there is the danger that later demands of technical and professional training may lead to its neglect.

The interest and earnestness with which any study is done—more than the subject matter itself—may determine its lasting value. The spirit of a course may be more important than its content if it stimulates interest and cultivates an inquiring and thoughtful attitude. Development of an inclination to study and the habit of reasoning is more valuable than an obligatory course taken merely to satisfy entrance requirements.

Applications should be filed as soon as possible after August 1 of the year preceding that in which admission is sought. Blanks will be furnished upon request, and instructions concerning fees and transcripts will be sent also.

#### ADMISSION TO ADVANCED STANDING

Applicants who have satisfactorily completed one or two years of study at another approved medical school may be accepted for admission to the second- or third-year class (when vacancies exist), provided:

- (1) That they comply with the requirements above stated for admission to the first-year class.
- (2) That courses equivalent in general content and duration to those in this School in the years for which credit is asked have been satisfactorily completed.
- (3) That at the discretion of the Committee on Admissions, examinations may be required in any subjects already covered.

An applicant for admission to the upper classes must have studied as a matriculated medical student in an acceptable medical school for a period at least equal to that already spent by the class to which admission is sought.

#### ADMISSION OF GRADUATES IN MEDICINE

Applicants who hold the M.D. degree are not accepted as candidates for that degree except under unusual circumstances.

A program of courses for postgraduate students may be secured from the Director of the Division of Postgraduate Studies.

---

#### STANDING AND PROMOTION

The following procedure for action on promotion and graduation has been adopted:

(1) After the completion of a major course each department reports to the dean's office a numerical grade for each student in the class for that course, designating in each case "honors," "pass," or "fail." The grade and designation may be based upon attitude and performance as well as upon examination grades. Final examinations are held at the close of each academic year.

(2) For each class there is a Promotions Committee which periodically reviews the records of all students in that class and acts in accordance with the following rules:

(a) A student having recorded failures in two major subjects (see list below) will be required to withdraw from the class.

##### Major Subjects.

First Year: Gross Anatomy, Microscopic Anatomy, Biochemistry, Physiology.

Second Year: Microbiology, Pathology, Pharmacology, Medicine, Surgery (1/2).

Third Year: Medicine, Psychiatry and Neurology, Obstetrics and Gynecology, Surgery, Pediatrics.



## REQUIREMENTS FOR DEGREES

---

Fourth Year: Medicine, Obstetrics and Gynecology, Pediatrics, Surgery, Ophthalmology ( $\frac{1}{2}$ ), Otolaryngology ( $\frac{1}{2}$ ), Outpatient Clinics.

(b) All students will be promoted to the next class who rank in the upper four-fifths of the class in at least 60% of the scheduled clock hours, provided there are no failures.

(c) Students who at the end of any year have recorded only one failure in a major department will be required to remove this failure as directed by the department concerned. When, and if, the failure is removed, the subcommittee will consider the student's entire record under rules (b) and (c) above. A student who has recorded a second failure in the attempt to remove a first failure will be required to withdraw from his class.

(d) No student shall be promoted to the third year until there is satisfactory credit for all required subjects of the first and second year.

(e) Under exceptional circumstances the promotion committees may suggest to the Dean and to the Committee on Admissions and Scholarships that a student be allowed to repeat certain courses as a special student or to repeat the work of the entire year as a member of the next class.

The registration of a student may be canceled at any time if in the opinion of the faculty his further attendance is deemed undesirable. A prorata refund of the tuition will be made in such cases.

---

## REQUIREMENTS FOR DEGREES

### DOCTOR OF MEDICINE

Candidates must be more than twenty-one years of age and of good moral character. They must have attended not less than four courses of instruction as matriculated medical students, the last of which has been in this School. They must have passed all required courses, or their equivalent, and have received satisfactory grades in the work of the entire four classes. They must have discharged all current indebtedness to the University.

At the end of the fourth academic term, students who have fulfilled these requirements will be recommended for the degree of Doctor of Medicine. Candidates must be present when the degrees are conferred. A graduation fee of \$5.00 must be paid before Commencement.

Honors are awarded on the basis of: (1) a written thesis submitted at any time prior to April 1 of the senior year; and (2) the candidate's over-all record at the time of graduation.

### BACHELOR OF ARTS (COMBINED PROGRAM)

A student who enters the School of Medicine with three years of work in the College of Liberal Arts of Washington University may become a candidate for the Bachelor of Arts degree at the end of the first year in the School of Medicine. Under this

combined program he must fulfill the premedical requirements and also the following additional requirements:

1. He must have completed at least 90 academic units, with a minimum grade-point average of 1.0, and 4 units in Physical Education.
2. He must have completed all of the specific requirements of the Common Studies Program and at least 15 additional units in advanced courses in not more than 3 departments. These units will satisfy a part of the A.B. requirements relative to advanced courses.
3. To be eligible for the degree of Bachelor of Arts under the combined plan, a student transferring to Washington University must complete at least the last 30 units of A.B. work in the College of Liberal Arts at Washington University and must complete all specific requirements for the A.B. degree, with the exception noted in item 2 above.
4. In addition to completing at least 90 units of work in the College, a student in the combined program must also satisfactorily complete the first year in the Washington University School of Medicine; this work will complete the A.B. requirements for fulfillment of the Individual Studies Program.
5. A candidate for the A.B. degree under the combined program must be recommended by the Dean of the School of Medicine to the Dean of the College of Liberal Arts.

## FEES AND OTHER EXPENSES

---

The University reserves the right to change the fees herein stated at any time without notice. Whenever a change is made, it will become effective with the next installment due.

All fees and charges are payable in advance at the Office of the Registrar of the School of Medicine.

Checks should be made payable to Washington University.

**TUITION FEE.** For undergraduate students the tuition fee is \$864.00, payable in two equal installments, at the beginning of the first and second semesters.

**HEALTH SERVICE FEE.** A health service fee of \$30.00 per semester is charged to all students. This fee covers complete medical examination on entering the School and continued medical care including all necessary hospital costs, drugs, and limited dental service during the regular school year. Those students who remain at school during the summer may make arrangements for continuation of health service. The services of one or more physicians are available at designated times for consultation at the Student Health Clinic. A physician is available for emergency care either in the clinic or the student's room when necessary. Hospital care is provided in the services of the Barnes Hospital. It is the aim of the staff to watch and safeguard the health of each student in the School. The responsibility of the Health Service automatically ceases when the student for any reason discontinues his enrollment. A partial refund of the Health Service fee will be made to such individuals.

**DIPLOMA FEE.** The diploma fee for the degree of Doctor of Medicine is \$5.00. This fee is payable before Commencement.

### MICROSCOPE AND DIAGNOSTIC INSTRUMENTS

Each student entering the freshman class is required to possess a standard microscope equipped with a substage light. All students are required to provide themselves with stethoscopes, ophthalmoscopes, otoscopes, hemocytometers, percussion hammers, tape measures, flashlights, head mirrors, and skin pencils as the need for them arises.

Supplies and books may be purchased at the bookstore located in the Medical School.

---

## ESTIMATE OF EXPENSES

An estimate of the average annual expenses of a student in the School of Medicine, excluding the cost of clothes, laundry, microscope, and incidentals, is given below. The amounts will vary considerably, according to the individual.

Tuition .....	\$ 864.00
Health Service Fee .....	60.00
Books and Instruments .....	\$ 75.00 to 150.00
Room and Board (from \$20.00 to \$25.00 a week) .....	720.00 to 900.00
	<hr/>
	\$1719.00 to \$1974.00

---

## REGISTRATION

Registration for the first half-year 1959-60 is scheduled for Wednesday, September 9 (new students) and Friday, September 11 (former students); for the second half-year, Monday, February 1, 1960.

Previously matriculated students who fail to register on any of the days set aside for that purpose will be charged a fee of \$5.00.

---

## WITHDRAWALS AND REFUNDS

A student who withdraws within the first two weeks of classes is charged 20% of the tuition fee; a student who withdraws during the third week is held for 40% of the charges; a student who withdraws during the fourth week is held for 60% of the charges; a student who withdraws during the fifth week is held for 80% of the charges. There is no refund of any portion of the tuition fee after the fifth week. No special fees are refundable after the second week of the term.

---

## THE SPENCER T. OLIN RESIDENCE HALL

The Spencer T. Olin Residence Hall is under construction and is expected to be ready for occupancy in September, 1960. This building was made possible by generous gifts from Spencer T. Olin, alumni of the School of Medicine, and friends of the School.

This residence, which is located on Scott Avenue in the Medical Center, will have accommodations for 295 single men and women students. The interior arrangement will be much like a modern hotel. The main floor will have a mail room, letter boxes, and a large lounge. The ground floor will have a snack bar, music rooms, a laundry, and meeting rooms. A two-story gymnasium will be available for use of the residents.

A non-denominational chapel, the gift of the Danforth Foundation, a lounge on the second floor for women students, the gift of William S. Bedal in memory of his mother, Dr. Adelheid C. Bedal, and a nonmedical library, a gift from the estate of Mary G. Reber, will be available for use by the students.

Each of the upper floors will have fifteen single bedrooms, two double bedrooms, and two two-bedroom suites. The second floor will house women students exclusively. A penthouse on the roof will have a large room for dances and other social activities.

The rates for the rooms have not been determined.

---

## VETERANS ADMINISTRATION

The School of Medicine is approved by the Veterans' Administration for full training under Public Laws 346, 16, 550, and 894.

## STUDENT RESEARCH FELLOWSHIPS

---

A considerable number of research fellowships are awarded each year to students who undertake to do research projects under the direction of a faculty member. These fellowships, the number of which varies from year to year, are supported by funds provided by the United States Public Health Service, the National Science Foundation, the Josiah Macy, Jr., Foundation, the Lederle Laboratories, the Foundation's Fund, the Tobacco Industry Research Committee, and others. In addition, the John and Mary Markle Foundation has provided funds for several of the preclinical departments to support additional staff members whose functions are to advise and consult with students interested in special research opportunities. Each year, at the Senior Research Assembly, the results of student research are presented before the Faculty and student body. Each year, also, a number of articles are published in which student research is presented to the scientific public. The Student Research Fellowships carry a stipend of \$600, and are awarded for a minimum period of two months. They may be undertaken by any student after admission to the Medical School and during any vacation period. Application should be made to the Committee on Special Awards which supervises this program. The members of the Committee are:

Dr. Carl G. Harford, Dr. W. Stanley Hartroft, Dr. A. Duncan Chiquoine (Secretary), Dr. Edward W. Dempsey (Chairman).



## FELLOWSHIPS AND SCHOLARSHIPS

---

**THE JACKSON JOHNSON FUND.** Under the will of Jackson Johnson, the sum of \$250,000 was given to the University, the income to be used "to aid worthy and desirable students in acquiring and completing their medical education." During recent years, the income from this fund has been devoted to Honor Scholarships named for the donor as well as to fellowships for needy students.

These Honor Scholarships are awarded on a regional basis with one or more scholarships being awarded annually to students from each of the following areas:

*South Central*

Alabama  
Arkansas  
Kentucky  
Louisiana  
Mississippi  
Oklahoma  
Tennessee  
Texas  
Canal Zone

*Southeastern*

Delaware  
Florida  
Georgia  
Maryland  
North Carolina  
South Carolina  
Virginia  
West Virginia  
Washington, D. C.  
Puerto Rico  
Virgin Islands

*New England*

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

*Western*

Alaska  
California  
Hawaii  
Nevada  
Oregon  
Washington  
Pacific Islands

*North Central*

Illinois  
Iowa  
Kansas  
Minnesota  
Missouri  
Nebraska  
North Dakota  
South Dakota  
Wisconsin

*Rocky Mountains*

Arizona  
Colorado  
Idaho  
Montana  
New Mexico  
Utah  
Wyoming

*Northeastern*

Indiana  
Michigan  
New Jersey  
New York  
Ohio  
Pennsylvania

The Jackson Johnson Regional Scholarships have been established to enable young men and women with superior qualifications and promise for a career in medicine to come to Washington University, without regard to their financial circumstances.

**Eligibility.** Jackson Johnson Regional Scholarships are open to those who plan to enter the freshman class at Washington University School of Medicine or to transfer from a two-year medical school to the third-year class at Washington University. The

candidate must have resided for three years before application in one of the specified Regions, and have completed premedical work or the first two years of medicine in the same Region.

*Stipend.* Since the Jackson Johnson Regional Scholarships are regarded as prizes to be competed for by all students, whatever their financial need, the stipends will vary with the financial resources of the students. In those cases in which there is no financial need, a scholarship without stipend will be awarded. The maximum stipend will be \$1,200 a year.

*Selection.* The awards will be made by the Committee on Admissions and Scholarships with the approval of the Chancellor on the basis of the academic record in college or medical school, the score on the medical aptitude and other tests, the recommendations of professors and others concerning ability, character, qualities of leadership, and general all-round development, and the extracurricular activities both in and outside of the School.

*Renewals.* Awards may be renewed with the same or different stipends for the succeeding years of the medical course, provided the achievements of the scholar justify the continuance of the award. The School may withdraw a Jackson Johnson Regional Scholarship if at any time the student's record or his actions in the School or outside prove him unworthy of it.

*Application.* All students accepted for admission are considered for the Jackson Johnson Regional Scholarships, making it unnecessary to file a special application.

**JACKSON JOHNSON FELLOWSHIPS.** In order to provide opportunities for able and promising young men and women, three Jackson Johnson Fellowships in the Preclinical Sciences will be offered annually.

*Eligibility.* All applicants must be graduates of a recognized school of medicine, and acceptable for admission to the Graduate School of Arts and Sciences of Washington University as candidates for a doctoral degree. Preference will be given to those who expect to pursue an academic career in one of the preclinical sciences.

*Stipend.* The stipend will vary with the needs and ability of the individual to a maximum of \$2000 a year for the first year.

*Renewal.* Awards may be renewed with the same or different stipends for not to exceed, in all, three years, provided the achievements of the fellow justify continued study.

*Application.* All applications should be completed by March 1 for the period beginning the following July or September. Awards will be announced about April 1.

**THE DANFORTH MEDICAL FUND.** The Danforth Foundation, Inc., and the late William H. Danforth have given the sum of \$400,000 to further and promote the acquisition and dissemination of the knowledge of medical science and to support research and new discoveries in basic and clinical medicine and surgery. The principal and income of the Fund shall be used to furnish scholarships, fellowships, outright grants, or other financial assistance to talented and promising young men and women

engaged or preparing to engage in such fields of study and endeavor. Mr. Danforth established a Danforth Medical Fund Committee which at the present time is comprised of Dr. Glover H. Copher, Chairman, Dr. Samuel B. Grant and Dr. James Barrett Brown.

The persons to or for whom funds shall be made available shall be proposed by the Committee on Scholarships and Loans of the School of Medicine and shall be finally selected and determined with the advice and consent of the Danforth Medical Fund Committee. The awards are made by the Chancellor.

THE GEORGE F. GILL SCHOLARSHIP, instituted in memory of a former Clinical Professor of Pediatrics, entitles the holder to remission of the tuition fee to the amount of \$100.

THE ALUMNI SCHOLARSHIP AWARD of \$100 to be applied on the payment of the tuition fee is given for excellence in work during the preceding scholastic year on the recommendation of the Committee on Loans and Scholarships and the President of the Medical Alumni Association.

THE DR. JOHN B. SHAPLEIGH SCHOLARSHIP. From a bequest of Dr. John B. Shapleigh, supplemented by contributions by Mrs. Shapleigh and Miss Margaret Shapleigh, a fund has been established, the income of which is used to pay the tuition of students in need of assistance.

THE T. GRISWOLD COMSTOCK SCHOLARSHIPS. Through the bequest of Marilla E. Comstock, the annual income from \$12,000 is used for two scholarships for students who otherwise would be unable to obtain a medical education and who desire and intend to follow the practice of medicine and surgery.

THE ROBERT ALLEN ROBLEE SCHOLARSHIPS. Through the gift of Mrs. Joseph H. Roblee, the income from the Robert Allen Roblee Scholarship Endowment Fund of \$15,000 provides one or more scholarships for qualified, worthy, and deserving students.

THE GAINES HALL SCHOLARSHIP FUND. Through the gift of Mr. and Mrs. Gaines Hall, \$2,000 has been given to the School of Medicine for scholarships. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

THE ALEXANDER BALDRIDGE SHAW SCHOLARSHIPS. Through the bequest of Roy A. Shaw, the annual income from \$10,975 has been given in memory of his father, Dr. Alexander Baldrige Shaw, for scholarships in the School of Medicine. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

THE ALINE RIXMAN LOAN FUND. Provided through the gift of William Rixman, the fund is used to alleviate unexpected financial emergencies that arise among medical students during the academic year. The fund is available to any student who, in the judgment of the Dean, gives promise of becoming a competent physician. It is expected that loans will be repaid within a reasonable time after the student has finished his training. The loans are granted by the Chancellor on the recommendation of the Dean.

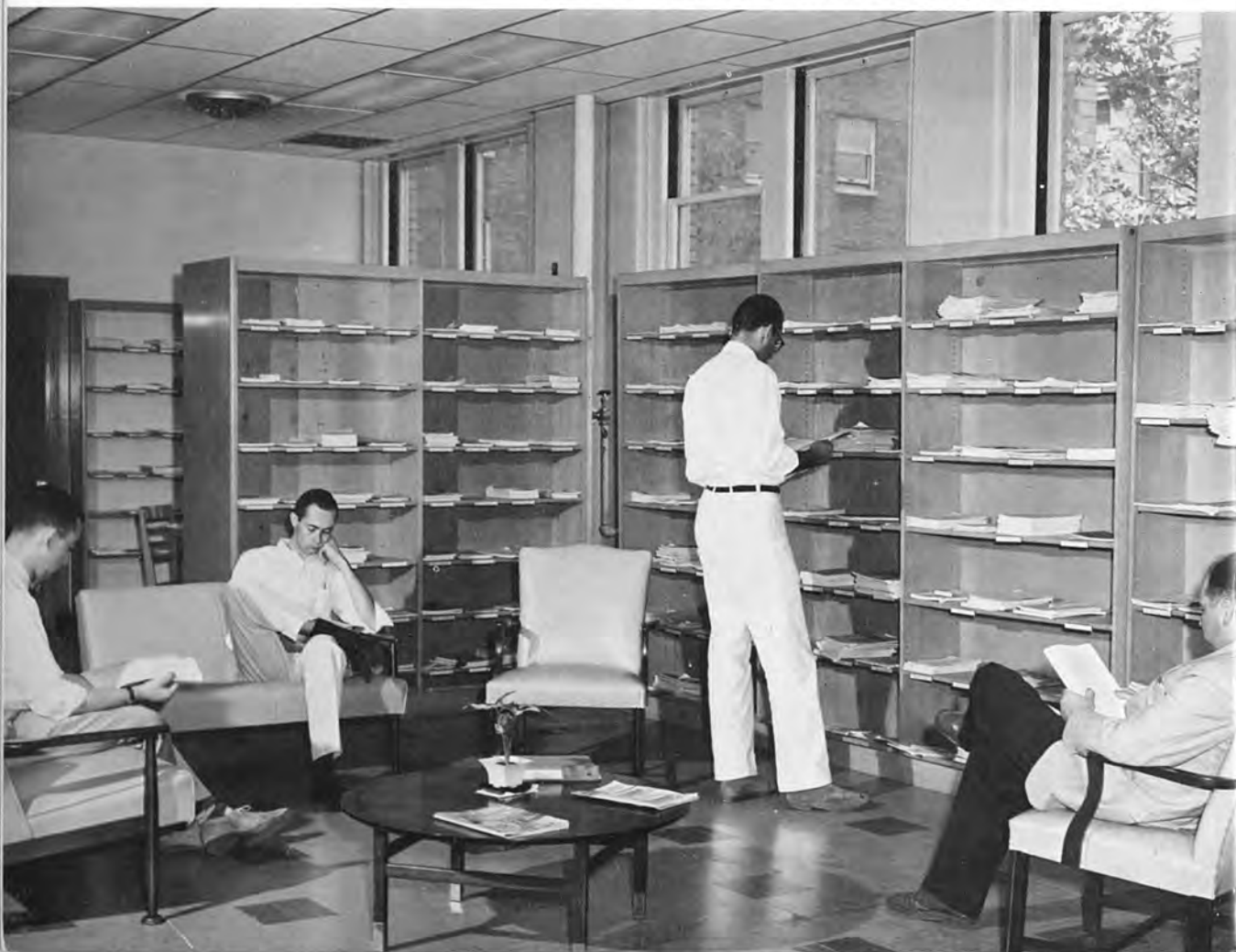
## FELLOWSHIPS AND SCHOLARSHIPS

THE W. MCKIM MARRIOTT SCHOLARSHIP AWARD, instituted in memory of Dr. W. McKim Marriott, Dean and Professor of Pediatrics, by Dr. C. V. Mosby for the C. V. Mosby Co., entitles the holder to an award of \$500, which provides partial tuition for the recipient in the School of Medicine. The scholarship is awarded annually, preferably to a deserving young man who shows promise in the field of pediatrics. The award is made by the Chancellor on the recommendation of the Dean and the Professor of Pediatrics.

W. K. KELLOGG FOUNDATION LOAN FUND. A generous gift has been made to this and other universities by the W. K. Kellogg Foundation to provide financial assistance to well-qualified medical students in need of such aid. A limited number of loans are available from this fund.

THE G. H. REINHARDT MEMORIAL SCHOLARSHIP FUND. Through the bequest of G. H. Reinhardt, an amount of not more than \$400 each year is available to deserving students during their second year. No more than \$100 shall be loaned to any one student. The loans are granted by the Chancellor on the recommendation of the Dean.

*A corner of the current reading room of the Library where the most recent numbers of the medical journals received are readily available.*



**JOSEPH H. SCHARF SCHOLARSHIP.** Through the bequest of Dr. Joseph H. Scharf, the annual income from \$2,418.72 is available for scholarships for worthy and needy students in the School of Medicine. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

**THE THOMAS W. AND ELIZABETH J. RUCKER SCHOLARSHIPS.** Through the bequest of Eugenia I. Rucker, the income from the Thomas W. and Elizabeth J. Rucker Scholarship Endowment of \$81,234.70 provides scholarships for students in the School of Medicine. They are awarded by the Chancellor on the recommendation of the Dean.

**THE ISABEL VALLE BROOKINGS SCHOLARSHIP AND LOAN FUND.** Through the gift of Isabel Valle Brookings (Mrs. Robert S.), the income from this fund of \$25,500 is available for scholarships and loans in the School of Medicine. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

**THE ALEXANDER AND GERTRUDE BERG FELLOWSHIP.** Through the bequest of the late Mrs. Gertrude Berg, \$40,000 has been given to the School of Medicine to establish an endowment fund for a fellowship in the Department of Microbiology.

**THE BERTHA REINHARDT GREEN MEMORIAL FUND.** Through the bequest of the late Mrs. Bertha Reinhardt Green, \$5000 has been given to the School of Medicine for a loan fund in Occupational and Recreational Therapy.

**STUDENT ASSISTANTSHIPS** are available in a number of departments in the School. Information may be obtained from the heads of the departments concerned.

Applications for all fellowships, scholarships, and assistantships may be made to the Dean. The awards are made by the Chancellor on the recommendation of the Dean.

---

## PRIZES

### GEORGE F. GILL PRIZES:

1. One prize of fifty dollars is awarded at the end of the first year to the member of the class who has demonstrated superior scholarship in anatomical work.
2. One prize of fifty dollars is awarded to a member of the graduating class, of high general standing, who has shown especially good scholarship in the Department of Pediatrics.

**THE KEHAR S. CHOUKE PRIZE** of fifty dollars is awarded at the end of the first year to a medical student who has demonstrated superior scholarship in anatomical work.

**ALPHA OMEGA ALPHA FRATERNITY PRIZE** is awarded at the end of the fourth year to the member of that class who has made the highest average for the entire medical course.

**ALPHA OMEGA ALPHA FRATERNITY PRIZE FOR STUDENT RESEARCH** amounting to \$25 is awarded to the student who submits the best thesis on a research problem.

**THE ALEXANDER BERG PRIZE** of one hundred dollars is awarded to a student of high general standing who presents the best results in research in bacteriology.

**THE BIOCHEMISTRY PRIZE** is awarded at the end of the first year to the member of the class who has demonstrated superior scholarship in biochemical work.



THE PRIZE FUND OF THE MEDICAL FUND SOCIETY:

1. One prize of one hundred dollars is awarded annually to the student of the senior class who shall in the opinion of the faculty have excelled in the study of internal medicine, provided, however, that no student shall be eligible for this prize who has not been a bonafide student of medicine in the School of Medicine of Washington University for the full junior and senior years.

2. One prize of one hundred dollars is awarded annually to that student of the senior class who shall in the opinion of the faculty have excelled in the study of surgery, provided, however, that no student shall be eligible for this prize who has not been a bonafide student of medicine in the School of Medicine of Washington University for the full junior and senior years.

It is stipulated that no individual shall be eligible for both prizes.

THE HOWARD A. MCCORDOCK BOOK PRIZE is awarded at the end of the second year to a member of that class for general excellence in pathology.

THE SIDNEY I. SCHWAB BOOK PRIZES are awarded at the end of the fourth year to members of that class for general excellence in neurology and psychiatry.

THE NU SIGMA NU AWARDS of twenty-five dollars each are awarded to the outstanding member of the first- and second-year classes.

THE BORDEN UNDERGRADUATE RESEARCH AWARD of five hundred dollars is awarded to that member of the graduating class who, during any year while enrolled in the School, has carried out the most meritorious undergraduate research.

THE MISSOURI STATE MEDICAL ASSOCIATION AWARD of a scroll and a \$100 U. S. Savings Bond is presented annually to an honor graduate of the senior class.

THE ROCHE AWARD of a scroll and a gold wrist watch is presented at the end of the second year to the student who best exemplifies the ideals of the modern American physician.

THE C. V. MOSBY COMPANY BOOK AWARDS are made to five members of the graduating class for high general scholastic standing and research achievement.

---

LECTURESHIPS

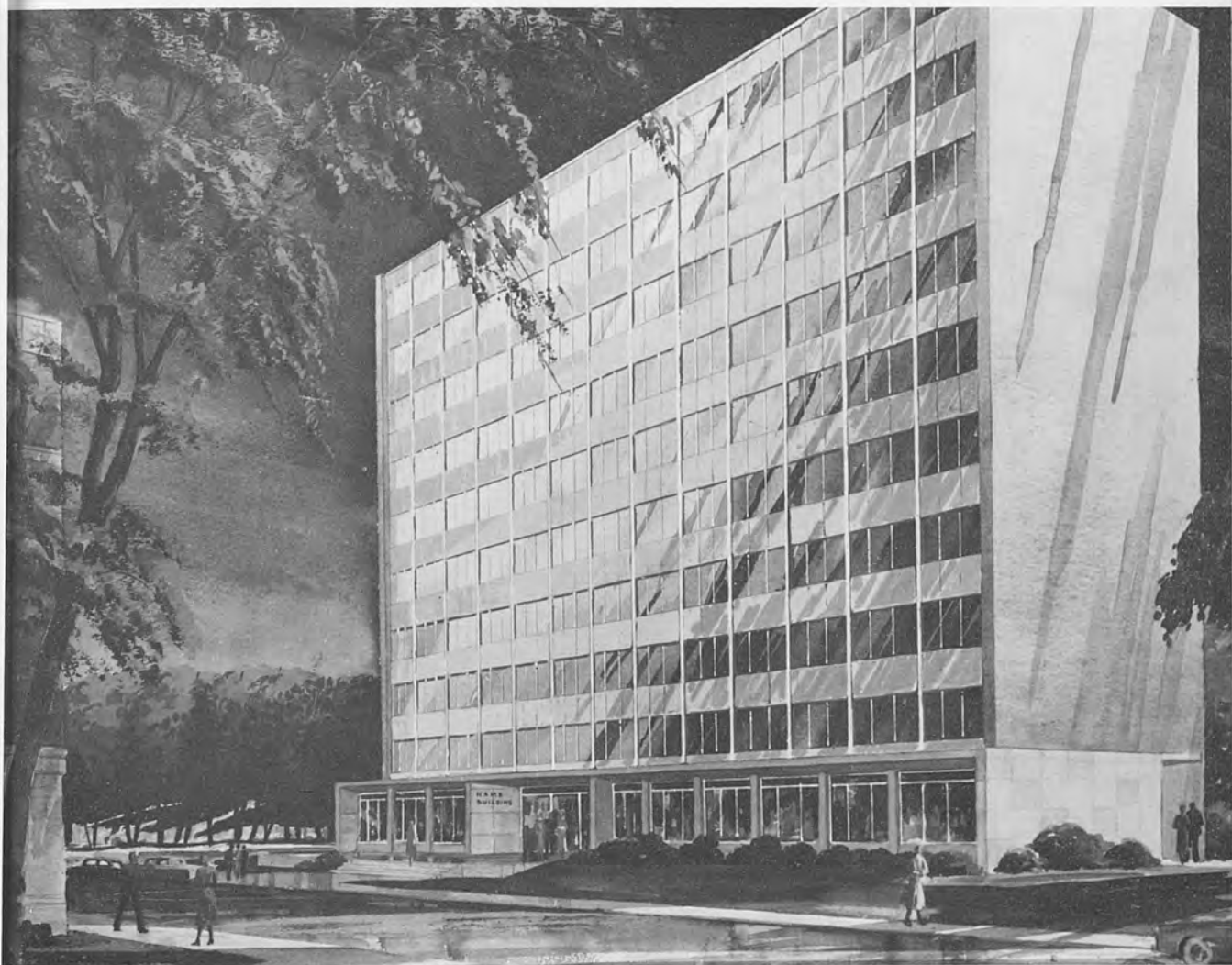
The Mu Chapter of the Phi Beta Pi fraternity established an annual lectureship in honor of Dr. Leo Loeb, Professor Emeritus of Pathology.

The Alumni of the School have established a Robert J. Terry Lectureship Fund "for the purpose of fostering greater appreciation of the study of human anatomy in relation to the teaching and practice of medicine" in honor of Dr. Robert J. Terry, Professor Emeritus of Anatomy.

Friends of the late Dr. Major G. Seelig and Mrs. Seelig have established an annual lectureship or fellowship in their honor.

A new lectureship in honor of Dr. George H. Bishop has been established by his friends.

Friends of Dr. Philip Anderson Shaffer have established a lectureship in his honor.



*The Spencer T. Olin Residence Hall for medical students is under construction and is expected to be ready for occupancy in September, 1960*

# CLASS SCHEDULE • FIRST YEAR

FIRST SEMESTER—September 14, 1959, through January 30, 1960

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Anatomy	Biochemistry	Anatomy	Biochemistry	Anatomy	Biochemistry
10 to 11	"	"	"	"	"	"
11 to 12	"	"	"	"	"	"
12 to 1	"	"	"	"	"	Preventive Medicine*
2 to 3	"	"	Free	"	"	
3 to 4	"	"		"	"	
4 to 5	"	"		"	"	

\* For first twelve weeks of semester

4

7

7

2

SECOND SEMESTER—February 1 through June 4, 1960

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Anatomy	Physiology	Anatomy	Physiology	Anatomy	Physiology
10 to 11	"	"	"	"	"	"
11 to 12	"	"	"	"	"	"
12 to 1	"	"	Med. Psych.	"	"	"
2 to 3	"	"	Free	"	"	
3 to 4	"	Physiology or Biostatistics*		"	"	
4 to 5	"			"	"	

\* Biostatistics for first twelve weeks of semester.

Physiology for last six weeks of semester

# CLASS SCHEDULE • SECOND YEAR

## FIRST TRIMESTER—September 14 through December 5, 1959

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Microbiology	Pharmacology	Microbiology	Pharmacology	Microbiology	Pharmacology
10 to 11	"	"	"	"	"	"
11 to 12	"	"	"	"	"	"
12 to 1	"	"	"	"	"	"
2 to 3	"	"		"		
3 to 4	"	"	Free	"	Free	
4 to 5	"	"		"		

## SECOND TRIMESTER, 1st half (6 weeks)—December 7-19, 1959, and January 4-30, 1960

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Pathology	Pathology	Pathology	Microbiology	Pathology	Microbiology
10 to 11	"	"	"	"	"	"
11 to 12	"	"	"	"	"	"
12 to 1	"	"	"	"	"	"
2 to 3	Clinical	Microbiology		Microbiology	Clinical	
3 to 4	Diagnosis	"	Free	"	Diagnosis	
4 to 5		"		"		

## SECOND TRIMESTER, 2nd half (6 weeks)—February 1 through March 12, 1960

Hours	Monday	Tuesday	Pathology	Path. Physiol.	Pathology	Pathology of Behavior
				Introduction to Surgery		
9 to 10	Pathology	Pathology	Pathology		Pathology	
10 to 11	"	"	"		"	
11 to 12	"	"	"		"	
12 to 1	"	"	"		"	
2 to 3	Clinical	Pathology			Clinical	
3 to 4	Diagnosis	of	Free	Free	Diagnosis	
4 to 5		Behavior				

CLASS SCHEDULE—SECOND YEAR

THIRD TRIMESTER—March 14 through June 4, 1960

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Pathology	Pathologic Physiology	Path. Physiol.	Pathology	Pathology	Clinical Diagnosis
10 to 11	"	Natural History of Disease	Clinical Diagnosis	"	"	
11 to 1	"	Pathology of Behavior		"	"	
2 to 3	Laboratory	Laboratory	Laboratory	Free	Laboratory	
3 to 4	Methods of	Methods of	Methods of		Methods of	
4 to 5	Diagnosis	Diagnosis	Diagnosis		Diagnosis	



## CLASS SCHEDULE • THIRD YEAR

MEDICINE SERVICE (Including Neurology and Psychiatry) 6 weeks at Barnes Hospital and 6 weeks at City Hospital

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Group A—First Trimester, September 14 through December 5, 1959 Group B—Second Trimester, December 7-19, 1959, and January 4 through March 12, 1960 Group C—Third Trimester, March 14, through June 4, 1960					
10 to 11						
11 to 12	Section I—City Hospital Section II—Barnes Hospital					
12 to 1	Sections change at end of 6-week period			C P C		Medicine Clinic
2 to 3				Pediatrics* Surgery Cl.‡		
3 to 4				Surgical Pathology		
4 to 5						

\* Pediatrics Lectures for the entire class during the first trimester.

‡ Surgery Clinic for the entire class during the second and third trimesters.

## SURGERY AND PSYCHIATRY SERVICE

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Group B—First Trimester Sept. 14 through Dec. 5, 1959  Group A—Second Trimester Dec. 7-19 and Jan. 4, through March 12, 1960  Group C—Third Trimester March 14 through June 4, 1960			Radiology 8:30 to 10	CLERKSHIP	
10 to 11				Otolaryngology		
11 to 12				Ophthalmology		
12 to 1				C P C		
2 to 3	Each Group will spend 9 weeks in Surgery and 3 weeks in Psychiatry			Pediatrics* Surgery Cl.‡		
3 to 4				Surgical Pathology		
4 to 5						

\* Pediatrics for the entire class during the first trimester.

‡ Surgery Clinic for the entire class during the second and third trimesters.

CLASS SCHEDULE—THIRD YEAR

PEDIATRIC SERVICE (6 weeks) and OBSTETRICS AND GYNECOLOGY SERVICE (6 weeks)

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Group C—First Trimester, September 14 through December 5, 1959 Group B—Second Trimester, December 7-19, 1959, and January 4 through March 12, 1960 Group A—Third Trimester, March 14, through June 4, 1960					
10 to 11						
11 to 12	Section I—Pediatrics Section II—Ob. & Gyn.					
12 to 1	Sections change at end of 6-week period			C P C		Medicine Clin
1 to 2						
2 to 3				Ob. & Gyn. Pathology	Pediatrics* Surgery Cl.‡	
3 to 4						
4 to 5					Surgical Pathology	

\* Pediatrics Lecture for the entire class during the first trimester.

‡ Surgery Clinic for the entire class during the second and third trimesters.

## CLASS SCHEDULE • FOURTH YEAR

### SURGERY SERVICE (6 weeks)—OBSTETRICS (3 weeks)—PEDIATRICS (3 weeks)

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Group A—First trimester, September 14 through December 5, 1959 Group B—Second trimester, December 7-19, 1959, and January 4 through March 12, 1960 Group C—Third trimester, March 14 through June 4, 1960 Group D—Summer term, June 22 through September 12, 1959					
10 to 11						
11 to 12						
12 to 1	Tumor Conf.	Surgery Cl.	Pediatrics	C P C	Ob. & Gyn. Neurology*	Medicine Clinic
2 to 3	Section I—Group (a), Urological Surgery (Groups change at end of 3 weeks) Group (b), Neurosurgery					
3 to 4	Section II—Group (a), Obstetrics Group (b), Pediatrics (Groups change at end of 3 weeks)					
4 to 5	Sections exchange services at end of 6-week period					

\* Obstetrics and Neurology alternate Lectures.

Lectures in Medical Jurisprudence are given during the third trimester on Wednesdays from 5 to 6 p. m. This course is required of all senior students.

### MEDICINE SERVICE, BARNES HOSPITAL WARDS (6 weeks) and ELECTIVES (6 weeks)

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 to 10	Group A—Third trimester, March 14 through June 4, 1960 Group B—Summer term, June 22 through September 12, 1959 Group C—First trimester, September 14 through December 5, 1959 Group D—Second trimester, December 7-19, 1959, and January 4 through March 12, 1960					
10 to 11						
11 to 12						
12 to 1		Surgery Cl.	Pediatrics	C P C	Ob. & Gyn. Neurology*	Medicine Clinic
2 to 3	Sections exchange services at end of 6-week period					
3 to 4						
4 to 5						

\* Obstetrics and Neurology alternate Lectures.

Lectures in Medical Jurisprudence are given during the third trimester on Wednesdays from 5 to 6 p. m. This course is required of all senior students.

# CLASS SCHEDULE—FOURTH YEAR

## CO-ORDINATED OUTPATIENT CLINIC CLERKSHIP (12 weeks)

Group A—Second trimester, December 7-19, 1959, and January 4 through March 12, 1960

Group B—Third trimester, March 14 through June 4, 1960

Group C—Summer term, June 22 through September 12, 1959

Group D—First trimester, September 14 through December 5, 1959

One-fourth of class is divided into 4 groups of 5 to 6 students for this clerkship

Group	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 a. m. to noon 1	Medicine A	Ob. & Gyn.	Medicine A	Surgery	Medicine A* Neurology*	Psychiatry
2	Medicine B	Surgery	Medicine B	Psychiatry	Medicine B* Neurology*	Ob. & Gyn.
3	Psychiatry	Medicine A* Neurology*	Ob. & Gyn.	Medicine A	Surgery	Medicine A
4	Surgery	Medicine B* Neurology*	Psychiatry	Medicine B	Ob. & Gyn.	Medicine B
Noon Clinics	Prev. Med.	Surgery Cl.	Pediatrics	C P C	Ob. & Gyn. Neurol. (alt.)	Medicine Clin.
2 to 5 p. m. 1	Surgery‡ Psychiatry‡	Ophthalmol.‡ Otolaryn.‡	—	Prev. Med.	Ob. & Gyn.‡ Dermatology‡	—
2	Ob. & Gyn.‡ Dermatology‡	Surgery‡ Psychiatry‡	Ophthalmol.‡ Otolaryn.‡	Prev. Med.	—	—
3	Prev. Med.	Ob. & Gyn.‡ Dermatology‡	Surgery‡ Psychiatry‡	Ophthalmol.‡ Otolaryn.‡	—	—
4	Prev. Med.	—	Ob. & Gyn.‡ Dermatology‡	Surgery‡ Psychiatry‡	Ophthalmol.‡ Otolaryn.‡	—

\* One-half of group alternates clinics each week.

‡ One-half of group takes each clinic for a six-week period.

Lectures in Medical Jurisprudence are given during the third trimester on Wednesdays from 5 to 6 p. m. This course is required of all senior students.

## ELECTIVE OR FREE TIME (12 weeks)

Group A—Summer term, June 22 through September 12, 1959

Group B—First trimester, September 14 through December 5, 1959

Group C—Second trimester, December 7-19, 1959, and January 4 through March 12, 1960

Group D—Third trimester, March 14 through June 4, 1960

# TABLE OF REQUIRED HOURS — 1959-1960

<i>First Year</i>	<i>Clock Hours</i>
Anatomy .....	576
Biological Chemistry .....	306
Physiology .....	300
Biostatistics .....	24
Preventive Medicine .....	12
Medical Psychology .....	18
	<hr/>
	1236 Total Hours
 <i>Second Year</i>	
Pharmacology .....	216
Microbiology .....	264
Pathology .....	336
Conjoint Medicine	
Clinical Diagnosis .....	144
Laboratory Methods of Diagnosis .....	144
Pathologic Physiology .....	30
Introduction to Surgery .....	18
Pathology of Behavior .....	60
Natural History of Disease .....	12
	<hr/>
	1224 Total Hours
 <i>Third Year</i>	
Surgery Clerkship .....	288
Psychiatry Clerkship .....	96
Radiology Lectures .....	18
Otolaryngology Lectures .....	12
Ophthalmology Lectures .....	12
Surgery Lectures .....	24
Surgical Pathology .....	72
Clinical Pathological Conference .....	36
Medicine Clerkship (including Neurology) .....	408
Medicine Lectures .....	36
Pediatrics Clerkship .....	180
Pediatrics Lectures .....	12
Obstetrics and Gynecology .....	180
Gynecological Pathology .....	36
	<hr/>
	1410 Total Hours



# TABLE OF REQUIRED HOURS

## *Fourth Year*

Surgery Clerkship .....	198
Surgery Lectures .....	36
Tumor Conference .....	12
Clinical Pathological Conference .....	36
Medicine Clerkship .....	198
Medical Jurisprudence .....	12
Medicine Lectures .....	36
Pediatrics Clerkship .....	99
Pediatrics Lectures .....	36
Obstetrics .....	99
Obstetrics Lectures .....	18
Neurology Lectures .....	18
Elective hours .....	198
Out-Patient Clinics .....	360

1356 Total Hours

## *Clinic hours*

Medicine .....	90
Obstetrics and Gynecology .....	54
Surgery .....	54
Neurology .....	18
Psychiatry .....	54
Ophthalmology .....	18
Otolaryngology .....	18
Preventive Medicine .....	36
Dermatology .....	18
	360

Total for four years 5226 clock hours

DEPARTMENTS OF  
THE SCHOOL OF MEDICINE

---

ANATOMY

BIOLOGICAL CHEMISTRY

INTERNAL MEDICINE - DERMATOLOGY

MICROBIOLOGY

OBSTETRICS-GYNECOLOGY

OPHTHALMOLOGY

OTOLARYNGOLOGY

PATHOLOGY

PEDIATRICS

PHARMACOLOGY

PHYSIOLOGY

PREVENTIVE MEDICINE - PUBLIC HEALTH

PSYCHIATRY AND NEUROLOGY

RADIOLOGY

SURGERY





*A panoramic view of the Washington University Medical Center showing the buildings of the school and the affiliated hospitals. The view is from adjacent Forest Park.*



*Dr. Edward W. Dempsey, Professor of Anatomy, preparing to demonstrate a tissue specimen, as viewed through the electron microscope, to three members of the first year class.*

## DEPARTMENT OF ANATOMY

The anatomical sciences are presented in two required courses (gross anatomy, microscopic anatomy). These are supplemented by clinical demonstrations supervised by members of other departments. Emphasis is placed upon the biological relationships of morphology to other disciplines of medical science. Lectures, demonstrations, and laboratory teaching are all used to call attention to the results of recent investigations and to acquaint students with the current literature. There are facilities for special work in gross anatomy, physical anthropology, embryology, neuroanatomy, cytology, histochemistry and electron microscopy.

### *Professor and Head of Department*

Edward W. Dempsey, A.B., Marietta College, 1932; Sc.M., Brown University, 1934;

Ph.D., 1937; A.M. (hon.), Harvard University, 1946; Sc.D. (hon.), Marietta College, 1954.



*Professors*

Jack Davies, B.Sc., Leeds University Medical School, 1941; M.B.Ch.B., 1944; M.D., 1948; M.D., University of Iowa, 1943; M.A. (hon.), Cambridge University, 1947.

Mildred Trotter, A.B., Mt. Holyoke College, 1920; M.S., Washington University, 1921; Ph.D., 1924; Sc.D. (Hon.), Western College, 1956. (See Department of Radiology.)

Graham Weddell (Visiting), M.D., University of London, 1942; D.Sc., 1943; M.A., Oxford University, 1945.

*Professors Emeriti*

Edmund Vincent Cowdry, A.B., University of Toronto, 1909; Ph.D., University of Chicago, 1912. (Also holds title of Lecturer.)

Robert James Terry, M.D., Missouri Medical College, 1895; A.B., Washington University, 1901; LL.D. (Hon.), 1956.

*Associate Professors*

David B. Allbrook (Visiting), M.R.C.S., L.R.C.P., M.B., B.S., University College Hospital, London, 1948.

Cecil Marvin Charles, A.B., University of Kentucky, 1926; M.S., 1927; Ph.D., Washington University, 1929; M.D., 1933. (See Department of Medicine.)

Walter Page Covell, B.S., Oregon State College, 1922; M.S., 1923; Ph.D., University of Minnesota, 1926; M.D., University of Chicago, 1933. (See Department of Otolaryngology.)

Keith C. Richardson, B.Sc., University of Western Australia, 1926; M.Sc., 1927.

*Assistant Professors*

A. Duncan Chiquoine, A.B., Swarthmore College, 1947; Ph.D., Cornell University, 1952.

Sam L. Clark, Jr., M.D., Harvard University, 1949. (Also U.S.P.H.S. Senior Research Fellow.)

Adolph Irvin Cohen, B.S., City College of New York, 1948; M.A., Columbia University, 1950; Ph.D., 1954.

Arthur Hess, B.S., University of Arkansas, 1946; M.S., 1947; Ph.D., University College (London, England), 1949.

Lorraine Lake, B.S., Washington University, 1950; M.A., 1954. (See Department of Physical Therapy.)

Roy Reed Peterson, A.B., University of Kansas, 1948; Ph.D., 1952. (On leave of absence.)

*Instructor*

Jean E. Small, A.B., University of Massachusetts, 1951; Ph.D., Brown University, 1956.

*Trainee*

Kenneth R. Smith, M.D., Washington University, 1957. (See Department of Neurosurgery.)

*Consultant*

Hugh Monroe Wilson (Radiology), B.A., Illinois College, 1924; M.D., Washington University, 1927; M.A. (hon.), Yale University, 1945. (See Department of Radiology.)

*Research Assistant*

Oliver H. Duggins, B.S., Northwestern University, 1934; M.S., 1936; Ph.D., Washington University, 1953.

**FIRST YEAR**

10 (501 and 502). *Gross Anatomy*. Each student shares a cadaver with one partner and so dissects one-half of the human body. An extensive collection of dissected specimens is housed in the dissecting rooms so that students may easily compare their dissections with museum specimens. X-ray equipment and films are used to complement the current dissections; cine-radiographs are presented regularly; and a collection of radiographs is loaned to each student. Fresh organs are provided for demon-

Note—The numbers in parentheses indicate that the course carries credit in the Graduate School of Arts and Sciences and may be found under that number in the Bulletin of that school.

stration and dissection at approximate times. Special attention is given to surface anatomy. Students examine each other and are encouraged to learn as much as possible from the living subjects. Occasional attendance at autopsies is recommended. Frequent discussions are held with small groups of students. 336 hours.

(Drs. Trotter, Charles, Chiquoine, Davies)

11 (506 and 507). *Microscopic Anatomy*. Each student is required to have his own microscope, and is loaned a collection of prepared slides which he can study either at home or in the laboratory. He is also loaned a collection of electron micrographs which supplements the histological preparations. Fresh tissues are frequently used in the laboratory, and are especially valuable for determining some of the histochemical reactions of cells. Demonstrations are regularly presented, in which material involving complex techniques can be made available. Frequent and extemporaneous conferences are made possible by the use of laboratories seating about twenty students.

The latter part of the course is devoted to a study of the central nervous system. The principal tracts and nuclei are discussed in lectures, studied in the laboratory by means of dissections, prepared slides, and photographs, and related to the functions of the nervous system by lectures, discussions, and demonstrations. As in histology, morphological structure is related to growth, development, chemical composition, and physiological functions. 282 hours.

(Drs. Dempsey, Clark, Hess, Cohen, Small)

#### ELECTIVE COURSES

50. *Topographical Anatomy*. Laboratory study of topographical anatomy may be undertaken at any time during the year. Sections, museum preparations, and models are used as material. Hours to be arranged.

51. *Dissection*. Opportunities are offered at any time except August and September for students and physicians desiring to review the subject. Any of the following parts may be elected for study: head and neck, thorax and upper limb, abdomen and pelvis, lower limb. A fee will be charged, except for medical students who elect this for credit.

52. *Advanced Work in Gross Anatomy, Histology, Cytology, Embryology, Neurology and Physical Anthropology*. A study of the literature on certain selected problems accompanied by individual laboratory work. Hours to be arranged.

53. *Research*. Properly qualified individuals are encouraged to carry on research in the anatomical sciences. (See Bulletin of The Graduate School of Arts and Sciences.)

Note—The numbers in parentheses indicate that the course carries credit in the Graduate School of Arts and Sciences and may be found under that number in the Bulletin of that school.



*Dr. Carl F. Cori, Nobel Laureate in Medicine discussing a problem with members of his staff in the Department of Biological Chemistry*

## DEPARTMENT OF BIOLOGICAL CHEMISTRY

The department offers a first-year course in biological chemistry for students of medicine and for students in the Graduate School of Arts and Sciences. Students of medicine, as well as graduate students, are afforded the opportunity to pursue research work under the direction of the staff. Facilities are provided for research on the preparation and properties of enzymes, the mechanism of their action, and on the metabolism of carbohydrates and proteins. Some summer research fellowships are offered to students of medicine.

### *Professor and Head of Department*

Carl F. Cori, M.D., University of Prague, 1920; Sc.D., Yale University, 1946; Sc.D., Western Reserve University, 1946; Sc.D., Boston University, 1948; Sc.D., Cambridge University (England), 1949.

### *Distinguished Service Professor Emeritus*

Philip Anderson Shaffer, A.B., West Virginia University, 1900; Ph.D., Harvard University, 1904; Sc.D., University of Rochester, 1939; Sc.D., Washington University, 1953. (Also holds title of Lecturer.)

*Associate Professors*

David H. Brown, B.S., California Institute of Technology, 1942; Ph.D., 1948.

Robert K. Crane, B.S., Washington College, 1942; Ph.D., Harvard University, 1950.

Mildred Cohn Primakoff, A.B., Hunter College, 1931; M.A., Columbia University, 1932; Ph.D., 1938.

Sidney F. Velick, A.B., Wayne University, 1935; Ph.D., University of Michigan, 1938.

*Assistant Professors*

George R. Drysdale, B.S., Birmingham-Southern College, 1948; M.S., University of Wisconsin, 1950; Ph.D., 1952.

Luis Glaser (Helen Hay Whitney Foundation Postdoctoral Fellow), B.A., University of Toronto, 1953; Ph.D., Washington University, 1956.

Philipp Strittmatter, B.S., Juniata College, 1949; Ph.D., Harvard University, 1954.

*Research Assistant Professors*

Barbara Illingworth Brown, B.A., Smith College, 1946; Ph.D., Yale University, 1950.

Paul W. Preisler, B.S.Chem.E., Washington University, 1923; M.S., 1925; Ph.D., 1927; LL.B., St. Louis University, 1954.

*Instructor*

Carl Frieden, B.A., Carleton College, 1951; Ph.D., University of Wisconsin, 1955.

*Research Assistant*

Kenneth A. Hawkins, B.S., State University of Iowa, 1943; M.S., 1944.

*Fellows*

Rosalind Hauk (National Science Foundation Predoctoral Fellow), B.S., George Washington University, 1957.

George R. Hug (Eli Lilly Postdoctoral Fellow), M.D., University of Zurich, 1957.

Hiromichi T. Narahara (U. S. Public Health Service Special Research Fellow), B.A., Columbia University, 1943; M.D., 1947.

FIRST YEAR

10 (503). *Biological Chemistry*. Lectures, conferences and laboratory work covering those portions of the subject which are of especial importance to the student of medicine. First year; first semester. 312 hours. Graduate student credit: 10 units; lectures only: 4 units.

ELECTIVE COURSES

50 (504). *Advanced Work*. For graduate students. Hours and credit to be arranged.

51 (515). *Research*. For graduate students. Hours and credit to be arranged.



*Dr. Carl V. Moore, Busch Professor of Medicine, examining a patient during ward rounds with three senior students and a house officer.*

## THE JOHN MILLIKEN DEPARTMENT OF MEDICINE

(The Department of Medicine includes Internal Medicine and Dermatology)

For the purposes of both teaching and research the Department of Medicine is divided into specialty divisions, under the following directors:

Arthritic Disease .....	Dr. Hagemann
Cardiovascular Disease .....	Dr. J. Smith
Chest Disease .....	Dr. A. Goldman
Dermatology .....	Dr. Eisen
Gastroenterology .....	Dr. Duden
Hematology .....	Dr. Harrington
Hypertension .....	Dr. H. M. Perry
Immunology .....	Dr. Noah
Infectious Disease .....	Dr. Harford
Malignant Disease .....	Dr. Reinhard



Metabolic Disease .....	Dr. Daughaday
Nutrition .....	Dr. Shank
Psychosomatic Medicine .....	Drs. Guze, Reichlin
Renal Disease .....	Dr. N. Bricker

Instruction in Medicine commences with the second trimester of the second year and continues throughout the third and fourth years of the curriculum. The teaching of the second year has two main objectives: first, the correlation of the basic sciences with the clinical aspects of disease, and second, training in the technical methods of physical examination and laboratory diagnosis. By the beginning of the third year the student is prepared for supervised clinical study of individual patients in the wards. The emphasis in the junior year is placed upon clinical diagnosis. In the final year each student acts for six weeks as clinical clerk in the wards of Barnes Hospital and also participates for twelve weeks in the co-ordinated outpatient clerkship under the supervision of the Department of Preventive Medicine. During his senior clinical clerkship he receives formal instruction in medical therapeutics.

Summer clerkships for which students may receive full credit are offered to both juniors and seniors. Students electing these summer clerkships may complete in advance their required work in Medicine and thus gain additional elective or vacation time during the regular academic year.

#### *Busch Professor and Head of the Department*

Carl Vernon Moore, A.B., Washington University, 1928; M.D., 1932; LL.D., Elmhurst College, 1955.

#### *Professors*

Richard John Bing, M.D., University of Munich, 1934; M.D., University of Bern, 1935.

Herman Nathaniel Eisen (Dermatology), A.B., New York University, 1939; M.D., 1943.

Edward Humphrey Reinhard, A.B., Washington University, 1935; M.D., 1939. (See Department of Radiology.)

Robert Ely Shank (Preventive Medicine), A.B., Westminster College, 1935; M.D., Washington University, 1939. (See Department of Preventive Medicine.)

Sol Sherry, A.B., New York University, 1935; M.D., 1939.

#### *Professor (Clinical)*

Clinton Welsh Lane (Dermatology), A.B., St. Mary's College (Kansas), 1916; M.D., St. Louis University, 1921.

#### *Professors Emeriti (Clinical)*

Harry Louis Alexander, A.B., Williams College, 1910; M.D., Columbia University, 1914.

Richard S. Weiss (Dermatology), M.D., Washington University, 1909.

#### *Associate Professors*

William Hamilton Daughaday, A.B., Harvard University, 1940; M.D., 1943.

Albert B. Eisenstein, A.B., University of Missouri, 1941; M.D., Washington University, 1944. (See Department of Preventive Medicine.)

Carl Gayler Harford, A.B., Amherst College, 1928; M.D., Washington University, 1933.

William J. Harrington, M.D., Tufts Medical College, 1947.

John Esben Kirk, M.D., University of Copenhagen, 1929. (See Gerontology.)

Lillian Recant, A.B., Hunter College, 1941; M.D., Columbia University, 1946. (See Department of Preventive Medicine.)

John Russell Smith, A.B., University of Wisconsin, 1931; A.M., 1932; M.D., Washington University, 1934.

*Associate Professors (Clinical)*

Alfred Goldman, A.B., Washington University, 1916; M.D., 1920; M.S., 1922.

Cyril M. MacBryde, A.B., Washington University, 1926; M.D., Harvard University, 1930.

Edward Massie, A.B., Washington University, 1931; M.D., 1935.

*Associate Professors Emeriti (Clinical)*

Joseph W. Larimore, A.B., DePauw University, 1908; M.D., Washington University, 1913.

Drew W. Luten, A.B., University of Kentucky, 1901; M.D., Johns Hopkins University, 1911.

William H. Olmsted, B.S., Coe College, 1909; M.D., Johns Hopkins University, 1913.

Llewellyn Sale, M.D., Washington University, 1907.

*Assistant Professors*

Neal S. Bricker (Established Investigator of the American Heart Association), A.B., University of Colorado, 1945; M.D., 1949. (See Department of Preventive Medicine.)

Thomas Brittingham (National Institute of Arthritis and Metabolic Diseases Trainee) (Hematology), M.D., Harvard University, 1950.

Elmer B. Brown, Jr., A.B., Oberlin College, 1946; M.D., Washington University, 1950. (On leave of absence until October 31, 1959.)

Hugh Chaplin, Jr., A.B., Princeton University, 1943; M.D., Columbia University, 1947. (See Department of Preventive Medicine.)

Herman Erlanger, A.B., University of Wisconsin, 1933; M.D., Washington University, 1937. (See Department of Preventive Medicine.)

Anthony P. Fletcher, B.M., University of London, 1943; B.S., 1943; M.D., 1949.

Samuel B. Guze, M.D., Washington University, 1945. (See Department of Psychiatry and Neurology.)

Ernst Helmreich (Biochemistry), M.B., University of Munich, 1945; M.D., University of Erlangen, 1949.

Milton Kern (Microbiology), B.S., Brooklyn College, 1949; Ph.D., Yale University, 1954.

M. Kenton King, B.A., University of Oklahoma, 1947; M.D., Vanderbilt University, 1951. (See Department of Preventive Medicine.)

David M. Kipnis (Markle Scholar in Biochemistry in Medicine), A.B., Johns Hopkins University, 1945; M.A., 1949; M.D., University of Maryland, 1951.

Robert D. Lange, A.B., Macalester College, 1941; M.D., Washington University, 1944.

Horace Mitchell Perry (Established Investigator of American Heart Association), M.D., Washington University, 1946.

Seymour Reichlin, A.B., Antioch College, 1945; M.D., Washington University, 1948; Ph.D., University of London, 1954. (See Departments of Psychiatry and Neurology and Preventive Medicine.)

Eric Reiss, B.S., Randolph-Macon College, 1943; M.D., Medical College of Virginia, 1948. (See Department of Preventive Medicine.)

William J. Williams (Markle Scholar in the Medical Sciences), M.D., University of Pennsylvania, 1949.

*Research Assistant Professors*

Norma K. Alkjaersig, M.S. (Chemical Engineering), The Technical University, Copenhagen, Denmark, 1949.

Ann Reuben Dubach, A.B., Bryn Mawr College, 1919; M.S., University of Colorado, 1935; Ph.D., 1938. (On leave of absence.)

Virginia Minnich, B.S., Ohio State University, 1937; M.S., Iowa State College, 1938.

*Assistant Professors (Clinical)*

Grace E. Bergner, A.B., Washington University, 1939; M.D., 1943.

Arthur Charles Brooks, B.S., Washington University, 1917; M.D., 1919.

Harold Aten Bulger, B.S., Ohio State University, 1916; M.D., Harvard University, 1920.

Truman Guthred Drake, A.B., Washington University, 1929; M.D., 1933.

Charles W. Duden, M.D., Washington University, 1926.

Bernard Friedman, A.B., University of Wisconsin, 1931; M.D., 1934.

Bernard T. Garfinkel, M.D., Washington University, 1948.

Samuel B. Grant, B.S., Washington University, 1918; M.D., 1920.

Paul O. Hagemann, A.B., Washington University, 1930; M.D., 1934.

Lawrence K. Halpern (Dermatology), M.D., University of Colorado, 1937.

Stanley Forrest Hampton, A.B., Washington and Lee University, 1930; M.D., Washington University, 1934.

Michael M. Karl, B.S., University of Wisconsin, 1936; M.D., University of Louisville, 1938.

Robert C. Kingsland, A.B., Washington University, 1933; M.D., 1937.

William Bryan Kountz, M.D., Washington University, 1926.

John V. Lawrence, B.S., University of Chicago, 1917; M.D., 1925.

Virgil Loeb, Jr., M.D., Washington University, 1944. (See Department of Pathology.)

Morris D. Marcus (Dermatology), M.D., Washington University, 1934.

Morris Moore (Dermatology), S.B., Boston University, 1928; A.M., Harvard University, 1929; Ph.D., Washington University, 1933.

James F. Nickel, A.B., University of Oklahoma, 1944; M.D., Washington University, 1948.

Joseph W. Noah, A.B., University of Missouri, 1938; B.S. in Medicine, 1939; M.D., Washington University, 1941.

Robert Paine, M.D., Harvard University, 1944.

William David Perry, A.B., Northwest Missouri State College, 1943; B.S. in Medicine, University of Missouri, 1945; M.D., Washington University, 1947.

Harold K. Roberts, B.A., Ohio State University, 1935; M.D., 1939.

Marvin Rosecan, B.S., Washington University, 1949; M.D., 1949.

Ernest T. Rouse, B.S., Alabama Polytechnic Institute, 1939; M.D., Washington University, 1943.

Llewellyn Sale, Jr., A.B., Yale University, 1936; M.D., Washington University, 1940.

Harold Scheff, M.D., University of Toronto, 1931.

Barrett L. Taussig, A.B., Harvard University, 1928; M.D., Washington University, 1932.

Lawrence D. Thompson, B.S., Rutgers University, 1917; M.D., Cornell University, 1922.

Ray David Williams, A.B., Hampden-Sydney College, 1930; M.S., Emory University, 1931; M.D., Washington University, 1937.

Keith Singleton Wilson, A.B., Williams College, 1930; M.D., Washington University, 1934.

#### *Assistant Professors Emeriti (Clinical)*

Jerome Epstein Cook, M.D., Washington University, 1905.

Charles H. Eyermann, M.D., St. Louis University, 1911.

George D. Kettelkamp, A.B., Central Wesleyan College, 1909; M.D., Washington University, 1914.

Arthur E. Strauss, B.S., Harvard University, 1912; M.D., 1917.

#### *Lecturer*

Hiromu Tsuchiya, A.B., University of Missouri, 1913; Sc.D., Johns Hopkins University, 1930.

#### *Instructors*

Henry S. Bloch, M.D., University of Minnesota, 1955.

Greta Camel, A.B., University of Wisconsin, 1946; M.D., 1949.

William H. Danforth, A.B., Princeton University, 1947; M.D., Harvard University, 1951.

Brent Mershon Parker, M.D., Washington University, 1952.

John D. Vavra (U. S. Public Health Service Research Fellow in Medicine) (Hematology), B.A., University of Colorado, 1950; M.D., Washington University, 1954.

#### *Instructors (Clinical)*

Harry Agress, B.S., Washington University, 1932; M.D., 1932.

Louis F. Aitken, B.S., University of Illinois, 1923; M.D., Washington University, 1927.

Morris Alex, B.S., University of Missouri, 1942; M.D., Washington University, 1943.

James W. Bagby (Dermatology), A.B., University of Missouri, 1930; B.S. in Medicine, 1931; M.D., Washington University, 1933.

Jack Barrow, M.D., Washington University, 1946.

Walter M. Baumgarten, Jr., A.B., Washington University, 1935; M.D., 1939.

Sim F. Beam, A.B., University of Missouri, 1928; M.D., Washington University, 1932.

William G. Becke, M.D., Washington University, 1923.

Aaron M. Bernstein, M.D., Chicago University, 1952.

Morton A. Binder, B.S., Yale University, 1948; M.D., Columbia University, 1951.

Aaron Birenbaum, M.D., Washington University, 1948.

William N. Blalock, M.D., Washington University, 1952.

Edward W. Cannady, A.B., Washington University, 1927; M.D., 1931.

Francis Joseph Catanzaro, M.D., Washington University, 1948.

Benjamin H. Charles, M.B., Ch.B., University of Edinburgh, 1934.

Cecil Marvin Charles, A.B., University of Kentucky, 1926; A.M., 1927; Ph.D., Washington University, 1929; M.D., 1933. (See Department of Anatomy.)

Margaret Chieffi, M.D., University of New Zealand, 1937.

William G. Coleman (Dermatology), B.S., Washington University, 1917; M.D., 1919. (On leave of absence.)

Phillip Comens, B.S. in Medicine, University of Missouri, 1949; M.D., Washington University, 1951.

Adolph H. Conrad, Jr. (Dermatology), A.B., Washington University, 1934; M.D., 1938.

Ralph Copp, Jr., A.B., Washington University, 1948; M.D., 1952.

Arnold Dankner, M.D., Washington University, 1947.

John D. Davidson, A.B., Washington University, 1948; M.D., 1952.

Joseph C. Edwards, A.B., University of Oklahoma, 1930; M.D., Harvard University, 1934.

Calvin C. Ellis (Dermatology), A.B., Washington University, 1937; M.D., 1941.

Julius Elson, M.D., Washington University, 1928.

Martin F. Engman, Jr. (Dermatology), M.D., Washington University, 1928.

Mauri Feldaker (Dermatology), A.B., Washington University, 1949; M.D., 1950.

Donald H. Finger, A.B., Washington University, 1949; M.D., 1950.

I. J. Flance, A.B., Washington University, 1931; M.D., 1935.

Alfred Fleishman, B.S., Washington University, 1935; M.D., 1935.

Bruce Todd Forsyth, M.D., Washington University, 1947.

Sydney A. Fraser, B.S., City College of New York, 1948; M.D., Meharry Medical College, 1952.

Ralph V. Gieselman, M.D., Washington University, 1947.

Bertrand Y. Glassberg, B.S., Washington University, 1923; M.D., 1925.

Melvin Leonard Goldman, A.B., Washington University, 1939; M.D., 1943.

John M. Grant, A.B., Princeton University, 1950; M.D., Washington University, 1954.

Axel Reinhold Gronau, M.D., University of Naples, 1935.

Lee B. Harrison, A.B., University of Utah, 1925; M.D., Washington University, 1927.

Lee W. Hawkins, A.B., Haverford College, 1952; M.D., Washington University, 1952.

Charles Hogancamp, B.S., Murray State College, 1949; M.D., Washington University, 1953.

John L. Horner, A.B., Washington University, 1932; M.D., 1936.

Richard F. Huck, B.S., Notre Dame University, 1947; M.D., Washington University, 1948.

Bernard Hulbert, B.A., University of Wisconsin, 1938; M.D., 1941.

James Herbert Hutchinson, Jr., B.S., Arkansas A. and M. College, 1942; M.D., University of Arkansas, 1945.

- J. Ted Jean, A.B., Indiana University, 1924; M.D., Washington University, 1928.
- Sidney Jick, M.D., Washington University, 1949.
- Harold J. Joseph, B.A., University of Texas, 1947; M.D., 1950.
- Robert S. Karsh, A.B., Washington University, 1951; M.D., 1952.
- Robert W. Kelley, A.B., Southwestern College, 1932; M.D., Washington University, 1936.
- David N. Kerr, A.B., University of Colorado, 1936; M.D., Washington University, 1941.
- Melvin B. Kirstein, B.S., Indiana University, 1930; M.D., 1933.
- William S. Klein, B.S., Columbia University, 1933; M.D., University of Chicago, 1937.
- Norman P. Knowlton, Jr., B.S., Harvard University, 1942; M.D., 1945.
- Robert E. Koch, A.B., Washington University, 1936; M.D., 1940.
- Karl F. Koenig, B.S., University of Illinois, 1923; M.D., Washington University, 1931.
- Paul U. Larson, A.B., Washington University, 1948; M.D., 1952.
- Marvin E. Levin, A.B., Washington University, 1947; M.D., 1951.
- Joseph Levitt, M.D., Washington University, 1949.
- David M. Lieberman, M.D., Vanderbilt University, 1949.
- Hiram S. Liggett, M.D., Washington University, 1920.
- Warren M. Lonergan, A.B., Westminster College, 1936; M.D., Vanderbilt University, 1940.
- William E. Magee, M.D., Duke University, 1950.
- Richard W. Maxwell, A.B., Greenville College, 1932; M.D., University of Chicago, 1937.
- Arnold S. Moe, B.S., University of Minnesota, 1938; M.B., 1939; M.D., 1940.
- Frede Mortensen, B.A., Wagner College, 1949; M.D., New York Medical College, 1953.
- J. Roger Nelson, A.B., Washington University, 1949; M.D., 1953.
- Lamar H. Ochs, A.B., Washington University, 1941; M.D., 1944.
- James W. Owen, Jr., M.D., Washington University, 1946.
- Kenneth C. Price, M.D., University of Washington, 1951.
- Herman Joseph Roodman, A.B., Washington University, 1950; M.D., 1954.
- Robert Rubin, A.B., Washington University, 1950; M.D., 1954.
- Samuel E. Schechter, M.D., Washington University, 1941.
- John Wickham Seddon, Ph.B., Yale University, 1931; M.D., Washington University, 1935.
- John Blasdel Shapleigh II, M.D., Washington University, 1946.
- Burton A. Shatz, A.B., Washington University, 1940; M.D., 1943.
- James C. Sisk (Dermatology), A.B., Washington University, 1943; M.D., 1946.
- David Miller Skilling, Jr., B.S., Washington and Jefferson College, 1923; M.D., Washington University, 1928.
- John Spalding Skinner, M.D., Washington University, 1940.
- Milton Smith, B.S., Washington University, 1928; M.D., 1930.
- Robert M. Smith, A.B., Washington University, 1936; M.D., 1940.
- Ross B. Sommer, A.B., Miami University, 1949; M.D., Cornell University, 1949.
- Franz U. Steinberg, M.D., University of Berne, 1938.
- William A. Tibbs, Jr., B.S., in Medicine, University of Missouri, 1949; M.D., Washington University, 1951.
- Stanley M. Wald, M.D., Washington University, 1946.
- Thomas Joseph Walsh, B.S., University of Richmond, 1946; M.D., Washington University, 1949.
- Hugh R. Waters, B.S., Northwestern University, 1942; M.D., Washington University, 1945.
- Eugene P. Weber (Dermatology), M.D., Northwestern University, 1940.



Alvin S. Wenneker, A.B., Washington University, 1949; M.D., 1953.

Herbert C. Wiegand, A.B., Washington University, 1940; M.D., 1943.

Harry W. Wiese, B.S., Washington University, 1920; M.D., 1922.

Edward B. Williams, Jr., M.D., Meharry Medical College, 1944. (On leave of absence.)

James A. Wood, A.B., Westminster College, 1947; M.D., Washington University, 1949.

Herbert B. Zimmerman, M.D., Washington University, 1951.

#### *Instructors Emeriti (Clinical)*

Anthony B. Day, B.S., Harvard University, 1913; M.D., Washington University, 1919.

George Manting (Dermatology), M.D., University of Michigan, 1915.

#### *Assistants*

Richard D. Aach, A.B., Washington University, 1955; M.D., 1959.

Charles C. Abel, Westminster College, 1952; M.D., Washington University, 1956.

Dorothy Bewie (Nursing), R.N., St. Joseph's School of Nursing (Alton, Ill.), 1952; B.S., St. Louis University, 1955.

Malcolm N. Blumenthal, B.A., University of Minnesota, 1954; M.D., 1958.

Benjamin A. Borowsky, M.D., Washington University, 1958.

William F. Bridgers, B.A., University of the South, 1954; M.D., Washington University, 1959.

John M. Cary, B.A., Central College, 1954; M.D., St. Louis University, 1958.

Laurence A. Cove, A.B., Columbia University, 1955; M.D., State University of New York at New York City, 1959.

Duane E. Cozart, Ph.B., University of Chicago, 1947; A.B., Washington University, 1949; M.D., Medical College of Virginia, 1959.

Josephine Davis, R.N.

Louis P. Duemler, B.A., University of California at Los Angeles, 1955; M.D., University of Southern California, 1959.

Howard R. Engel, B.A., University of Chicago, 1951; B.S., 1953; M.D., 1955.

Thomas E. Flipse, B.S., Davidson College, 1951; M.D., University of Miami, 1957.

Harry A. Fozzard, M.D., Washington University, 1956.

Michael G. Fusillo, B.S., Queen's College, 1952; M.D., Albany Medical College, 1958.

Lester S. Garfinkel, A.B., Washington University, 1955; M.D., 1959.

Ivan K. Goldberg, A.B., Johns Hopkins University, 1955; M.D., New York University, 1959.

S. Philip Greiver, B.A., University of Louisville, 1951; M.D., 1955.

Mark J. Halloran, M.D., Marquette University, 1959.

Donald R. Harkness, A.B., University of California, 1954; M.D., Washington University, 1958.

Duane C. Hellam, A.B., Arizona State College at Tempe, 1955; M.D., Washington University, 1959.

Foster Kay, A.B., Middlebury College, 1954; M.D., Boston University, 1958.

Daniel K. Lane, A.B., Princeton University, 1955; M.D., Washington University, 1959.

Wenzel A. Leff, B.A., Yankton College, 1955; B.S., in Medicine, University of South Dakota, 1957; M.D., Washington University, 1959.

Norman J. Marieb, B.S., Tufts University, 1955; M.D., University of Rochester, 1959.

John J. McKinsey, B.S., Southern Methodist University, 1953; M.D., Southwestern Medical School, 1957.

George R. Morrison, B.N.S., Holy Cross College, 1946; A.B., University of Rochester, 1948; M.D., 1954.

Charles F. Nadler, A.B., Dartmouth College, 1951; M.D., Northwestern University, 1955.

Stanley G. Nathenson, B.A., Reed College; M.D., Washington University, 1959.

Gordon Newton, M.D., University of Arkansas, 1958.

Nobuko Obayashi, B.A., University of Hawaii, 1955; M.D., Washington University, 1959.

- Margaret O'Connell, R.N.
- James C. Peden, Jr., A.B., Haverford College, 1951; M.D., Washington University, 1955.
- Gerald F. Peppers, B.S., South Dakota State College, 1953; B.S. in Medicine, University of South Dakota, 1957; M.D., Washington University, 1959.
- Martin J. Petersen, A.B., University of California, 1954; M.D., 1958.
- John D. Pettigrew, B.A., University of Colorado, 1955; M.D., 1959.
- George H. Porter III, A.B., Duke University, 1954; M.D., 1958.
- Michael J. Regan, M.D., Marquette University, 1959.
- Frank A. Riddick, Jr., B.A., Vanderbilt University, 1950; M.D., 1954.
- Martin C. Robinson, B.Sc., McGill University, 1953; M.D., University of Manitoba, 1958.
- Jesse Roth, B.A., Columbia University, 1955; M.D., Albert Einstein College of Medicine, 1959.
- Harold H. Sandstead, B.A., Ohio Wesleyan University, 1954; M.D., Vanderbilt University, 1958.
- Eveline E. Schneeberger, B.S., University of Colorado, 1955; M.D., 1959.
- Lee C. Shine, A.B., University of Kentucky, 1955; M.D., Vanderbilt University, 1959.
- John M. Singleton, A.B., Washington University, 1953; M.D., 1957.
- Martin F. Stein, M.D., St. Louis University, 1959.
- Robert M. Stroud, B.A., Harvard University, 1952; M.D., 1956.
- William W. Sullivan, B.A., Pomona College, 1955; M.D., Washington University, 1955.
- Ellinore Tabbert, R.N.
- Walter J. Tannenberg, S.B., Massachusetts Institute of Technology, 1952; M.D., Tufts University, 1958.
- Marjorie Tittsworth, R.N.
- William Yates Trotter, M.D., Washington University, 1955.
- James W. Walsh, A.B., Washington University, 1950; M.D., 1954.

Wallace W. Wegner, M.D., Washington University, 1959.

Paul H. Wender, A.B., Harvard University, 1955; M.D., Columbia University College of Physicians and Surgeons, 1959.

Raymond B. Wuerker, A.B., Johns Hopkins University, 1955; M.D., 1959.

Rae Ziern, R.N.

### *Research Assistants*

Grace K. Arimura, B.S., Harding College, 1950.

Frank R. Dietz, B.S., University of Illinois, 1950.

Mary Chapman Johnson, A.B., Washington University, 1938.

Victoria Kirchoff.

Ida Kozak, A.B., Washington University, 1940.

Siegfried Naegle, Dipl.Chem., Technische Hochschule, Munchen, 1957. (Appointment terminates September 30, 1959).

### *Assistants (Clinical)*

Robert N. Alexander, Jr. (Dermatology), M.D., University of Tennessee, 1954.

Irwin H. Eskeles (Dermatology), B.S., Washington University, 1920; M.D., 1922.

Albert F. Fricke, S.B., University of Chicago, 1939; M.D., 1941.

John D. Lakes (Dermatology), M.D., St. Louis University, 1951.

Oliver A. McKee (Dermatology), L.R.C.P., Royal College of Physicians and Surgeons (Dublin), 1949; S.M., 1949.

Austin F. Montgomery, M.D., University of Pittsburgh, 1954.

Robert F. Owen, B.A., Princeton University, 1948; M.D., Yale University, 1952.

Dorothy Windhorst (Dermatology), M.D., University of Chicago, 1954.

### *Fellows and Trainees*

Oliver Abel III, A.B., Westminster College, 1951; M.D., Washington University, 1955.

Turhan Akyol, M.D., Ankara University (Turkey), 1953.

Marino Audia Lo Polito, B.A., University of Louisville, 1948; M.D., University of Panama, 1955. (Through July 31, 1959.)

John H. Bryant (Special National Institute of Arthritis and Metabolic Diseases Trainee in Hematology), B.A., University of Arizona, 1949; M.D., Columbia University College of Physicians and Surgeons, 1953.

A. Chrysoshou, M.D., University of Salonica (Greece), 1952.

Alain Ladislas de Weck, M.D., University of Geneva, 1953. (Through September 15, 1959.)

Fuad Salim Farah, M.D., American University of Beirut, 1954. (Through July 31, 1959.)

Barry George Firkin (Trainee), B.S., University of Sydney, 1951; B.S., M.B., 1954. (Through March 31, 1960.)

Paulo Augusto Ayroza Galvao, M.D., Universidade de Sao Paulo (Brazil), 1953. (Through November 30, 1959.)

Reams Glenn Greene (Trainee), A.B., Vanderbilt University, 1951; M.D., 1954.

Bertram William Justus (Trainee), A.B., Amherst College, 1953; M.D., Washington University, 1957.

Kyohei Kako, M.D., Tokyo Jikei-kai, 1953.

S. Wesley Kime, M.D., College of Medical Evangelists, 1952.

Richard Lewis Klein, A.B., Cornell University, 1953; M.D., New York University, 1957.

George P. McNicol, M.B., Ch.B., University of Glasgow, 1952; F.R.F.P.S., 1957; M.R.C.P., University of Edinburgh, 1957. (September 1, 1959, to August 31, 1960.)

Daniel N. Mohler, Jr. (Trainee), M.D., University of Virginia, 1953.

Peter A. F. Morrin, M.B., B.Ch., B.A.O., University College (Dublin), 1954; B.Sc., 1955.

Tadeusz Orlowski, M.D., Lodz University (Poland), 1948. (Through January 31, 1960).

Socrates C. Papathanassiou, M.D., University of Athens, 1952.

Charles Ward Parker (Allergy Foundation of America Postdoctoral Fellow), M.D., Washington University, 1953.

Nongnuch Patponpanij, M.D., Siriraj University (Thailand), 1950. (Through October 6, 1959.)

Rathindra Nath Ray (Rockefeller Foundation Fellow in Hematology), I.Sc., Jagannath College (India) 1945; M.B.B.S., Calcutta Medical College, 1951; M.D., 1957.

Celestino Sanchez, M.D., San Marcos University (Peru), 1954.

William D. Sawyer, M.D., Washington University, 1954.

Robert David Utiger (Trainee), A.B., Williams College, 1953; M.D., Washington University, 1957.

James H. Utley, M.D., Meharry Medical College, 1955.

## SECOND YEAR

## CONJOINT MEDICINE

The several courses given by the clinical departments during the sophomore year have been placed under the supervision of a Committee on Conjoint Medicine in order that teaching might be co-ordinated effectively. Even though individual courses are listed in the catalogue under departmental headings, representatives of several departments participate in the presentation of material. For instance, clinical diagnosis (see under Medicine) is taught jointly by the Departments of Medicine, Psychiatry and Neurology, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pediatrics, and Surgery. The number of hours allotted to each department in the conjoint courses is included in the listing of courses under the respective departmental headings. The following courses are included in this arrangement:

Medicine: Clinical Diagnosis

Applied Pathologic Physiology

Laboratory Methods of Diagnosis

Psychiatry and Neurology: Introductory Course on the Patient-Physician Relationship; Neurological Examination in Clinical Diagnosis

Obstetrics and Gynecology: Introduction to Obstetrics

Ophthalmology: Introduction to Ophthalmology

Otolaryngology and Clinical Diagnosis

Pediatrics: Introduction to Pediatrics

Surgery: Introduction to Surgery

William J. Harrington.....Committee Chairman

20. *Elementary Medicine.*

(a) *Pathologic Physiology.* Observation and interpretation of the symptoms and signs of disease, with special reference to pathologic physiology. Part of Conjoint Medicine. 36 hours.  
(Dr. Moore and Staff)

(b) *Clinical Diagnosis.* Lectures, demonstrations, and practical exercises in the technique of clinical diagnosis. Part of Conjoint Medicine. 144 hours.

(Drs. Garfinkel, Smith, and Staff)

(c) *Laboratory Methods of Diagnosis.* Lectures and laboratory course in microscopic, bacteriological, serological, and chemical methods of diagnosis. Part of Conjoint Medicine. 144 hours.

(Dr. Harrington and Staff)

## THIRD YEAR

30. *General Medicine.* Supervised Study of Patients on the Semi-Private Medical Service of the Barnes Hospital and on the Wards of St. Louis City Hospital and the Veterans Administration Hospital. Students are assigned in rotation as clinical clerks

to the patients admitted to these services. Teaching exercises include ward rounds, clinics, and afternoon work in the wards and laboratories. Students serve for six weeks on each of the two services. 408 hours.

(Drs. Bing, Reinhard, Brittingham, Paine, and Staff)

31. *Clinical Pathological Conference*. 36 hours. (See under Fourth Year—Medicine 42.)

32. *Medical Clinics*. 36 hours. (See under Fourth Year—Medicine 41.)

#### FOURTH YEAR

##### 40. *Medicine*.

(a) *Clinical Clerkship in Hospital Wards*. For six weeks the entire day is spent in the medical wards at Barnes Hospital. Patients are assigned for complete study and are followed throughout their stay in the hospital. Cases are presented by the student before the attending physician at ward rounds on the General Medical Wards three times a week, and on the Neurology Service once a week. Special therapeutic conferences are held three times a week with the Medical Resident. The students also attend weekly Staff Rounds, X-ray conferences, and Clinicopathological conferences. 198 hours.

(Drs. Moore, Sherry, and Staff)

(b) *Clinical Clerkship in Washington University Clinics*. Part of Co-ordinated Clerkship in Outpatient Medicine under supervision of Department of Preventive Medicine. Students act as clinic physicians for twelve weeks under the supervision of consultants from the Department of Medicine in the following outpatient clinics:

*General Medical Clinics* (Medicine A and B). Three mornings a week for six weeks and two mornings a week for six weeks. 90 hours.

(Drs. Goldman, Massie, Roberts, Brooks and Staff)

*Dermatology Clinic*. One afternoon a week for six weeks. 18 hours.

(Drs. Eisen, Lane, and Staff)

41. *Medical Clinics*. Cases which have been studied by students working in the wards of the Barnes Hospital are presented before the third- and fourth-year classes to illustrate medical problems of particular interest. One hour a week throughout the year. 36 hours.

(Dr. Moore and Staff)

42. *Clinical Pathological Conferences*. Abstracts of the clinical records of patients upon whom post-mortem examinations have been performed are presented in advance to members of the third- and fourth-year classes and to members of the medical staff. At each conference the diagnosis is discussed in detail by the clinical staff before the anatomical findings are presented by the pathologists. 36 hours.

(Dr. Reinhard and Medical Staff; Dr. Hartroft and Pathology Staff)



ELECTIVE COURSES

50. *Student Internship, Private Medical Service, Barnes Hospital.* One senior student. Six or twelve weeks. Student will serve as substitute intern on Private Medical Service.  
(Drs. Reinhard, W. Perry, and Staff)

51. *Student Internship, Ward Medical Service, Barnes Hospital.* One senior student. Six or twelve weeks. Student will serve as substitute intern on Ward Medical Service.  
(Drs. C. Moore, S. Sherry, and Staff)

52. *Student Internship, Washington University Service of the St. Louis City Hospital.* Two senior students. Six or twelve weeks. Students will serve as interns on the Unit I Medical Service.  
(Dr. Brittingham and Staff)

53. *Student Internship at the St. Louis Veterans Hospital—Washington University Service.* Six students. Six or twelve weeks, morning and afternoon. The medical service has been divided equally between the two medical schools in St. Louis to provide about 80 beds each. The full-time and part-time staff members plus the consultants and attending men on the Washington University service are prepared to offer highly individualized instruction.  
(Drs. Bing, Lange, Danforth, and Staff)

54. *Student Internship, Medical Service of the Jewish Hospital.* Two students. Six or twelve weeks. Students will serve as substitute interns on the Ward Service. Time will be provided for attendance at Medical School conferences.  
(Dr. Eisenstein and Staff)

55. *Medical Clerkships at Homer Phillips Hospital.* Six students. Morning only for six weeks. Attendance at ward rounds and conferences. Students will be given an opportunity to study selected patients admitted to the medical wards.  
(Drs. Williams, Rosecan, and Staff)

56. *Medical Specialty Clinics.* Four students. Afternoons, six weeks. Gastrointestinal (Monday), Allergy (Tuesday), Arthritic or Rheumatic (Wednesday), and Endocrine (Thursday).  
(Drs. Brooks, Daughaday, Hagemann, Hampton, Harrington, Scheff)

Work in other medical specialty clinics, including cardiovascular (cardiac, hypertension, peripheral vascular), chest, endocrine (a.m.), hematology, and liver may be arranged individually with the physician in charge of each clinic.

57. *Diseases of the Chest. Koch Hospital.* Four students. All day for six weeks. Individual training in the clinical examination of patients suffering from thoracic disease. Assignment of selected cases. Discussion and demonstration of therapeutic procedures. Attendance at staff conferences and Clinical Pathological Conferences at Koch Hospital.  
(Dr. Friedman)

58. *Metabolic Diseases.* Two students. All day for six weeks. Rounds with metabolism consultant on the wards of the Barnes Hospital and attendance at Diabetic and Endocrine Clinics in the Washington University Clinics. Training in special diagnostic tests applicable to the study of metabolic and endocrine diseases. (Dr. Daughaday)

59. *Infectious Diseases.* Two students. Six or twelve weeks. Observations of patients with infectious diseases in Barnes Hospital and the ward for contagious diseases at the City Hospital. Intensive study in the library of problems connected with these patients, followed by conferences with instructor. (Drs. Harford, King)

60. *Hematology.* One or two senior students may be accepted each trimester for special work in the Hematology Laboratory. Time is divided between study of patients with hematologic dyscrasias and training in special diagnostic procedure.

(Drs. Harrington, C. Moore, Chaplin, Brittingham, Reinhard)

61. *Cardiology.* Seven students. All day for six weeks. The elective course in cardiovascular disease is offered every six weeks of each trimester. The course includes intensive training in the diagnosis and treatment of cardiovascular disorders, demonstrations in cardiovascular physiology, and instruction in electrocardiographic and roentgenographic diagnosis. The clinical instruction is carried out at the Homer G. Phillips Hospital and is supplemented by conferences and round table discussions.

(Dr. J. Smith and Staff)

62. *Rotating Student Internship, St. Luke's Hospital.* One senior student. Six weeks. Students will serve as interns on medical, surgical, or obstetrical service. For medical service, apply to Dr. Paul O. Hagemann.

63. *Research.* Interested senior students are encouraged to participate in the clinical and laboratory research programs of the Department of Medicine. Each applicant should arrange his schedule so that he can devote at least twelve consecutive weeks to his research elective. Positions available will include the following:

Cardiovascular Disease—Drs. Bing, J. Smith

Clinical Investigation—Drs. S. Sherry, A. Fletcher

Dermatology—Dr. Eisen

Hematology—Drs. Harrington, Loeb, Chaplin, Brittingham, C. Moore, Reinhard

Hypertension—Dr. M. Perry

Infectious Diseases—Drs. Harford, King

Malignant Disease—Drs. Loeb, Reinhard

Metabolic Disease—Drs. Daughaday, Recant, Eisenstein, Kipnis, E. Reiss

Neuroendocrinology—Dr. Reichlin

Nutrition—Drs. Shank, Eisenstein

Psychosomatic Disease—Dr. Guze

Renal Disease—Dr. Bricker

Arrangements for these research electives should be made directly with the faculty member with whom the student wishes to work.



*Work going on in the laboratory for diagnosis of infectious diseases.*

## DEPARTMENT OF MICROBIOLOGY

---

### SECOND YEAR

20 (531). *Microbiology*. Lectures and laboratory. This course will present the basic principles relating to the metabolism, growth, and reproduction of microorganisms and to the immune responses of the host to pathogenic microorganisms and their metabolic products. The organization of the course is as follows: pure culture methodology, biochemical mechanisms of nutrition and intermediary metabolism, physiology of growth, fundamental genetics (with special emphasis on microbial aspects), immunology. In terms of the above concepts, specific groups of pathogenic organisms will then be considered: viruses, rickettsia, bacteria and fungi. The interaction between host and parasite will be studied by analyzing the biochemical basis for the pathogenicity of the microbe and for the immune reaction of man. The factors which make microorganisms vulnerable or resistant to chemotherapeutic agents will also be examined. 264 hours.



*Dr. Willard M. Allen, Professor of Obstetrics and Gynecology, and a fourth year student observe the induction of anesthesia in a patient being prepared for gynecologic surgery.*

## DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

---

Students are given practical instruction in obstetrics and gynecology in the St. Louis Maternity Hospital, the Barnes Hospital, the Washington University Clinics, and also at the St. Louis City and Homer G. Phillips Hospitals. There are approximately 6,000 confinements annually which are available for the teaching of obstetrics on the ward services of the St. Louis Maternity, the St. Louis City, and the Homer G. Phillips Hospitals. Instruction in the care of ambulatory obstetrical and gynecological patients is carried out in the University Clinics, where about 1,300 new patients are seen and about 22,000 follow-up visits are made annually. Instruction in gynecology is given in the University Clinics and on the wards of the St. Louis Maternity, the Barnes, and the Barnard Hospitals. There are approximately 2,000 admissions annually to the gynecological service, of which about one-fifth have malignant disease.

*Professor and Head of the Department*

Willard Myron Allen, B.S., Hobart College, 1926; M.S., University of Rochester, 1929; M.D., 1932; Sc.D. (hon.) Hobart College, 1940; Sc.D. (hon.) University of Rochester, 1957.

*Professor (Clinical)*

A. Norman Arneson, B.S., Texas Christian University, 1924; M.D., Washington University, 1928. (See Department of Radiology.)

*Professor Emeritus (Clinical)*

Grandison D. Royston, M.D., Washington University, 1907.

*Associate Professors*

William H. Masters, B.S., Hamilton College, 1938; M.D., University of Rochester, 1943.

Alfred I. Sherman, M.D., University of Toronto, 1944. (See Department of Radiology.)

Ralph B. Woolf, B.S., Massachusetts Institute of Technology, 1935; M.D., University of Rochester, 1939.

*Associate Professors (Clinical)*

Robert J. Crossen, A.B., Oberlin College, 1921; M.D., Washington University, 1925. (On leave of absence.)

John E. Hobbs, A.B., Southwest Missouri State Teachers College, 1923; M.D., Washington University, 1927.

F. P. McNalley, B.S., Washington University, 1915; M.D., 1917.

Melvin A. Roblee, B.S., Washington University, 1923; M.D., 1925.

Samuel D. Soule, M.D., Washington University, 1928.

Carl Reinhard Wegner, A.B., North Central College, 1922; M.D., University of Nebraska, 1926.

*Research Assistant Professor*

Matthew W. Noall, B.A., University of Utah, 1948; M.A., 1949; Ph.D., 1952.

*Assistant Professors (Clinical)*

Arthur T. Esslinger, M.D., Washington University, 1940.

Otto St. Clair Krebs, B.S., Washington University, 1917; M.D., 1919.

Seymour Monat, A.B., University of Pennsylvania, 1935; M.D., Long Island College of Medicine, 1939.

Kevin Charles Morrin, M.B., B.Ch., National University of Ireland, 1921.

Richard S. Paddock, M.D., Washington University, 1921.

Willard C. Scrivner, B.S., Washington University, 1926; M.D., 1930.

Helman C. Wasserman, A.B., Johns Hopkins University, 1928; M.D., Washington University, 1932.

George J. L. Wulff, Jr., A.B., Washington University, 1929; M.D., 1933.

*Instructors (Clinical)*

Hubert L. Allen, A.B., University of Kansas, 1932; M.D., Tulane University, 1936.

William Berman, A.B., Washington University, 1931; M.D., 1935.

Bryce H. Bondurant, A.B., Northeast Missouri State Teachers College, 1936; D.O., Kirksville College of Osteopathy and Surgery, 1940; M.D., Washington University, 1943.

Arthur R. Bortnick, M.D., Washington University, 1935.

Robert Burstein, M.D., Washington University, 1948.

H. Marvin Camel, M.D., Creighton University, 1950.

Francis J. Canepa, M.D., Washington University, 1922.

Myron W. Davis, M.D., Washington University, 1925.

Leon Foster, M.D., University of Georgia, 1933.

Charles R. Gulick, A.B., Central College, 1940; M.D., St. Louis University, 1943.

William D. Hawker, B.S., Shurtleff College, 1933; M.D., Washington University, 1938.

Herman Hutto, A.B., University of Alabama, 1932; M.D., Washington University, 1935.



Justin F. Kraner, M.D., University of Michigan, 1949.

Frank B. Long, Jr., M.D., Washington University, 1947.

Paul F. Max, B.S., Washington University, 1932; M.D., 1932.

Laurence E. Maze, M.D., Washington University, 1948.

Milton H. Meyerhardt, A.B., University of Missouri, 1925; M.D., St. Louis University, 1927.

Frank Andrew Morrison, B.S., University of Nebraska, 1935; M.D., 1936.

Norman K. Muschany, A.B., Westminster College, 1947; M.D., Temple University, 1951.

John B. O'Neill, B.S., St. Louis University, 1925; M.D., 1927.

Leslie E. Patton, B.S., St. Louis University, 1921; M.D., 1924.

James Pennoyer, B.S., Hobart College, 1933; M.D., University of Rochester, 1939.

David Rothman, B.S., Washington University, 1935; M.D., 1935.

William L. Smiley, A.B., Ohio State University, 1933; M.D., 1937.

Frances Helen Stewart, M.D., Washington University, 1927.

Alva C. Trueblood, Jr., A.B., Washington University, 1940; M.D., 1943.

Sol Weisman, A.B., Washington University, 1928; M.D., 1932.

Seth E. Wissner, A.B., Washington University, 1942; M.D., 1945.

Mitchell Yanow, M.D., Washington University, 1941.

#### *Instructor Emeritus (Clinical)*

Grover Bernard Liese, A.B., Real-Gymnasium, Cassel, Germany, 1910; M.D., University of Heidelberg (Germany), 1918.

#### *Assistants*

David M. Anderson, Jr., A.B., University of North Carolina, 1950; M.D., 1954.

Julio Contreras, M.D., Escuela Nacional de Medicina, 1953.

Philip S. Crossen, A.B., Amherst College, 1950; M.D., Washington University, 1954.

Robert H. Duemler, A.B., Washington University, 1952; M.D., 1956.

Dale R. Dunnihoo, B.S., Gannon College, 1949; M.S., University of Michigan, 1950; M.D., Washington University, 1956. (On leave of absence.)

Bill G. Floyd, M.D., University of Arkansas, 1956.

Ernst R. Friedrich, M.D., University of Heidelberg (Germany), 1954.

Jack S. Galloway, B.A., Cornell College, 1953; M.D., University of Iowa, 1957.

Manzar Jabbari, M.D., University of Tehran (Iran), 1956.

Alexander G. Juden, Jr., B.A., Rice Institute, 1952; M.D., University of Texas, 1956.

John Barlow Martin, B.A., Amherst College, 1951; M.D., Washington University, 1955.

Dan C. Mills, B.S., La Sierra College, 1947; M.D., College of Medical Evangelists, 1951.

John D. Moore, Jr., M.D., University of Tennessee, 1956.

Hans I. Orup, B.S., University of Washington, 1953; M.D., Washington University, 1956.

Eugene Renzi, B.A., Cornell University, 1953; M.D., 1957.

Mahfouz H. Rizk, M.B.B., Faculty of Medicine, Cairo University, 1955.

Walter A. Ruch, A.B., Princeton University, 1951; M.D., Washington University, 1955.

James M. Sloan, A.B., Vanderbilt University, 1951; M.D., University of Arkansas, 1955.

Saul Vitner, A.B., Emory University, 1950; M.D., 1954.

Ray J. Wolff, A.B., Dartmouth College, 1954; M.D., Washington University, 1958.

#### *Assistants (Clinical)*

John J. Carroll, A.B., Miami University, 1943; M.D., Loyola University, 1946.

Ira Clyde Gall, B.S., University of Cincinnati, 1948; M.D., 1951.

Michael McNalley, A.B., Washington University, 1947; M.D., 1951.

Theodore Merrims, A.B., Washington University, 1949; M.D., 1954.

Gerald Newport, A.B., Washington University, 1948; M.D., 1953.

Joseph Damon O'Keefe, A.B., University of Colorado, 1946; M.D., Washington University, 1950.

Marvin Rennard, A.B., Washington University, 1947; M.D., 1952; B.S., University of Missouri, 1950; M.S., 1950.

Melvin M. Schwartz, A.B., University of Nebraska, 1945; M.D., 1947.

Alfred F. Sudholt, A.B., University of Missouri, 1940; B.S., 1942; M.D., Washington University, 1943.

#### *Research Assistant*

Samuel J. Hayward.

#### *Fellows*

France Alexander, A.B., Indiana University, 1950; M.D., 1953.

David R. Holmes, B.S., Southwest Missouri State College, 1942; M.D., Washington University, 1951.

Girgis Mikhail, M.D., Alexandria University (Egypt), 1955.

Amelia Rivera, M.D., University of Santo Tomas (P.I.), 1954.

Carol F. Williams, B.A., University of Tennessee, 1952; M.D., 1955.

#### SECOND YEAR

20. *Introduction to Obstetrics*. Instruction is given to small groups of students in the University Clinics. (Part of Conjoint Medicine. See page 60.)

(Dr. Woolf and Staff)

#### THIRD YEAR

30. *Obstetrical and Gynecological Pathology*. One session of three hours each is used for lectures and study of representative slides (in sections of one-third of the class). 36 hours.

(Dr. Hobbs and Staff)

31. *Clinical Clerkship*. Students spend six weeks on the obstetrical and gynecological wards of the St. Louis Maternity, Barnes, and Barnard Hospitals, where they become an integral part of the organization studying cases in detail and assisting at operations and deliveries. During this period they are also given instruction in abdominal palpation, pelvic examination, and measurement of the pelvis. Numerous informal lectures are given by various members of the attending staff.

## FOURTH YEAR

40. *Clinics and Lectures.* Entire class each second week throughout the year. 18 hours. (Dr. Allen and Staff)

41. *Co-ordinated Outpatient Clerkship.* During this period of twelve weeks students divide their time between various outpatient departments. New obstetrical and gynecological patients in the clinics are examined by the students and the diagnosis and treatment discussed by members of the attending staff. (Dr. Woolf and Staff)

42. *Obstetrical Service.* One-twelfth of the class spends three weeks on obstetrical call. Some students work at the St. Louis Maternity Hospital and others at the St. Louis City and Homer G. Phillips Hospitals. During this period normal multiparous patients are delivered by the students under the supervision of the house staff.

43. *Tumor Service.* Instruction in the diagnosis and treatment of neoplastic disease is given three hours once weekly in the tumor clinic for a period of six weeks. Informal lectures covering the use of X-ray, radium, and radio isotopes are given. (Dr. Sherman and Staff)

## ELECTIVE COURSES

50. *Gynecological Pathology.* Two students at a time may serve as assistants in the laboratory. Six weeks, full time, all trimesters. (Dr. Hobbs)

51. *University Clinics.* Three students at a time may serve as clinical clerks, all day for six weeks.

52. *Obstetrical Services.* One or two students may serve as clinical clerks, living in the hospital for six weeks.

53. *Maternal Health.* All students are urged to attend the Planned Parenthood Clinic, where practical instruction is given in the practical aspects of family planning. This course is given in the evening at the local offices of the Planned Parenthood Association.



*One of the refraction ranges in the Ophthalmology Out-patient Department.*

## DEPARTMENT OF OPHTHALMOLOGY

The instruction in the Department of Ophthalmology begins in the second year with methods of examination of the eye. Emphasis is placed on the use of the ophthalmoscope in the first three-hour session. Three additional two-hour sessions are devoted to other methods of examination.

During the junior year a series of twelve didactic lectures is given as an introduction to various aspects of ocular disease.

During the fourth year, students are assigned to the Eye Clinic once a week for six weeks. This affords opportunity for work with patients under supervision.

### *Professor and Head of the Department*

Bernard Becker, A.B., Princeton University, 1941; M.D., Harvard University, 1944.

Meyer Wiener, M.D., Missouri Medical College, 1896.

### *Professors Emeriti (Clinical)*

Martin Hayward Post, A.B., Amherst College, 1908; M.D., Johns Hopkins University, 1912.

### *Associate Professor*

Paul A. Cibis, M.D., University of Berlin, 1936; M.D., University of Heidelberg, 1944.

*Associate Professors (Clinical)*

Howard Rommel Hildreth, M.D., Washington University, 1928.

William Mahlon James, B.S., Drury College, 1923; M.D., Washington University, 1926.

Theodore Eugene Sanders, B.S., University of Nebraska, 1931; M.D., 1933.

*Associate Professors Emeriti (Clinical)*

Bennett Young Alvis, B.S., St. Louis University, 1916; M.D., 1918.

Frederick Oscar Schwartz, M.D., Washington University, 1910.

Frederick Eno Woodruff, M.D., Missouri Medical College, 1897; A.B., Washington University, 1923.

*Assistant Professors*

Ake Sigurd Holmberg (Visiting), M.D., Karolinska Institute (Sweden), 1950.

Albert P. Ley, B.S., Antioch College, 1940; M.D., Harvard University, 1943.

James E. Miller, M.D., Medical College of Alabama, 1949.

Robert A. Moses, A.B., Johns Hopkins University; M.D., University of Maryland School of Medicine, 1942.

*Research Assistant Professor*

Marguerite A. Constant (Biochemistry), B.S., George Washington University, 1947; Ph.D., University of Wisconsin, 1951.

*Assistant Professors (Clinical)*

Edmund B. Alvis, M.D., Washington University, 1934.

Leslie C. Drews, A.B., Washington University, 1927; M.D., 1929.

Adolph Charles Lange, B.S., Washington University, 1928; M.D., 1930.

William H. Meinberg, B.S., Washington University, 1932; M.D., 1932.

Benjamin Milder, M.D., Washington University, 1939.

Paul W. Miles, A.B., University of Kansas, 1935; M.D., 1938.

Harry David Rosenbaum, M.D., Washington University, 1934.

*Instructor*

Samuel A. Canaan, Jr. (National Institutes of Health Special Trainee), A.B., University of Iowa, 1942; M.A., Columbia University, 1948; M.D., Meharry Medical College, 1954. (April 1, 1959, to March 31, 1960.)

*Research Instructors*

Jay M. Enoch, B.S., Columbia University, 1950; Ph.D., Ohio State University, 1956.

Bernard Wortman, A.B., Syracuse University, 1948; Ph.D., Ohio State University, 1955.

*Instructors (Clinical)*

Charles R. Barnes, B.A., Pomona College, 1948; M.D., McGill University, 1953.

Daniel Bisno, B.A., University of Wisconsin, 1927; M.D., Johns Hopkins University, 1931.

James Howard Bryan, A.B., Washington University, 1932; M.D., 1936.

Robert C. Drews, A.B., Washington University, 1952; M.D., 1955.

Ruth Schreiber Freedman, A.B., Washington University, 1938; M.D., 1942.

David Merrill Freeman, A.B., University of Missouri, 1940; B.S. in Medicine, 1941; M.D., Washington University, 1943.

S. Albert Hanser, B.S., St. Louis University, 1933; M.D., 1937.

Lawrence T. Post, Jr., M.D., Washington University, 1948.

Philip T. Shahan, A.B., Harvard University, 1938; M.D., Washington University, 1942.

*Assistants*

Harry Easom, B.A., University of Michigan, 1954; M.D., 1958.

Max Forbes (National Institute of Neurological Diseases and Blindness Trainee), A.B., Cornell University, 1951; M.D., University of Chicago, 1957.

Andrew J. Gay (National Institutes of Health Special Trainee), B.S., University of Alabama, 1950; M.A., 1954; M.D., Medical College of Alabama, 1955.

Glen Paul Johnston, A.B., Washington University, 1953; M.D., 1956.



Jack Kayes, B.A., Yale University, 1953; M.D., Washington University, 1957.

Donald Konicoff, M.D., New York Medical College, 1958.

William A. Moor, A.B., Washington University, 1935.

Edward Okun, M.D., University of Vermont, 1956. (On leave of absence.)

James R. Patton, Jr., B.A., Rice Institute, 1950; M.D., University of Pennsylvania, 1954.

Thomas H. Pettit (National Institute of Neurological Diseases and Blindness Trainee), M.D., University of Pennsylvania, 1956.

Irvin Paul Pollack (National Institute of Neurological Diseases and Blindness Trainee), A.B., Johns Hopkins University, 1952; M.D., University of Maryland, 1956.

Rufus Roberts, M.D., Baylor University, 1955.

Howard H. Siegel (National Institute of Neurological Diseases and Blindness Trainee), A.B., Western Reserve University, 1953; M.D., University of Maryland, 1957.

Kenneth A. Simon (National Institute of Neurological Diseases and Blindness Trainee), M.S., Yale University, 1955; M.D., 1957.

J. L. Stevenson.

Larry Weiss, B.A., Wooster College, 1951; M.D., Ohio State University, 1958.

#### Research Assistant

Sylvia G. Moses, B.A., Goucher College, 1940; M.A., Columbia University, 1942.

#### SECOND YEAR

20. *Ophthalmology*. Lectures and demonstrations are given as a part of the course in Conjoint Medicine as well as additional lectures. 7 hours.

(Drs. Becker, Cibis, L. T. Post, Jr., and Resident Staff)

#### THIRD YEAR

30. *Ophthalmology*. Twelve didactic lectures are given in each trimester to one-third of the class.

(Drs. Becker, Cibis, Freeman, James, Miller, Moses, Ley, L. T. Post, Jr., Sanders and Resident Staff)

#### FOURTH YEAR

40. *Clinical Ophthalmology*. Practical instruction in diagnosis and treatment of eye diseases is given to small sections of the class. Three hours a week for six weeks. 18 hours.

(Drs. Becker, Miller, Moses, Ley, L. T. Post, Jr., P. T. Shahan, Stickle, and Resident Staff)

#### Assistants (Clinical)

Stanley Becker, A.B., Washington University, 1948; M.A., 1950; Ph.D., 1951; M.D., Chicago Medical School, 1955.

Jack Hartstein, B.S., University of Missouri, 1953; M.D., University of Cincinnati, 1955.

Maxwell Rachlin, M.D., University of Ontario, 1942.

Arthur W. Stickle, Jr., M.D., University of Oklahoma, 1943.

Howard P. Venable, B.S., Wayne State University, 1935; M.D., 1940.

#### Fellows

Stan Coleman, B.A., University of Virginia, 1954; M.D., 1958.

Allan Kolker, A.B., Washington University, 1954; M.D., 1957.

Quentin Korfhage, B.A., University of Louisville, 1952; M.D., 1956.

James Krause, M.D., University of Oklahoma, 1958.

Satoshi Noyori, M.D., Juntendo Medical College (Japan), 1950.

Andrew G. Ostrom, A.B., Princeton University, 1954; M.D., Johns Hopkins University, 1958.

F. Dale Roth (National Institutes of Health Trainee), B.S., University of Michigan, 1950; M.D., 1954. (April 1, 1959, to March 31, 1960.)

Tsuyoshi Yamashita, M.D., Juntendo Medical College (Japan).



*Dr. Theodore E. Walsh, Professor of Otolaryngology, reviews a student's dissection of the inner ear.*

## DEPARTMENT OF OTOLARYNGOLOGY

Otolaryngology is presented to the students during the sophomore, junior, and senior years. In the sophomore year the importance of careful examination of the ear, nose, and throat is emphasized, and the students are taught the use of instruments peculiar to the specialty. In the junior year lectures are given which are intended to supplement the information obtainable in textbooks. In the senior year the student examines patients in the outpatient clinics. Those students who have a particular interest in the specialty are accepted for an elective period during their senior year.

### *Professor and Head of Department*

Theodore E. Walsh, B.A., Cambridge University (England), 1921; M.R.C.S., L.R.C.P., London, 1925.

### *Professors*

Hallowell Davis (Research), A.B., Harvard University, 1918; M.D., 1922. (See Department of Physiology.)

Sol Richard Silverman (Audiology), A.B., Cornell University, 1933; M.S., Washington University, 1938; Ph.D., 1942.

*Visiting Professor*

J. Santiago MacClure, M.D., Universidad de Chile, 1933. (July 1 to August 31, 1959.)

*Professor (Clinical)*

James B. Costen, A.B., University of Arkansas, 1917; M.D., Washington University, 1922.

*Professor Emeritus (Clinical)*

Arthur W. Proetz, A.B., Washington University, 1910; M.D., 1912; Sc.D. (hon.), Colby College, 1950.

*Associate Professors*

Walter Page Covell, B.S., Oregon State College, 1921; M.S., 1923; Ph.D., University of Minnesota, 1926; M.D., University of Chicago, 1933. (See Department of Anatomy.)

Joseph H. Ogura, A.B., University of California, 1937; M.D., 1941.

*Research Associate Professor*

Ira J. Hirsh (Audiology), A.B., New York State College for Teachers (Albany), 1942; M.A., Northwestern University, 1943; M.A., Harvard University, 1947; Ph.D., 1948.

*Associate Professors (Clinical)*

French K. Hansel, M.D., St. Louis University, 1918; M.S., University of Minnesota, 1923.

Ben H. Senturia, A.B., Washington University, 1931; M.D., 1935.

*Associate Professors Emeriti (Clinical)*

Arthur M. Alden, A.B., University of Oklahoma, 1907; A.M., 1909; M.D., St. Louis University, 1915.

Isaac Dee Kelley, Jr., B.A., St. Louis University, 1903; M.D., 1908.

*Assistant Professor*

Malcolm H. Stroud, M.B., Ch.B., University of Birmingham, 1945; L.R.C.P., M.R.C.S., 1946; F.R.C.S., 1949.

*Assistant Professors (Clinical)*

William T. K. Bryan, A.B., Washington University, 1929; M.D., 1933.

Alfred J. Cone, B.S., State University of Iowa, 1921; M.D., 1923; M.S., 1927.

Lee W. Dean, Jr., B.S., Yale University, 1930; M.D., Washington University, 1933.

Harry N. Glick, A.B., Cornell University, 1916; M.D., St. Louis University, 1922.

Edward H. Lyman, B.S., Washington University, 1937; M.D., 1937.

Robert E. Votaw, B.S., State University of Iowa, 1927; M.D., 1929.

*Research Assistant Professor*

Catherine A. Smith, A.B., Washington University, 1935; M.S., 1948; Ph.D., 1951. (On leave of absence.)

*Instructors*

Riad Mikhail Dibbs, P.C.B., University of Damascus, 1949; M.D., 1955.

Allan Goodman (Audiology), A.B., Brooklyn College, 1941; M.S., University of Michigan, 1949; Ph.D., 1952.

Ronald K. Watson, M.D., University of Manitoba, 1953.

*Research Instructors*

Marian Pfingsten Bryan, A.B., Washington University, 1931.

Donald H. Eldredge, S.B., Harvard University, 1943; M.D., 1946.

Carl F. Gessert, A.B., Washington University, 1949; M.S., University of Wisconsin, 1952; Ph.D., 1955.

*Instructors (Clinical)*

Benard Adler, B.S., Washington University, 1937; M.D., 1937.

Harold M. Cutler, A.B., University of Maine, 1930; M.D., Tufts College, 1937.

Morris Davidson, B.S., Indiana University, 1936; M.D., 1938.

Guerdan Hardy, M.D., Washington University, 1929.

Charles C. Jacobs, A.B., Washington University, 1942; M.D., 1945.

Daniel D. Klaff, B.S., University of Virginia, 1933; M.D., 1936.

Allen B. Potter, A.B., William Jewell College, 1916; M.D., St. Louis University, 1924.

Herbert M. Smit, M.D., St. Louis University, 1933.

A. Chesterfield Stutsman, B.S., Roanoke College, 1927; M.D., University of Virginia, 1931.

Joseph Warren West, M.D., Duke University, 1944.

#### Assistants

Fernando Medina do Amaral, M.D., Faculdade de Medicina de Para (Brazil), 1955.

Dean W. Gray (National Institute of Neurological Diseases and Blindness Trainee), B.S., Brigham Young University, 1952; M.D., Stanford University, 1956.

Albert J. Harris, A.B., Westminster College, 1941; M.D., Northwestern University, 1946.

Toshio Roy Kaku (National Institute of Neurological Diseases and Blindness Trainee), M.D., Washington University, 1956.

Masashi Kawasaki, B.S., University of Western Ontario, 1953; M.D., 1957.

William L. Licklider, B.A., Ohio State University, 1954; M.D., 1958.

Robert J. Petersen (National Institute of Neurological Diseases and Blindness Trainee), B.A., Grinnell College, 1950; M.S., University of Illinois, 1952; M.D., Washington University, 1956.

Manuel Vicente R. Porras, M.D., Universidad Central de Venezuela (Caracas), 1945.

Harold J. Quinn, Jr., B.S., Washington and Lee University, 1954; M.D., Tulane University, 1958.

Clarence J. Sands, B.S., Duquesne University, 1953; M.D., St. Louis University, 1956.

Donald Shumrick (National Institute of Neurological Diseases and Blindness Trainee), B.S., Seton Hall University, 1949; M.S., University of Minnesota, 1953; M.D., 1957.

Wayne A. Viers (National Institute of Neurological Diseases and Blindness Trainee), M.D., University of Oklahoma, 1956.

#### SECOND YEAR

20. *Otolaryngology and Physical Diagnosis.* The class is divided into small groups with individual instructors for a total of six hours for instruction in the methods of otolaryngological diagnosis and the use of instruments peculiar to this field. (Part of Conjoint Medicine. See page 60.)

#### THIRD YEAR

30. *Otolaryngology.* Twelve lectures are given in each trimester to one-third of the class.  
(Drs. Stroud, Walsh, Ogura)

#### FOURTH YEAR

40. *Otolaryngology.* Practical instruction in diagnosis and treatment is given to small sections of the class. Three hours a week for 6 weeks. 18 hours.  
(Drs. Votaw, Lyman, Dean)

#### ELECTIVE COURSE

50. *Clerkship in Otolaryngology.* Two students may serve as externs in the clinics for six weeks. Permission of the Head of the Department is necessary before registration for this elective. Full time.  
(Dr. Walsh and Staff)



*A member of the resident staff demonstrates a gross specimen to students in the second year course in pathology.*

## DEPARTMENT OF PATHOLOGY

---

Pathology for medical students is given during the second, third, and fourth years. In the second year the course covers General and Special Pathology, and in the third and fourth years the students attend the Clinical and Pathological Conferences conducted in collaboration with the Clinical Departments.

Properly qualified students may register in the School of Medicine or Graduate School of Arts and Sciences for any of the courses. Pathology 501 is a prerequisite for all other courses.

The staff in pathology of several hospitals in and about St. Louis are members of the faculty of the department: Missouri Baptist Hospital (Dr. W. Platt), DePaul Hospital (Dr. J. Bauer), St. Louis City Hospital (Drs. M. Silberberg, R. Silberberg, and L. Yuan), Homer G. Phillips Hospital (Dr. Blache), and Jewish Hospital (Dr. Hasson). Material from these hospitals is available for teaching and research.



For the purpose of both teaching and research, the Department of Pathology is divided into specialties under the following directors:

Hematopoietic Pathology.....	Dr. Sorenson
Clinical Pathology.....	Dr. V. Loeb, Jr.
Dentistry.....	Dr. Burstone (on leave of absence)
Experimental Pathology.....	Dr. P. Hartroft
Hepatic Pathology.....	Dr. Grisham, Dr. Porta
Infectious Diseases.....	Dr. M. G. Smith
Medicolegal Pathology.....	Dr. O'Neal
Metabolic Diseases.....	Dr. W. S. Hartroft
Neuropathology .....	Dr. Luse
Pathological Microchemistry.....	Dr. J. Kissane
Pathology of the Endocrines.....	Dr. Lacy
Surgical Pathology.....	Dr. Ackerman

*Edward Mallinckrodt Professor and Head of Department*

Walter Stanley Hartroft, B.Sc. in Medicine, University of Alberta, 1941; M.D., 1941; Ph.D., University of Toronto, 1950.

*Professors*

Lauren V. Ackerman, A.B., Hamilton College, 1927; M.D., University of Rochester, 1932. (See Department of Surgery.)

Margaret Gladys Smith, A.B., Mount Holyoke College, 1918; M.D., Johns Hopkins University, 1922.

*Professor Emeritus*

Leo Loeb, M.D., University of Zurich, 1896; Sc.D. (hon.), Washington University, 1948.

*Associate Professors*

Sarah A. Luse, A.B., Rockford College, 1940; M.D., Western Reserve University, 1949.

Martin Silberberg, M.D., University of Breslau, 1920. (On leave of absence.)

Ruth Silberberg, M.D., University of Breslau, 1931. (On leave of absence.)

*Assistant Professors*

John D. Bauer, B.Sc., University of Innsbruck (Austria), 1938; L.R.C.P. & S., University of Glasgow (Scotland), 1944; M.D., Marquette University, 1947.

Julian Blache, M.D.

Jack Hasson, B.S., City College of New York, 1947; M.D., State University of New York, 1951.

David S. Johnson, M.D., Washington University, 1948.

Paul E. Lacy, B.A., Ohio State University, 1945; M.D., 1948; M.Sc. 1948; Ph.D., University of Minnesota, 1955.

Virgil Loeb, Jr., M.D., Washington University, 1944. (See Department of Medicine.)

Robert M. O'Neal, B.S., University of Mississippi, 1943; M.D., University of Tennessee, 1945.

William R. Platt, B.S., University of Maryland, 1936; M.D., 1940.

*Research Assistant Professor*

Phyllis Merritt Hartroft, B.S., University of Michigan, 1949; M.A., University of Toronto, 1951; Ph.D., 1954.

*Instructors*

Robert C. Ahlvin, B.S., Iowa State College, 1950; M.D., Washington University, 1954.

Walter C. Bauer, B.S., Ohio State University, 1946; M.D., Washington University, 1954. (See Department of Surgery.)

Virgil R. Bleisch, M.D., Washington University, 1948.

Ernest L. Frank, M.D., Friedrich-Alexander University, 1942.

Joe W. Grisham (Life Insurance Medical Research Fund Postdoctoral Fellow), A.B., Vanderbilt University, 1953; M.D., 1957.

John Kissane, A.B., University of Rochester, 1948; M.D., Washington University, 1952.

Nadya F. Konikov, B.S., Boston University, 1946; M.D., 1950.

Malcolm McGavran, B.A., Bethany College, 1951; M.D., Washington University, 1954. (See Department of Surgery.)

Robert Ogilvie, B.A., University of Utah, 1943; M.D., 1946. (See Department of Surgery.)

Kalman M. Palmer, M.D., Pazmany Peter Tudomány Egyetem (Hungary), 1938.

Eduardo A. Porta (Life Insurance Medical Postdoctoral Fellow).

Robert F. Schaefer, M.D., St. Louis University, 1948.

Ursula Sclafford, B.S., Howard University, 1942; M.D., 1945.

Gordon Shaw, A.B., Washington University, 1945; M.A., University of Toronto, 1948; M.D., 1953.

Gregorio Sierra, B.S., Instituto Manzanillo (Cuba), 1945; M.D., Havana University, 1954.

George D. Sorenson, B.S., Pennsylvania State University, 1950; M.D., Jefferson Medical College, 1954.

Louis S. K. Yuan, M.D., Aurora University (China), 1938.

#### Assistants

Luis Alvarez (U. S. Public Health Service Trainee in Experimental Pathology), M.D., University of Santo Domingo, 1958.

Bernabe Banson (U. S. Public Health Service Trainee in Experimental Pathology), M.D., University of Santo Tomas, 1954.

Luiciano Barajas (U. S. Public Health Service Trainee in Experimental Pathology), M.D., University of Madrid, 1956.

#### SECOND YEAR

20 (501). *Pathology*. General and special pathology are covered by lectures, gross and microscopic demonstrations, and laboratory work. In general pathology, degenerations, inflammations, infectious diseases, and tumors are considered. The diseases of each organ system are studied during the time devoted to special pathology. Small groups are given instruction in post-mortem technique, and in gross pathology. 336 hours. (Drs. Hartroft, M. Smith, Luse, Sorenson, O'Neal, Grisham, Lacy, Kissane, and Staff)

Ara M. Chalvardjian (U. S. Public Health Service Trainee in Experimental Pathology), M.D., American University of Beirut, 1958.

Jacques P. Chenard (U. S. Public Health Service Trainee in Experimental Pathology), B.A., St. Boniface College, 1951; M.D., Laval University, 1956.

John F. Fitzgibbons, B.S., Creighton University, 1950; M.S., 1951; M.D., 1955.

Khalid Hameed (U. S. Health Service Trainee in Experimental Pathology), F.Sc., Muslim University, 1946; M.D., King Edward Medical College, 1953.

Hideshige Imai (U. S. Public Health Service Trainee in Experimental Pathology), B.S., Toyama College (Japan), 1947; M.D., Tohoku University (Japan), 1947.

Charles Kuhn (U. S. Public Health Service Trainee in Experimental Pathology), A.B., Harvard University, 1955; M.D., Washington University, 1959.

Atsuo Mikata (U. S. Public Health Service Trainee in Experimental Pathology), M.D., Keio University (Japan), 1957.

Franz F. Schlunk (U. S. Public Health Service Trainee in Experimental Pathology), M.D., Phillips University, Marburg, West Germany, 1955.

Carl H. Smith (U. S. Public Health Service Trainee in Experimental Pathology), B.A., Swarthmore College, 1954; M.D., Yale University, 1959.

Joe R. Williamson (National Cancer Institute Trainee), B.A., Phillips University, 1954; M.D., Washington University, 1958.

#### Research Assistants

William Wilson.

Minoru Suzuki, M.D., Keio University (Japan), 1952.

#### Fellow

Roosevelt L. Tillman (Research).

## THIRD AND FOURTH YEARS

30 and 40. *Clinical and Pathological Conference.*

The clinical history and treatment of patients who have died are discussed before the class by the physicians and surgeons of the departments concerned. These conferences afford the students an opportunity to interpret the clinical observations in the light of the post-mortem findings. One hour a week during the third and fourth years.

(Drs. Hartroft, M. Smith, Thomas, O'Neal, Luse, Sorenson, O'Neal, Grisham, Lacy, Kissane)

## ELECTIVE COURSES

50 (502). *Major Research.* The laboratory offers facilities for research in pathology. Specialists and students with adequate training who desire to extend their knowledge of pathology will be admitted.

(Drs. W. S. Hartroft, M. Smith, Luse, P. M. Hartroft, Sorenson, O'Neal, Grisham, Lacy, Kissane)

51 (595). *Journal Club.* The current journals concerned with morphological and experimental pathology and oncology are reviewed by the members of the staff. Properly prepared students may attend or participate.

52 (596). *Seminar in Gross Pathology.* The autopsies for the affiliated hospitals are performed by the junior members of the staff. The entire Department meets, and the cases are evaluated by the senior staff at this conference. Two hours once a week throughout the year.

(Drs. Hartroft, M. Smith)

53 (597). *Seminar in Microscopic Pathology.* The microscopic sections from each autopsy are presented by the prosecutor at a conference.

(Drs. Hartroft, M. Smith)

53 (598). *Elective Course in Experimental Pathology.* Conducted during the third trimester one afternoon a week. General Pathology portion of 501 is the prerequisite. The course consists of the production of experimental lesions in small animals, using a variety of techniques. Only a limited number of students can be accepted.

(Drs. W. S. Hartroft, P. M. Hartroft, and Staff)

54. *Clerkship in Pathology at Washington University.* Students may serve as clerks in the Department of Pathology. The students will assist at autopsies and prepare reports for presentation at a seminar once a week. Six half-days a week, or full-time throughout the year.

(Drs. Hartroft, M. Smith)

55. *Research.* Those students who during a preceding summer or school year have initiated a research problem in Pathology may continue the work during the elective trimester of the fourth year. Full time for six weeks. All trimesters.

(Drs. W. S. Hartroft, M. Smith, P. M. Hartroft, and Staff)

The Department offers facilities for fulfilling requirements for the degree of Ph.D. in Pathology.



*Students, house officers and an attending physician examine an infant during rounds on the contagious ward at the St. Louis Children's Hospital as a part of the pediatric clerkship.*

## THE EDWARD MALLINCKRODT DEPARTMENT OF PEDIATRICS

---

In its undergraduate teaching program, the primary aim of the Department of Pediatrics is to enable the graduate to practice a good brand of pediatrics as a general practitioner. The training of the pediatric specialist is through the residency program at the St. Louis Children's Hospital. It is also expected that as a result of the combined undergraduate and postgraduate programs, a liberal number of top-ranking students will be encouraged to embark upon an academic pediatric career.

The major clinical facilities are in the St. Louis Children's Hospital and the St. Louis Maternity Hospital. The former has a bed capacity of 196, and accepts all types of problems in children under 15 years of age, averaging about 5,000 yearly admittances. The pediatric outpatient department is conducted in the hospital and averages about 50,000 yearly visits. In the St. Louis Maternity Hospital the yearly number of newborn infants averages more than 4,000.

*Professor and Head of Department*

Alexis F. Hartmann, B.S., Washington University, 1919; M.S., 1921; M.D., 1921.

*Professor*

David Goldring, A.B., Washington University, 1936; M.D., 1940.

*Professor Emeritus (Clinical)*

Borden Smith Veeder, M.D., University of Pennsylvania, 1907; Sc.D., Colgate University, 1929.

*Associate Professors*

William Klingberg, A.B., University of Wichita, 1938; M.D., Washington University, 1943.

Donald Lionell Thurston, B.S., Vanderbilt University, 1934; M.D., 1937.

*Associate Professor Emeritus (Clinical)*

Adrien S. Bleyer, M.D., Missouri Medical College, 1899.

*Assistant Professors*

M. Remsen Behrer, A.B., Williams College, 1942; M.D., Long Island College of Medicine, 1945.

Alexis F. Hartmann, Jr., B.S., Washington University, 1951; M.D., 1951.

John C. Herweg, B.S., Drury College, 1943; M.D., Washington University, 1945.

Barbara Jones (Research Fellow), A.B., Stanford University, 1949; M.D., University of Utah, 1952.

J. Neal Middelkamp, B.S., University of Missouri, 1946; M.D., Washington University, 1948.

Jean Holowach Thurston, B.A., University of Alberta, 1937; M.D., 1941.

Hulda J. Wohltmann, B.S., College of Charleston, 1944; M.D., Medical College of South Carolina, 1949.

*Research Assistant Professor*

Helen Knott Thornton (Microbiology), B.S., University of Washington, 1937; M.S., 1938; Ph.D., Ohio State University, 1944.

*Assistant Professors (Clinical)*

Max Deutch, M.D., Washington University, 1926.

Frederick August Jacobs, B.S., Washington University, 1927; M.D., 1928.

Joseph C. Jaudon, A.B., Washington University, 1926; M.D., 1933.

Alfred S. Schwartz, A.B., Amherst College, 1932; M.D., Johns Hopkins University, 1936.

Park J. White, A.B., Harvard University, 1913; M.D., Columbia University, 1917.

Paul J. Zentay, M.D., University of Kolozsvár (Hungary), 1914. (See Department of Psychiatry and Neurology.)

*Assistant Professor Emeritus*

Ruth E. Martin (Dentology), D.D.S., Washington University, 1923.

*Research Consultant*

Frances K. Graham, B.A., Pennsylvania State University, 1938; Ph.D., Yale University, 1942. (July 1 to October 31, 1959.)

*Instructors*

John Gilster (Dentistry), D.D.S., Washington University, 1944.

Miriam M. Pennoyer, B.S., Carnegie Institute of Technology, 1935; M.D., University of Rochester, 1939.

*Instructors (Clinical)*

Helen Aff-Drum, B.S., Washington University, 1934; M.D., 1934.

Joseph A. Bauer, M.D., Washington University, 1926.

Clifford Read Boles, A.B., Washington University, 1940; M.D., 1943.

Natalie Aronson Eisen (Children's Research Foundation Fellow) A.B., Hunter College, 1942; M.D., New York University, 1947.

Robert H. Friedman, M.D., Washington University, 1948.



Samuel Collub, B.S., Washington University, 1941; M.D., 1941.

Leo Francis Gowen, A.B., St. Joseph's College, 1934; M.D., Temple University, 1938.

Gene Grabau, B.S., St. Louis College of Pharmacy, 1937; M.D., Washington University, 1942.

Marshall B. Greenman, B.S., University of Illinois, 1946; M.D., 1948.

Stanley Leonard Harrison, B.S., Washington University, 1928; M.D., 1930.

Dorothy Jeannette Jones, A.B., Oberlin College, 1930; M.D., Washington University, 1934.

Lawrence I. Kahn, A.B., University of Alabama, 1941; M.D., Louisiana State University, 1945.

Kenneth Albert Koerner, A.B., Washington University, 1935; M.D., 1941.

Paul Edward Kubitschek, B.S., Creighton University, 1918; M.D., 1922; D.Sc., University of Pennsylvania, 1928. (See Department of Psychiatry and Neurology.)

Sol Londe, B.S., Washington University, 1925; M.D., 1927.

John C. Martz, A.B., University of Missouri, 1938; M.D., Washington University, 1942.

Herbert Arthur Mazur, M.D., Washington University, 1943.

David McClure, M.D., University of Tennessee, 1940.

Helen Nash, A.B., Spelman College, 1942; M.D., Meharry Medical College, 1945.

W. Neal Newton (Dentistry).

Paul H. Painter, M.D., St. Louis University, 1947. (Also Psychiatry.)

Edith C. Robinson, A.B., Randolph-Macon College, 1927; M.S., University of South Carolina, 1928; M.D., Johns Hopkins University, 1932. (See Department of Psychiatry and Neurology.)

Edwin H. Rohlfing, M.D., Washington University, 1919.

Wayne Arthur Rupe, A.B., University of Missouri, 1916; M.D., Washington University, 1918.

Stanley H. Schuman, M.D., Washington University, 1948.

Bernard Schwartzman, A.B., Washington University, 1931; M.D., 1935.

Frank S. Wissmath, A.B., Washington University, 1939; M.D., 1943.

### *Instructor Emeritus (Clinical)*

Maurice J. Lonsway, B.S., Valparaiso University, 1910; M.D., St. Louis University, 1914.

### *Assistants*

Irving E. Allen, Jr., A.B., Duke University, 1954; M.D., 1958.

Yildiz Arkonac, M.D., University of Istanbul, 1956.

Mary Elizabeth Beckman, R.N., Washington University, 1945; B.S. in Nursing, 1948.

Deborah K. Bublitz, B.S., Bates College, 1955; M.D., Johns Hopkins University, 1959.

Milenda Carino, B.S., University of the Philippines, 1952; M.D., Far Eastern University, 1958.

Albert H. Chavannes, M.D., University of Tennessee, 1959.

Mildred Dugan, B.A., Texas Christian University, 1951; M.D., Southwestern Medical School, 1955.

Ann R. Flipse, B.A., University of Texas, 1954; M.D., Washington University, 1959.

Olga Gallegos, B.S., Universidad Autonoma de San Luis Potosi, S.L.P., (Mexico), 1948; M.D., 1954.

Malcolm Garber, A.B., Vanderbilt University, 1951; M.D., University of Louisville, 1955.

Dorothy May Greendonner, R.N., Washington University School of Nursing, 1953.

Virginia Hagemann, B.S., in Nursing, Washington University, 1948.

Sara Kerr.

Mary Agnes Klosterman, B.S. in Nursing, St. Louis University, 1950.

Kathleen Doris McClinton, R.N., DePaul Hospital School of Nursing, 1947.

Thomas E. Morrissey, B.S., Creighton University, 1953; M.D., 1957.

Ruth Oda, A.B., Washington University, 1949; M.D., 1953.

Ayhan Okcuoglu, M.D., Ankara University (Turkey), 1953. (July 1 to December 31, 1959.)

Sinasi N. Ozsoylu, M.D., University of Istanbul, 1951.

Frederick D. Peterson, A.B., Knox College, 1953; M.D., Washington University, 1957.

Rosemary Pieniek, M.D., Ecuador Medical School, 1956. (July 1 to December 31, 1959.)

Eugenia M. Pierce, M.D., St. Louis University, 1958.

Mable L. Purkerson, A.B., Erskine College, 1951; M.D., Medical College of South Carolina, 1956.

Yavuz A. Renda, M.D., Ankara University (Turkey), 1953.

Kenneth L. Roark, B.S., Milligan College, 1949; M.D., University of Tennessee, 1953.

Leonard P. Rome, B.A., Yale University, 1952; M.D., Tufts University, 1956.

Ulgan I. Sila, M.D., Istanbul University, 1956.

Thomas W. Thurston, B.S., University of Oklahoma, 1953; M.D., 1957.

Frances Tihen (Nursing), R.N., Washington University School of Nursing, 1945.

Argyrios A. Tsifutis, M.D., University of Salonica (Greece), 1955.

Barbara Nancy Voegel, B.S., University of Illinois, 1950; M.D., Washington University, 1957.

Betty Jean Whitener, R.N., St. Luke's Hospital, 1948.

Costas A. Zervos, B.A., Lyceum of Corfu, 1942; M.D., Athens University, 1952.

## SECOND YEAR

20. In the course on Applied Pathologic Physiology the student is introduced to pediatrics and the full-time staff through the medium of eleven lectures designed to acquaint him with the nature of human growth and development, and the relationship of age to reaction to injury and disease. In the course on Conjoint Medicine the student is taken to the wards and given instruction in physical diagnosis. (See page 60.) (Entire full-time Staff)

## Assistants (Clinical)

Martin Calodney, B.S., College of the City of New York, 1930; M.D., New York University, 1936.

Norman Hankin, A.B., University of Wisconsin, 1940; M.D., 1943.

Maurice J. Keller, A.B., Yale University, 1936; M.D., Columbia University, 1940.

Henry L. Knock, A.B., Johns Hopkins University, 1949; M.D., 1952.

Marian Kuttner, M.D., Johann Wolfgang Goethe University (Frankfurt am Main), 1931.

Maurice J. Lonsway, Jr., A.B., Washington University, 1946; M.D., 1950.

Homer Nash, M.D., Meharry Medical College, 1951.

Herman W. Reas, B.S., St. Joseph's College, 1948; M.D., St. Louis University, 1952.

Frederick Sargent, A.B., Yale University, 1939; M.D., Cornell University, 1943.

George Sato, M.D., Washington University, 1947.

Seymour M. Schlansky, M.D., Chicago Medical School, 1950.

James K. Turner, A.B., Washington University, 1949; M.D., 1953.

## Research Assistants

Charles Crawford, B.S., Washington University, 1956.

Mary Elizabeth Wesley, A.B., Washington University, 1942; M.A., University of Kansas, 1959.

## Fellow

Margaret Williams (Research), B.S., Rutgers University, 1944; M.D., University of Pennsylvania, 1949.

THIRD YEAR

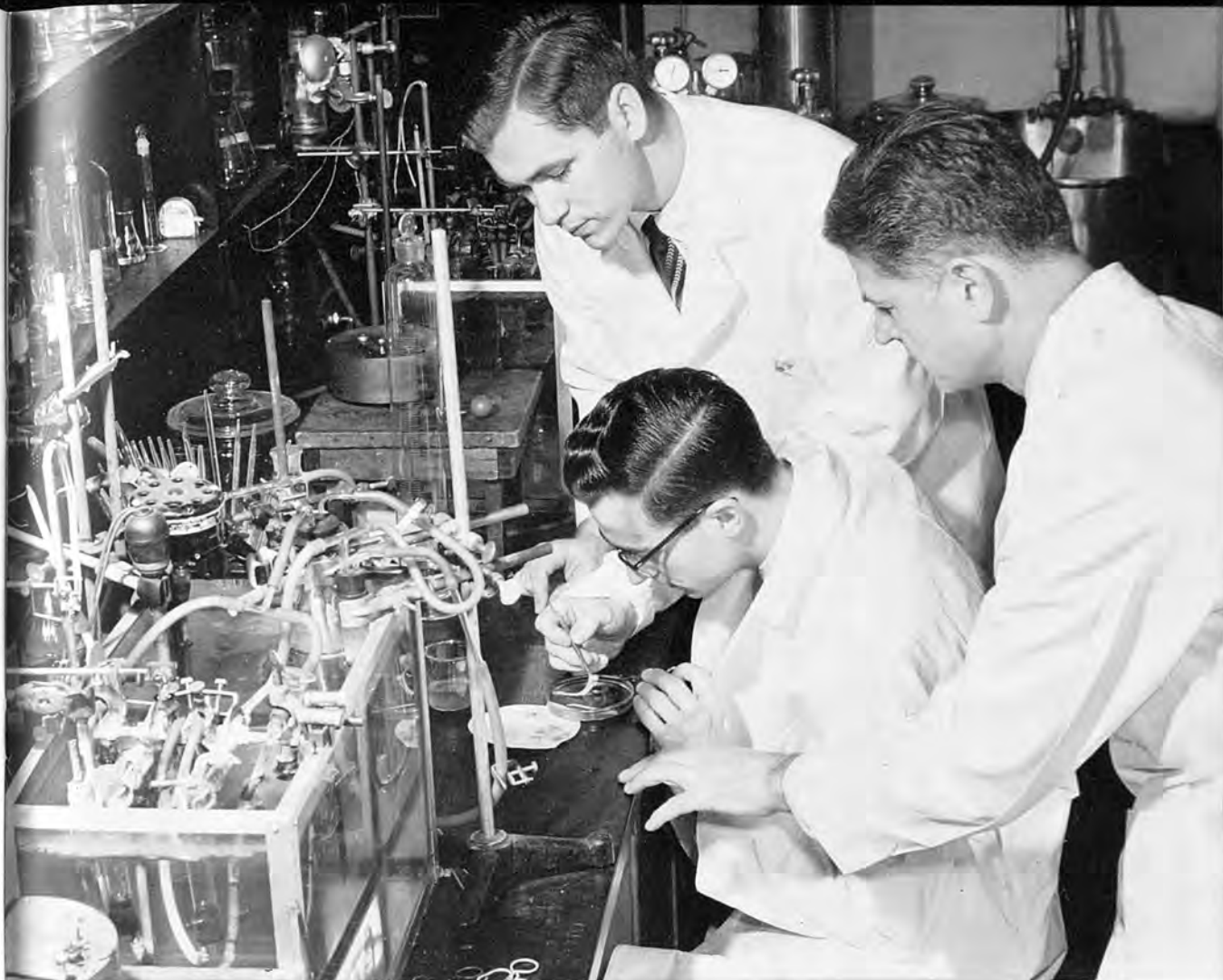
30. Twelve lectures on nutritional requirements, infant feeding, and contagious diseases are given to the entire class. One-sixth of the class works as clinical clerks for six weeks. This work consists of the following: (1) Assignment to intern or resident with joint responsibility of caring for inpatients; (2) Daily ward rounds and bedside conferences with house staff and their full-time supervisor; (3) Weekly conference on infectious diseases; (4) Weekly clinical conference; (5) Weekly clinical conference primarily designed for fourth-year students; (6) Weekly Wednesday and Saturday morning sessions in the Metabolic Clinic; (7) Special demonstrations in common nursing procedures, which include the preparation of artificial formulae and special diets.  
(Entire full-time Staff)

FOURTH YEAR

40. One-twelfth of the class works for three weeks in the pediatric outpatient department.  
(Entire Staff)

ELECTIVE COURSE

50. Six weeks of elective time may be spent according to the individual desires of the student—as intern substitute, in the research laboratory, or by combining clinical and laboratory work.



*Dr. Oliver H. Lowry, Professor of Pharmacology, observes two students as they carry out an experiment as part of their research project in the Pharmacology course in the second year.*

## THE EDWARD MALLINCKRODT DEPARTMENT OF PHARMACOLOGY

---

The number of useful drugs is steadily increasing. It is the purpose of the pharmacology course, through discussions of existing drugs, to develop general principles which will be applicable as well to drugs of the future. Pharmacology draws heavily on biochemistry, physiology, and bacteriology for an understanding of drug action. It looks toward pathology, medicine, and surgery for its uses. For this reason the course is constructed as a part of the continuum of medicine rather than a separate discipline. Since many drugs are harmful in excessive amounts, toxicology is included in the course as a logical part of pharmacology.

The laboratory portion of the course is divided roughly in half. The first part consists of selected animal experiments designed to illustrate and give reality to the action of drugs; the second part, of a small research project for each group of four students. The problems are of student choice, and the results of the research are reported to the class.

*Professor and Head of the Department*

Oliver Howe Lowry, B.S., Northwestern University, 1932; Ph.D., University of Chicago, 1937; M.D., 1937.

*Visiting Professor*

J. Harold Burn, M.A., Cambridge University, 1918; M.B., 1920; M.D., 1925.

*Professor Emeritus*

Helen Tredway Graham, B.A., Bryn Mawr College, 1911; M.A., 1912; Ph.D., University of Chicago, 1915.

*Associate Professors*

Helen B. Burch, B.S., Texas State College for Women, 1926; M.S., Iowa State College, 1928; Ph.D., 1935.

Francis Edmund Hunter, Jr., B.S., Mount Union College, 1938; Ph.D., University of Rochester, 1941.

Jack Strominger (Markle Scholar), A.B., Harvard University, 1946; M.D., Yale University, 1948.

*Assistant Professors*

Robert M. Burton, B.S., University of Maryland, 1950; M.S., Georgetown University, 1952; Ph.D., The Johns Hopkins University, 1955.

David B. McDougal, Jr. (Kenny Scholar), A.B., Princeton University, 1945; M.D., University of Chicago, 1947.

*Research Assistant Professor*

Janet V. Passonneau, B.A., University of Minnesota, 1945; M.A., Radcliffe College, 1946; Ph.D., Harvard University, 1949.

*Instructors*

Bruce Breckenridge (Markle Scholar), B.S., Iowa State College, 1948; Ph.D., University of Rochester, 1952; M.D., University of Rochester, 1956.

David M. Geller, B.A., Amherst College, 1952; Ph.D., Harvard University, 1957.

Stephen C. Kinsky, A.B., University of Chicago, 1951; Ph.D., Johns Hopkins University, 1957.

*Research Instructor*

Richard A. Salvador, B.S., Siena College, 1951; M.A., Boston University, 1953; Ph.D., George Washington University, 1957.

*Fellows*

Daniel L. Azarnoff, B.S., Rutgers University, 1947; M.S., 1948; M.D., University of Kansas Medical School, 1955.

Luis Garcia, M.D., Zaragoza University, 1955.

Eiji Ito, Ph.D., University of Hokkaido, 1947.

Gerard M. Lehrer, B.S., City College of New York, 1950; M.D., New York University, 1954.

Paul Mandelstam, A.B., Harvard University, 1944; A.M., 1946; M.D., 1950; Ph.D., 1953.

Arnold R. Sanderson, B.S., Durham University, 1954; Ph.D., 1957.

*Predoctoral Fellows*

David N. Dietzler, A.B., Washington University, 1957.

Francisco Guerra, B.S., University of Porto, 1956.

Marilyn H. Mandelstam (U. S. Public Health Service Fellow), B.A., Cornell University, 1955; M.S., Yale University, 1956.

Jeannette A. Skerjance, B.S., College of St. Scholastica, 1958.

SECOND YEAR

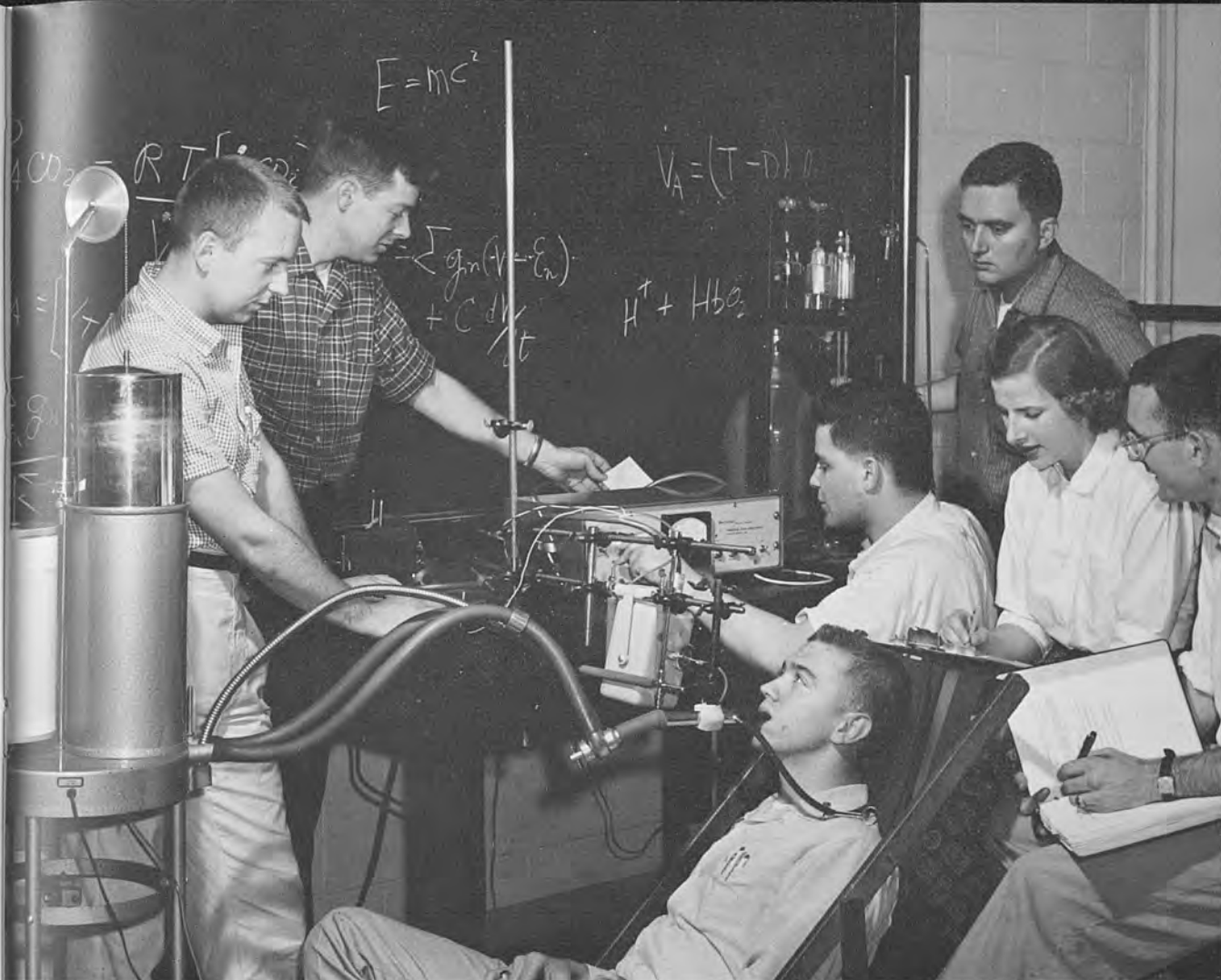
20 (501 and 502). (a) Lectures, conferences, panel discussions. 70 hours.

(b) Laboratory course. 146 hours. (Drs. Lowry, Hunter, Strominger, Burch, McDougal, Burton, Breckenridge, Geller, Kinsky)

ELECTIVE COURSE

51 (590) *Research*. The facilities of the laboratory are available to those who wish to carry on original investigation on problems of their own or on those the department is prepared to suggest.





*First year students making observations during one of the laboratory sessions in physiology.*

## DEPARTMENT OF PHYSIOLOGY

The department occupies one and a half floors of the South Building and one-half floor of the Cancer Research Building. The student laboratories are shared with the Department of Pharmacology, whose student laboratory work is done in the first trimester of the second year. Students work in groups of two at individual tables, except for special experiments where groups of two or four are assigned. The principal research interests of the department at present are the peripheral and central nervous systems, circulation, smooth and striated muscle, respiration, kidney, exchanges through cell membranes, and protein structure.

### *Professor and Head of Department*

Harvey Lester White, B.S., Washington University, 1918; M.D., 1920.

### *Professor*

Hallowell Davis, A.B., Harvard University, 1918; M.D., 1922; Sc.D. (hon.), Colby College, 1954. (See Department of Otolaryngology.)

### *Professor Emeritus*

Joseph Erlanger, B.S., University of California, 1895; M.D., Johns Hopkins University, 1899; LL.D., University of California, 1932; Sc.D., University of Wisconsin, 1936; Sc.D., University of Pennsylvania, 1936; Sc.D., University of Michigan, 1937; Sc.D., Washington University, 1946; LL.D., Johns Hopkins University, 1947; Doctor (hon.), Free University of Brussels, 1949.

### *Associate Professors*

Arthur S. Gilson, Jr., B.S., Dartmouth College, 1919; A.M., Harvard University, 1922; Ph.D., 1924.

Albert Roos, M.D., University of Groningen (Netherlands), 1940. (See Department of Surgery.)

Gordon Marcus Schoepfle, A.B., DePauw University, 1937; A.M., Princeton University, 1939; Ph.D., 1941.

William Sleator, Jr. (Biophysics), A.B., University of Michigan, 1938; M.S., 1939; Ph.D., 1946.

Dan C. Tosteson (U. S. Public Health Service Senior Research Fellow), M.D., Harvard University, 1949.

### *Assistant Professors*

Paul Horowicz (Biophysics), A.B., New York University, 1951; Ph.D., Johns Hopkins University, 1955.

Stanley Lang, Ph.B., University of Chicago, 1946; S.B., 1948; S.M., 1949; Ph.D., 1952.

### *Research Assistant Professor*

Doris Rolf, A.B., Harris Teachers College, 1936.

### *Instructors*

Frederick W. Klinge, A.B., University of Missouri, 1938; M.D., Washington University, 1942. (See Department of Surgery.)

Bernard Shore, B.S., California Institute of Technology, 1949; Ph.D., University of California, 1955.

### *Research Instructors*

Virgie G. Shore, A.B., University of California, 1950; Ph.D., 1955.

Mae Wang, B.S., National Southwestern Associate University, 1942; M.S., Syracuse University, 1949; Ph.D., University of Missouri, 1951.

### FIRST YEAR

The lectures cover systematically the field of human physiology. The laboratory experiments are selected with the twofold objective of (a) supplying a basis for the understanding of the more important physical methods employed in physiology and in clinical medicine, and (b) elucidating certain fundamental physiological principles essential to the intelligent practice of medicine as well as to the further pursuit of physiology. The student serves as the subject in many of the experiments. The course is designed primarily to meet the needs of medical students.

Conferences on lecture material are held throughout the second and third trimesters, about six to eight students for a conference. Small groups of students also meet with instructors to discuss principles concerned with laboratory experiments and results obtained.

Open to students who have completed or have begun the study of anatomy and biological chemistry.

10 (502). Lectures in second and third trimesters of first year. 114 hours.

---

11 (503). Laboratory and conferences. Third trimester of first year. Laboratory 152 hours, conferences 40 hours. (Drs. White, Gilson, Schoepfle, Roos, Sleator, Tosteson, Lang, Horowicz, B. Shore, Klinge)

ELECTIVE

50 (590). *Research*. The facilities of the laboratory are offered to qualified students for the investigation of their own problems or of those which the department is prepared to suggest. The most appropriate time for student research is the summer months or free time in the senior year.



*Dr. Robert E. Shank, Professor of Preventive Medicine, other members of his department, and fourth year students assigned to the co-ordinated out-patient clerkship photographed during an informal seminar at which the problems presented by a patient recently seen in the Clinic are discussed.*

## DEPARTMENT OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

---

Instruction in preventive medicine and public health is given in the first, second, and fourth years of the undergraduate medical curriculum. In the first trimester of the first year the staff of the Student Health Service, which is a part of the department organization, presents a course in health and health management applied most specifically to health problems peculiar to the medical student and physician. Throughout the four years the Health Service attempts to teach by precept as students appear for health counsel or treatment of illness. Later in the first year, a course in statistical methods in medicine is given and is introductory to the later use of statistical procedures in courses of other departments. The principles of epidemiology and the concepts of the natural history of disease are presented in a second-year course. From these are deduced the opportunities for individual and community action in the prevention and control of disease. The teaching of the department in the fourth year is included in the Co-ordinated Outpatient Clerkship. At this time emphasis is placed upon the

opportunities for health promotion and disease prevention in the contacts of physician with patients in office practice. In addition, as suitable opportunities present, the student visits certain patients at home and contacts community agencies for assistance for the patient and family.

*Danforth Professor and Head of the Department*

Robert Ely Shank, A.B., Westminster College, 1935; M.D., Washington University, 1939. (See Department of Medicine.)

*Professor*

C. Howe Eller (Public Health), A.B., Stanford University, 1927; M.D., University of Colorado, 1930; Ph.D., Johns Hopkins University, 1934.

*Associate Professors*

Albert Eisenstein, A.B., University of Missouri, 1941; M.D., Washington University, 1944. (See Department of Medicine.)

Lillian Recant, A.B., Hunter College, 1941; M.D., Columbia University, 1946. (See Department of Medicine.)

*Assistant Professors*

Neal S. Bricker, A.B., University of Colorado, 1945; M.D., 1949. (See Department of Medicine.)

Hugh Chaplin, Jr., A.B., Princeton University, 1943; M.D., Columbia University, 1947. (See Department of Medicine.)

Herman Erlanger, A.B., University of Wisconsin, 1933; M.D., Washington University, 1937. (See Department of Medicine.)

M. Kenton King, B.A., University of Oklahoma, 1947; M.D., Vanderbilt University, 1951. (See Department of Medicine.)

Seymour Reichlin, A.B., Antioch College, 1945; M.D., Washington University, 1948; Ph.D., University of London, 1954. (See Departments of Medicine and Psychiatry and Neurology.)

Eric Reiss (American Cancer Society Scholar), B.S., Randolph-Macon College, 1943; M.D., Medical College of Virginia, 1948. (See Department of Medicine.)

*Instructors*

Marilyn Dunn (Vocational Rehabilitation), B.A., University of Illinois, 1956, M.Ed., 1958.

Rose A. Meyer (Social Work), B.A., Louisiana State University, 1947; M.S.W., Washington University, 1950.

M. Frances Watson (Social and Environmental Studies), B.S., Northeast Missouri State Teachers College, 1932; M.S.W., Washington University, 1949.

*Lecturers*

Harry L. Acker (Physical Medicine and Rehabilitation), B.S., Clemson College, 1940; M.D., Medical College of South Carolina, 1950. (See Department of Physical Therapy.)

Barbara Hixon (Biostatistics), B.S., University of Illinois, 1941.

D. Mattarella (Physical Medicine and Rehabilitation), B.S., Brooklyn College, 1934; M.D., University of Bologna (Italy), 1939. (See Department of Physical Therapy.)



FIRST YEAR

10. *Health and Health Maintenance.* The purpose of this course of twelve lectures is to introduce considerations of health and health planning, relating these particularly to the medical student and physician in practice. The environment and conditions in which the student is to spend the next four years are considered in detail. How the student may plan to adapt his habits of living, work, and recreation so that a state of health may be most readily assured and disease prevented is discussed. In addition students are introduced to the services available through the Health Service. First trimester, 1 hour a week, 12 hours. (Dr. King and Staff)

11. *Statistical Methods in Medicine.* Twelve two-hour periods are devoted to an introduction to statistical methods important in the study of medicine. Lectures and exercises are concerned with collection of data, descriptive statistics, common theoretical distributions, tests of significance, correlation, and regression. A knowledge of these is presented as essential in the design of experiments and in the interpretation of data recorded in the medical literature. The material in the course affords background material for later use of statistics in courses of the Departments of Pharmacology, Physiology, and Preventive Medicine. Third trimester, 2 hours a week, 24 hours. (Mrs. Barbara Hixon)

SECOND YEAR

20. *Natural History of Disease.* This is a series of lectures reviewing the principles of epidemiology and the utilization of epidemiologic data in arriving at description of the natural history of disease. The course is concerned with multiple rather than the specific causes of disease and demonstrates how a knowledge of the natural history of a disease is of assistance in diagnosis, prognosis, and prevention of that disease. Each student is required to submit a treatise on the natural history of a selected disease. Third trimester, 1 hour a week, 12 hours.

(Drs. Shank, Eller, Eisenstein, Recant, Bricker, Chaplin, Reiss)

FOURTH YEAR

40. *Co-ordinated Outpatient Clerkship.* The purpose of this clerkship is to afford experience in dealing with the problems of ambulatory patients. Each student is assigned for the period of one trimester. He cares for patients in the following clinics: Medicine, Surgery, Obstetrics and Gynecology, Psychiatry, Neurology, Ophthalmology, Otolaryngology, and Dermatology. The student becomes the physician for the patient, and his instructors are his consultants. Patients who are seen on initial visits in the Medicine Clinic by the student but who require examination in other specialty clinics are given appointments in the second clinic at times corresponding to the periods in which the student is also assigned to that clinic. The opportunity is available for the student to observe and follow each patient for as long as desirable in each of the participating clinics. In addition, the student is responsible for maintaining contact

with patients during periods of hospitalization and for visiting certain patients in the home.

The clerkship is under the general direction of the Department of Preventive Medicine. The teaching of the department is directed at opportunities for institution of preventive measures and for health management in the office practice of medicine. In addition, the student is taught to evaluate the social and environmental factors which pertain in the individual case and to take account of these in planning programs of therapy. He is given information about and encouraged to utilize the facilities of a variety of health and welfare agencies in dealing with his patients' problems. The teaching of the department is carried out through weekly seminars, student interviews with assigned instructors, and socio-medical case studies. By assignment, 31 hours a week, 372 hours.

#### ELECTIVE

50. *Public Health Elective.* Junior or senior students are afforded an opportunity to participate in epidemiologic and public health programs for a period of six weeks in the St. Louis County Health Department. The activities to be undertaken are determined after consultation with the staff but will ordinarily include participation in selected public health programs and special projects which relate to the particular interests of the student. Full time, six weeks. (Dr. Eller)



*Dr. George Winokur, Assistant Professor of Psychiatry, supervising electroshock therapy.*

## DEPARTMENT OF PSYCHIATRY AND NEUROLOGY

---

Instruction in psychiatry and neurology is given in all four years of the medical course. In the third trimester of the first year a course is given which is basic to the understanding of human behavior. Major emphasis is given to a presentation of psychological research in the field of early development, learning, emotion, and similar topics.

In the second year, the student is introduced to psychiatric interviewing, to the evaluation of emotional and behavioral symptoms, to clinical psychiatric disorders—their diagnosis and natural history, and to the conceptual problems involved in psychiatry and psychology. These subjects are taken up in lectures, demonstration interviews, and discussion. The emphasis is upon critical thinking, the evaluation of data, and the methodologic problems arising in the study of behavioral, emotional, and thinking disturbances.

In the third year, supervised clinical study of patients admitted to the Renard Hospital is emphasized. An introduction is given to various therapeutic procedures in psychiatry.

In the fourth year, psychiatric and neurologic teaching are carried out in the concurrent outpatient clerkship. Neurological clinics are presented in alternate weeks. Students may select electives of special interest from a variety of opportunities. In the psychiatric teaching, whether regular course or elective, major emphasis is upon interviewing techniques, diagnosis, and psychotherapy.

Neurological instruction commences in the first year with a series of case demonstrations designed to acquaint the freshman student with the applicability of anatomical and physiological knowledge of the nervous system in the localization of neurological lesions. In the second year the neurological part of physical diagnosis is covered by lectures and exercises. Third and fourth year work centers upon in- and outpatient clerkship studies in clinics and on hospital wards. Systematic lecture series are provided for both third and fourth years. Electroencephalography is available as a fourth-year elective.

*Wallace Renard Professor of Psychiatry and Head of Department*

Edwin Francis Gildea, A.B., Colorado College, 1920; M.D., Harvard University, 1924.

*Professors*

James Lee O'Leary (Neurology), S.B., University of Chicago, 1925; Ph.D., 1928; M.D., 1931.

Eli Robins (Psychiatry), A.B., Rice Institute, 1940; M.D., Harvard University, 1943.

Saul Rosenzweig (Medical Psychology), A.B., Harvard University, 1929; M.A., 1930; Ph.D., 1932. (Also Department of Psychology.)

George Andrew Ulett (Psychiatry), B.A., Stanford University, 1940; M.S., University of Oregon, 1943; Ph.D., 1944; M.D., 1944.

*Blanche Ittleson Professor of Child Psychiatry*

E. James Anthony, B.S., University of London, 1938; M.R.C.S., L.R.C.P., 1941; M.B., B.S., 1942; D.P.M., 1947; M.D., 1949.

*Professor Emeritus*

George Holman Bishop (Neurophysiology), A.B., University of Michigan, 1912; Ph.D., University of Wisconsin, 1920. (Also holds title of Lecturer.)

*Associate Professors*

Samuel B. Guze (Psychiatry), M.D., Washington University, 1945. (See Department of Medicine.)

William M Landau (Neurology), M.D., Washington University, 1947.

John A. Stern (Medical Psychology), A.B., Hunter College, 1949; M.S., University of Illinois, 1951; Ph.D., 1953.

George Winokur (Psychiatry), A.B., Johns Hopkins University, 1944; M.D., University of Maryland, 1947.

*Associate Professor Emeritus and Lecturer*

Ethel Ronzoni Bishop (Biochemistry), B.S., Mills College, 1913; A.M., Columbia University, 1914; Ph.D., University of Wisconsin, 1922.

*Associate Professors (Clinical)*

Bernard A. Cruvant (Psychiatry), A.B., Washington University, 1932; M.D., 1937.

Margaret C.-L. Gildea (Psychiatry), B.S., University of Chicago, 1923; M.D., Yale University, 1936.

Irwin Levy (Neurology), A.B., Cornell University, 1927; M.D., St. Louis University, 1931; Med.Sci.D., Columbia University, 1935.

*Associate Professor Emeritus (Clinical)*

Andrew B. Jones (Neurology), M.D., Vanderbilt University, 1916.

*Lecturer*

Lester Drubin (Clinical Psychiatry), B.S., Columbia University, 1933; M.D., Long Island University, 1937.

*Assistant Professors*

Laverne C. Johnson (Medical Psychology), A.B., Stanford University, 1949; M.A., 1952; Ph.D., 1954.

Warren H. Kempinsky (Neurology), B.S., University of Washington, 1941; M.D., Washington University, 1944.

George E. Murphy (Psychiatry), B.S., Oregon State College, 1949; M.D., Washington University, 1952.

Patricia L. O'Neal (Psychiatry), A.B., Washington University, 1944; M.D., 1948.

Seymour Reichlin (Psychiatry), A.B., Antioch College, 1945; M.D., Washington University, 1948; Ph.D., University of London, 1954. (See Departments of Medicine and Preventive Medicine.)

Kathleen Smith (Psychiatry), B.S., University of Arkansas, 1944; M.D., Washington University, 1949.

Albert F. Wessen (Sociology), B.A., Yale University, 1948; M.A., 1949; Ph.D., 1951. (Also Department of Sociology-Anthropology and Social Science Institute.)

*Research Assistant Professors*

Margaret H. Clare (Neurophysiology), B.S. in Ed., Southeast Missouri State Teachers College, 1940; M.A., Washington University, 1951.

David J. Pittman (Sociology), A.B., University of North Carolina, 1949; M.A., 1950; Ph.D., University of Chicago, 1956. (Also Department of Sociology-Anthropology and Social Science Institute.)

Lee N. Robins (Sociology), A.B., Radcliffe College, 1942; M.A., 1943; Ph.D., 1951.

*Assistant Professors (Clinical)*

Leonard Berg (Neurology), A.B., Washington University, 1945; M.D., 1949.

Nathan Blackman (Psychiatry), B.S., University of Rhode Island, 1929; M.D., University of Paris, 1936.

Anthony K. Busch (Psychiatry), M.D., St. Louis University, 1937.

Archie D. Carr (Neurology), B.S., Washington University, 1918; M.D., 1921.

Hyman H. Fingert (Psychiatry), B.A., State University of Iowa, 1931; M.D., 1934.

Joseph J. Gitt (Neurology), M.D., Washington University, 1930.

Alex H. Kaplan (Psychiatry), B.S., College of City of New York, 1932; M.D., St. Louis University, 1936. (Also Child Guidance.)

Robert L. Lam (Psychiatry), A.B., University of Michigan, 1941; M.D., 1944.

Sydney B. Maughs (Psychiatry), A.B., Westminster College, 1931; M.D., Washington University, 1935.

Ernest Holden Parsons (Psychiatry), B.A., Vanderbilt University, 1927; M.D., 1930.

Val B. Satterfield (Psychiatry), B.S., Washington University, 1922; M.D., 1924.

Conrad Sommer (Psychiatry), B.S., University of Illinois, 1929; M.S., 1931; M.D., 1932.

*Instructors*

George A. Benson, Jr., B.S., University of Cincinnati, 1950; M.D., 1954.

Mary McFayden Bishop (Psychiatry), A.B., Washington University, 1936; M.D., 1940.

Marguerite Cannon (Psychiatric Social Work), B.S., St. Louis University, 1936; M.S.W., Washington University, 1948.

William Cone (Psychiatry), B.A., Yale University, 1949; M.D., 1954.

Tulio Estrada (Psychiatry), M.D., National University of Colombia, 1950.

Louise Evans (Medical Psychology), B.S., Northwestern University, 1949; M.S., Purdue University, 1952; Ph.D., 1955.



Wolfgang Fröelich (Neurology), M.D., Free University of Berlin, 1955. (National Institute of Neurological Diseases and Blindness Trainee in Neurology.)

Janet Golden (Psychiatric Social Work), A.B., Washington University, 1924.

Naomi I. Rae Grant (Child Psychiatry), D.P.M., University of London, 1957.

Quentin Rae Grant (Child Psychiatry), M.B., Aberdeen University, 1951; D.P.M., University of London, 1958.

Lucile Healy (Psychiatric Social Work), A.B., College of St. Catherine, 1922; M.A., University of Minnesota, 1927; M.S.W., Washington University, 1949.

Franz E. Hornung (Psychiatry), M.D., University of Heidelberg, 1945.

Alan G. Krasnoff (Medical Psychology), B.A., University of Bridgeport, 1950; Ph.D., University of Texas, 1956.

Joseph W. Lamberti (Psychiatry), M.D., Ottawa University, 1954.

Donald M. Pollie (Medical Psychology), A.B., Kalamazoo College, 1950; M.A., University of Michigan, 1952; Ph.D., 1956. (Also Department of Psychology.)

#### *Research Instructors*

Adele B. Croninger, A.B., Washington University, 1943; M.A., 1948.

John C. Glidewell (Medical Psychology), A.B., University of Chicago, 1949; Ph.D., 1953.

Jacob O. Sines (Medical Psychology), B.A., University of Minnesota, 1949; M.A., 1950; Ph.D., Michigan State University, 1955.

#### *Instructors (Clinical)*

Libby G. Bass (Medical Psychology), B.A., University of Illinois, 1928; M.A., Northwestern University, 1929.

Robert M. Bell (Psychiatry), M.D., St. Louis University, 1928.

Thomas T. Bennett (Psychiatry), B.S., University of Oregon, 1950; M.D., 1952.

Robert D. Brookes (Neurology), A.B., De Pauw University, 1934; M.D., Washington University, 1938.

Mary A. Cox (Psychiatry), A.B., Washington University, 1941; M.D., 1944.

Robert Bailey Deitchman (Psychiatry), B.A., University of Virginia, 1949; M.D., 1953.

Herbert J. Erwin (Psychiatry), A.B., Lincoln University 1933; M.D., Meharry Medical College, 1937.

Arwin E. Gorham (Psychiatry), B.S., University of Tulsa, 1950; M.D., Washington University, 1954.

Arthur S. Greditzer (Psychiatry), M.D., Washington University, 1948.

James N. Haddock (Psychiatry), A.B., University of Missouri, 1940; M.A., 1942; M.D., Washington University 1943.

Leopold Hofstatter (Psychiatry), M.D., University of Vienna, 1926.

Barbara S. Kendall (Medical Psychology), A.B., Radcliffe College, 1913; Ed.M., Harvard University, 1928.

Joseph B. Kendis, M.D., Washington University, 1933.

Harold Korner (Psychiatry), M.D., University of Oklahoma, 1949.

Edward H. Kowert (Psychiatry), A.B., Washington University, 1940; M.D., 1943.

Paul E. Kubitschek (Child Psychiatry), B.S., Creighton University, 1918; M.D., 1922; Sc.D., University of Pennsylvania, 1928. (See Department of Pediatrics.)

Wanda L. Lamb (Psychiatry), B.S., in Medicine, University of Missouri, 1946; M.D., Washington University, 1948.

Ervin Lipschitz (Psychiatry), B.S., Washington University, 1949; M.D., 1949.

John H. McMahan (Psychiatry), A.B., Southeast Missouri State Teachers College, 1939; M.D., St. Louis University, 1943.

Kenneth D. Michael (Psychiatry), M.D., St. Louis University, 1947.

Warren B. Mills (Neuropsychiatry), B.S., Washington University, 1941; M.D., 1942.

Robert J. Mueller (Neuropsychiatry), M.D., Washington University, 1936; M.S., University of Michigan, 1942.

Jackson C. Neavles (Psychiatry), A.B., Washington University, 1938; B.S. in Medical Science, 1942; M.D., 1942.

W. Oppler (Psychiatry), M.D., University of Breslau, 1925.

Paul H. Painter (Child Psychiatry), M.D., St. Louis University, 1947. (See Department of Pediatrics.)

Jerome D. Pauker (Medical Psychology), B.S., Brooklyn College, 1949; M.S., Purdue University, 1950; Ph.D., Washington University, 1957.

Reese H. Potter (Psychiatry), A.B., University of Kansas, 1931; B.S., University of Missouri, 1933; M.D., Washington University, 1935.

Edith C. Robinson (Child Psychiatry), A.B., Randolph-Macon College, 1927; M.S., University of South Carolina, 1928; M.D., Johns Hopkins University, 1932. (See Department of Pediatrics.)

Herbert E. Rosenbaum (Neurology), B.S., University of Oregon, 1947; M.D., 1949.

Frank O. Shobe (Psychiatry), A.B., Washington University, 1938; M.D., 1942.

Stuart Weiss (Neurology), A.B., Washington University, 1950; M.D., 1954.

Paul J. Zentay (Neurology), M.D., University of Kolozsvár, 1914. (See Department of Pediatrics.)

#### Assistants

John M. Anderson (Psychiatry), B.S., Colorado State University, 1938; M.D., McHarry Medical College, 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

Oguz Arkonac (Psychiatry), M.D., Istanbul University, 1956.

John F. Bergmann (Psychiatry), A.B., Washington University, 1950; M.D., 1954. (Also National Institute of Mental Health Trainee in Psychiatry.)

Ralph L. Bidby (Psychiatry), A.B., University of Detroit, 1954; M.D., St. Louis University, 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

Ronald J. Catanzaro (Psychiatry), A.B., Washington University, 1954; M.D., 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

Lawrence A. Cohen (Neurology), B.S., Western Reserve University, 1948; M.D., 1954; M.A., Northwestern University, 1951. (Also National Institute of Neurological Diseases and Blindness Trainee in Neurology.)

Gladys Cordero (Psychiatry), B.A., West Virginia University, 1949; Facultad de Medicina de la U.N.A. de Mexico, 1954. (Also National Institute of Mental Health Trainee in Psychiatry.)

Richard E. Daniels (Psychiatry), M.D., University of Tennessee, 1945.

K. C. Das (Psychiatry), B.Sc., University of Calcutta, 1951; M.B.B.S., 1956.

Alejandro M. Datuin (Psychiatry), M.D., University of Santo Tomas, 1956. (Exchange Visitor from the Philippines.)

Querico D. Doronila (Psychiatry), M.D., University of Santo Tomas, 1954. (Exchange Visitor from the Philippines.)

Paul D. Gatfield (Psychiatry), M.D., C.M., Queen's University, 1957. (Exchange Visitor from Canada.)

Nancy M. Groves (Medical Psychology), B.A., Washington University, 1956; M.A., 1958. (Also U. S. Public Health Trainee in Clinical Psychology.) (July 1 to 31, 1959.)

Jane Harris (Medical Psychology), A.B., Bryn Mawr College, 1954; M.A., Columbia University, 1957.

Rowland D. Hawkins (Psychiatry), M.D., University of Tennessee, 1945.

Robert S. Hicks (Psychiatry), A.B., Hendrix College, 1951; M.D., University of Arkansas, 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

C. Andrew Hilgartner (Psychiatry), A.B., Amherst College, 1954; M.D., Johns Hopkins University, 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

Ralph E. Holemon (Psychiatry), A.B., Washington University, 1955; M.D., 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

William M. Irvin (Psychiatry), B.A., Southern Illinois University, 1950; M.D., University of Illinois, 1954. (Also National Institute of Mental Health Trainee in Psychiatry.)

Alan G. Johnson (Psychiatry), A.B., Oberlin College, 1952; M.D., Washington University, 1956. (Also National Institute of Mental Health Trainee in Psychiatry.)

Donald F. Kausch (Medical Psychology), B.A., University of Wisconsin, 1953; M.A., University of Nebraska, 1958. (July 1 to 31, 1959.)

Jose Keating (Neurology), M.D., University of Coimbra (Portugal), 1955. (Also National Institute of Neurological Diseases and Blindness Trainee in Neurology.)

Maria Keating (Psychiatry), M.D., University of Coimbra (Portugal), 1956.

Alexander V. Khayat (Psychiatry), M.D., National University of Ireland, 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

H. Kienast (Psychiatry), M.D., University of Tuebingen, 1951. (Also National Institute of Mental Health Trainee in Psychiatry.)

Lucy J. King (Psychiatry), A.B., Washington University, 1954; M.D., 1958. (Also National Institute of Mental Health Trainee in Psychiatry.)

Robert J. Leider (Psychiatry), Ph.D., University of Chicago, 1950; M.D., 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

John D. Loeffler (Neurology), B.S., University of Wisconsin, 1954; M.D., 1958. (Also National Institute of Neurological Diseases and Blindness Trainee in Neurology.)

Philip J. Marco (Psychiatry), A.B., Boston College, 1938; M.D., Middlesex University, 1943. (Also National Institute of Mental Health Trainee in Psychiatry.)

Gustavo Martinez-Okrassa (Psychiatry), M.D., San Carlos University of Guatemala, 1958.

James N. McClure, Jr. (Psychiatry), A.B., Washington University, 1951; M.D., 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Joe Kent McKinney (Psychiatry), B.A., Westminster College, 1954; M.D., Washington University, 1958.

William V. McKnelly, Jr. (Psychiatry), B.A., Westminster College, 1951; M.D., St. Louis University, 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Alma Miller (Psychiatry), B.S., LeMoyne College, 1941; M.D., Meharry Medical College, 1949.

Nicholas Nunez (Psychiatry), M.D., Buenos Aires University, 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Charles D. Ottensmeyer (Psychiatry), A.B., Washington University, 1950; M.D., 1954.

Rajaiah D. Paul (Psychiatry), B.Sc., Loyola College (India), 1944; M.B.B.S., Madras University, 1953. (Exchange Visitor from India.)

Bruce F. Picken (Psychiatry), B.S., State College of Washington, 1951; M.D., Washington University, 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Ferris N. Pitts, Jr. (Psychiatry), A.B., Washington University, 1952; M.D., 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Stephen L. Post (Psychiatry), A.B., Princeton University, 1950; M.D., Columbia College of Physicians and Surgeons, 1957. (Also National Institute of Mental Health Trainee in Psychiatry.)

Jack A. Raines (Psychiatry), M.D., University of Tennessee, 1950.

Felix Ruivivar (Psychiatry), A.A., University of the Philippines, 1952; M.D., 1957.

Earl R. Schultz (Psychiatry), A.B., Southeast Missouri State College, 1952; B.S. in Medicine, University of Missouri, 1953; M.D., Washington University, 1955. (Also National Institute of Mental Health Trainee in Psychiatry.)

Basri A. Sila (Psychiatry), M.D., University of Istanbul, 1956. (Exchange Visitor from Turkey.)

Dixon Flemon Spivy (Neurology), B.A., Yale University, 1948; LL.B., Washington University, 1951; M.D., 1957. (Also National Institute of Neurological Diseases and Blindness Trainee in Neurology.)

Mark A. Stewart (Psychiatry), B.A., M.A., Cambridge University, 1953; M.R.C.S., L.R.C.P., Cambridge and St. Thomas' Hospital, 1956. (Also National Institute of Mental Health Trainee in Psychiatry.)

Emel Aktan Sumer (Psychiatry), M.D., University of Istanbul, 1957. (Exchange Visitor from Turkey.)

M. Cengiz Sumer (Psychiatry), M.D., University of Istanbul, 1951. (Exchange Visitor from Turkey.)

William Surphlis (Psychiatry), M.D., C.M., Queen's University (Canada), 1958.

Robert H. Vanderpearl (Psychiatry), A.B., Washington University, 1951; M.D., 1954. (Also National Institute of Mental Health Trainee in Psychiatry.)

Eugene L. Zwillinger (Medical Psychology), B.A., New York University, 1956. (July 1 to August 31, 1959.)

Patricia G. Zwillinger (Medical Psychology), B.S., Wellesley College, 1954. (Also U. S. Public Health Trainee in Clinical Psychology.) (July 1 to August 31, 1959.)

#### Research Assistants

Margaret Johnson (Psychiatry), R.N., Baylor University Hospital School of Nursing, 1940; B.S., University of Chicago, 1948.

David G. McDonald (Medical Psychology), A.B., University of Missouri, 1955. (July 1 to December 31, 1959.)

Shinshu Nakajima (Medical Psychology), B.A., Chiba University, 1955.

#### Assistants (Clinical)

Edmund V. Cowdry, Jr. (Psychiatry), A.B., Princeton University, 1942; M.D., Washington University, 1945.

Anthony Ferro (Psychiatry), M.D., Havana University, 1949.

Joseph Shuman (Psychiatry), B.S., Middlesex University, 1943; M.D., University of Lausanne, 1952.

#### Fellows

Romualdo do Carmo (Electroencephalography and Electromyography in Neurology), M.D., Universidade de Minas Gerais (Brazil), 1956. (July 1 to December 31, 1959.)

Carl Joseph Gerber (Neurology), B.S., University of Detroit, 1956. (National Institute of Neurological Diseases and Blindness Fellow.) (July 1 to August 31, 1959.)

Marie Mowrer (Psychiatry), A.B., Southern Illinois University, 1947; B.S., University of Illinois, 1949; M.D., 1951.

Toshihiko Oikawa (Neurophysiology), M.D., Tohoku University (Japan), 1949. (Rockefeller Foundation Fellow.) (July 1 to September 30, 1959.)

Vincente B. Tuason (Research Fellow in Psychiatry), M.D., University of Santo Tomas, 1955.

Willy J. Weinstein (Neurology), A.B., Columbia University, 1951; M.D., Washington University, 1956. (Also National Institute of Neurological Diseases and Blindness Postdoctoral Fellow in Neurology.)

#### FIRST YEAR

##### 10. Psychiatry and Neurology.

*Determinants of Behavior.* Through lectures and discussion a framework for understanding human behavior (both in illness and in health) is presented. The behavior of ill people is presented as following the same principles (laws of learning, influence of organismic factors, role of emotion, etc.) as in the better understood behavior of well persons. For 8 hours the course is given as a seminar in which the class is divided into four groups. The last 4 hours of the program are devoted to social factors in disease and personality development. 12 hours. (Dr. Winokur and associates)

*Integrative Neurology* (Given as part of Anatomy 11). A series of four clinics is held in the second trimester to acquaint students of neuroanatomy and neurophysiology with the applicability of these subjects in localizing lesions of the central and peripheral nervous system. The series commences with spinal and cranial nerve deficits and proceeds systematically through spinal cord, brain stem, basal ganglia, cerebellum and cerebral cortex, utilizing currently available cases from the neurological and neurosurgical services. (Dr. O'Leary and Staff)

## SECOND YEAR

20. *Psychiatry.*

*The Pathology of Behavior.* (Part of Conjoint Medicine. See page 60.) Emphasis is upon (a) effective interviewing in preparation for medical history taking; (b) evaluation of behavioral and emotional factors in patients with various kinds of illnesses; (c) the diagnosis and natural history of the major psychiatric disorders; (d) critical evaluation of conceptual and methodologic problems in psychiatry and psychology. Lectures, demonstration interviews, discussions. 60 hours.

(Drs. Guze, Kaplan, Murphy, Painter, Robins, Winokur)

21. *Neurology.*

*Neurological Examination in Clinical Diagnosis.* (Part of Conjoint Medicine. See page 60.) Lectures, demonstrations, and exercises in the neurological examination of the patient. 6 hours. (Dr. London in conjunction with Neurology Staff)

## THIRD YEAR

30. *Psychiatry.*

Students in groups of seven spend 3 weeks full time on the inpatient service of Renard Hospital. Each new admission is completely studied by an individual student. This study includes a history from the relatives and from the patient, physical and neurological examinations, and a mental status examination. The progress of the patient is also followed by the student. Psychiatric emergencies are also seen when the student is on emergency call with a member of the house staff. Teaching exercises include ward rounds three times weekly on the students' patients; a seminar in which original articles from the literature are read and discussed; an introduction to psychotherapy, drug therapy, and the various shock therapies; and clinical conferences with the resident house staff. 120 hours.

(Drs. Eli Robins, O'Neal, Murphy, and associates)

31. *Neurology.*

The third-year neurology inpatient clerkship is offered as a part of the larger medicine clerkship. This is divided between Barnes and City Hospitals and emphasizes the pathophysiologic approach to neurological disorders. A series of six lectures, repeated for each clerkship group throughout the year, emphasizes the practical considerations in early neurological diagnosis. (Dr. Kempinsky and Staff)

## FOURTH YEAR

40. *Psychiatry.*

(a) Senior students obtain experience in the recognition, diagnosis, and management of outpatient psychiatric disorders in that part of the co-ordinated outpatient clerkship conducted by the staff of the Psychiatry Clinic. The emphasis in this part of the clerkship is on the development of interviewing and psychotherapeutic skills. 54 hours. (Drs. Guze, Murphy, and associates)



(b) *Psychiatric Aspects of Clinical Medicine.* (See Medicine—Drs. Guze and Reichlin.)

(c) *Pediatric Psychiatry.* The staff of the Child Guidance Clinic participates in consultation and informal instruction when the students are in their clerkship in Pediatrics. (Dr. Painter)

#### 41. *Neurology.*

Fourth-year neurological training continues to emphasize early diagnosis and the treatment of the commoner neurological conditions. Each student passes through an inpatient clerkship which is a part of the larger senior medicine clerkship, and an outpatient clerkship where acute and chronic ambulatory cases are worked up by the students under staff supervision. A series of 18 lectures is given on alternate weeks through the academic year, covering in systematic fashion the field of clinical neurology. (Dr. O'Leary and Staff)

#### ELECTIVE COURSES

51. *Psychiatry.* Work may be elected for six weeks. Student's preference as to type of experience desired will be met so far as possible. Students may work in Renard Hospital, the Bliss Institute, the City Sanitarium, the Barnes Hospital, or the University Clinics. Each student must make his wishes known to Dr. E. F. Gildea and must then obtain the approval of the staff member who will supervise the work.

(Drs. E. Gildea, Guze, Winokur)

52. *Research in Neurology, Psychology, and Psychiatry.* Facilities are available for qualified students to undertake original research in the laboratories of the department or in the clinics or wards.

(Drs. E. Gildea, O'Leary, Stern)

53. *Staff Conferences.* Students are invited to attend certain of the psychiatric and neurological staff conferences. These are as follows: a psychiatric staff conference held weekly at Bliss Institute; neurological staff conferences held weekly at Barnes Hospital; conferences of the neurological and neurosurgical staffs held weekly at Barnes Hospital.

54. *Psychoanalysis.* Introduction to psychoanalysis is presented at weekly seminars lasting one trimester. Some didactic material is given, but most of the session is devoted to discussion.

(Drs. Cruvant, Fingert, Kaplan, Sommer)

55. *Barnes Hospital Clerkship.* Neurology outpatient clinics, ward rounds, Neurology-Neurosurgery-Neuropathology Conferences, EEG. Full time for three or six weeks.

(Drs. Kempinsky, Landau)

56. *City Hospital Externship.* Ward care for neurological patients; opportunity to see consultation and outpatient material, ward rounds, Neuropathology Conferences. Full time for three or six weeks.

(Drs. Kempinsky, Landau)



*Two fourth year students observing a radiologist as he adjusts the controls of the Betatron preparatory to beginning therapy on a patient suffering from malignant disease. This installation, one of the few available in medical schools in this country, makes it possible to deliver 24,000,000 electron volt X-rays.*

## DEPARTMENT OF RADIOLOGY

---

The Department of Radiology of Washington University is housed in the Edward Mallinckrodt Institute of Radiology and connects by corridor or tunnel with all of the hospitals and clinics constituting the Medical Center. The Department provides both diagnostic and therapeutic radiological services for the patients of Barnes, St. Louis Children's, St. Louis Maternity, McMillan, Wohl, Barnard, and Renard Hospitals, and the Washington University Clinics. In addition, laboratory facilities for research in radiochemistry, radiation physics, and radiobiology are housed in the Institute.

Four floors of the Institute building are devoted to diagnostic roentgenographic facilities. The first floor houses a business office, film library, and consultation viewing room. The radiation therapy section is located on the ground floor of the

Institute and Barnard Hospital. Its facilities include low and high voltage X-ray, cobalt, and a 24 Mev. betatron in addition to radium and other radioactive isotope therapy. Two floors of the Institute provide research laboratories for the staff and experimental diagnostic and therapeutic service for other departments of the School.

The undergraduate teaching program is designed to present both diagnostic and therapeutic radiology to students as part of their clinical clerkship experience. One introductory course in the third year provides an opportunity to present the principles of roentgenological interpretation and radiation therapy during the surgical clerkship. Every effort is made to provide an opportunity to correlate roentgen and clinical findings through interdepartmental conferences, consultations, and group discussions.

*Professor and Head of the Department  
and Director of the Mallinckrodt  
Institute of Radiology*

Hugh Monroe Wilson, A.B., Illinois College, 1924; M.D., Washington University, 1927; M.A. (hon.) Yale University, 1945. (See Department of Anatomy.)

*Professor Emeritus*

Sherwood Moore, M.D., Washington University, 1905. (Also Lecturer in Radiology and Consultant in Radiology to the Division of Tumor Services.)

*Professor (Clinical)*

Wendell G. Scott, A.B., University of Colorado, 1928; M.D., Washington University, 1932; Sc.D. (hon.), University of Colorado, 1954.

*Consultants*

Arthur L. Hughes (Physicist), B.Sc., Liverpool University, 1906; M.Sc., 1908; D.Sc., 1912; B.A., Cambridge University, 1910.

William E. Koch, Jr. (Radiodontics), D.D.S., Washington University, 1934.

Edward H. Reinhard (Hematology and Oncology), A.B., Washington University, 1935; M.D., 1939. (See Department of Medicine.)

Alfred I. Sherman (Gynecology), M.D., University of Toronto, 1944. (See Department of Obstetrics and Gynecology.)

Mildred Trotter (Anatomy), A.B., Mount Holyoke College, 1920; M.S., Washington University, 1921; Ph.D., 1924; Sc.D. (hon.), Western College, 1956. (See Department of Anatomy.)

*Associate Professors*

Michel M. Ter-Pogossian (Radiophysics), B.A., University of Paris, 1942; M.S., Washington University, 1948; Ph.D., 1950.

Leonard J. Tolmach (Chemistry), B.S., University of Michigan, 1943; Ph.D., University of Chicago, 1951.

*Associate Professor (Clinical)*

A. Norman Arneson, B.S., Texas Christian University, 1924; M.D., Washington University, 1928. (See Department of Obstetrics and Gynecology.)

*Assistant Professors*

Erik Carlsson, M.D., Karolinska Institute (Sweden), 1952.

Fred J. Hodges III, B.A., University of Wisconsin, 1944; M.D., 1946.

Harvey A. Humphrey, A.B., University of Rochester, 1941; M.D., Yale University, 1944.

Alexander R. Margulis, M.D., Harvard University, 1950.

William E. Powers, B.S., University of Illinois, 1949; M.D., 1951.

*Assistant Professors (Clinical)*

Wayne A. Simril, A.B., Culver Stockton College, 1941; M.D., Washington University, 1944.

Oscar C. Zink, M.D., Washington University, 1921.

#### *Instructors (Clinical)*

Donald Bottom, A.B., Washington University, 1932; M.D., 1940.

Mark D. Eagleton, Jr., A.B., Amherst College, 1947; M.D., Washington University, 1950.

Sumner Holtz, M.D., St. Louis University, 1948.

#### *Assistants*

David W. Bennett, M.D., Harvard University, 1955.

Kenneth K. Hines, B.A., University of Buffalo, 1949; M.D., 1957.

Henry A. Lee, B.S., University of Arkansas, 1955; M.D., University of Missouri, 1958.

David B. Lewis, B.S., University of Louisville, 1950; M.D., 1953. (July 1, 1959, to May 31, 1960.)

Neill B. Longley, M.D., Southwestern Medical School, 1956.

George J. Stead, B.S., John Carroll University, 1950; M.D., St. Louis University, 1954.

John C. Stears, B.A., University of Toronto, 1950; M.D., 1954.

Albin Steiner, M.D., Louisiana State University, 1953.

L. Dexter Thomas, B.S., Oklahoma State University, 1956; M.D., University of Oklahoma, 1956.

Dewey Reid Tickle, M.D., Duke University, 1954.

#### *Research Assistant*

Anica Jovanovich, M.D., University of Belgrade (Yugoslavia).

### THIRD YEAR

30. *Introduction to Diagnostic and Therapeutic Radiology.* The principles of roentgenological interpretation of diagnostic X-ray examinations in the major fields of clinical application are presented for group discussions. Radiophysics and the principles of radiation therapy are discussed. One trimester, 18 hours.

(Drs. Wilson, Carlsson, Hodges, Humphrey, Margulis, Powers, Ter-Pogossian)

### ELECTIVE COURSES

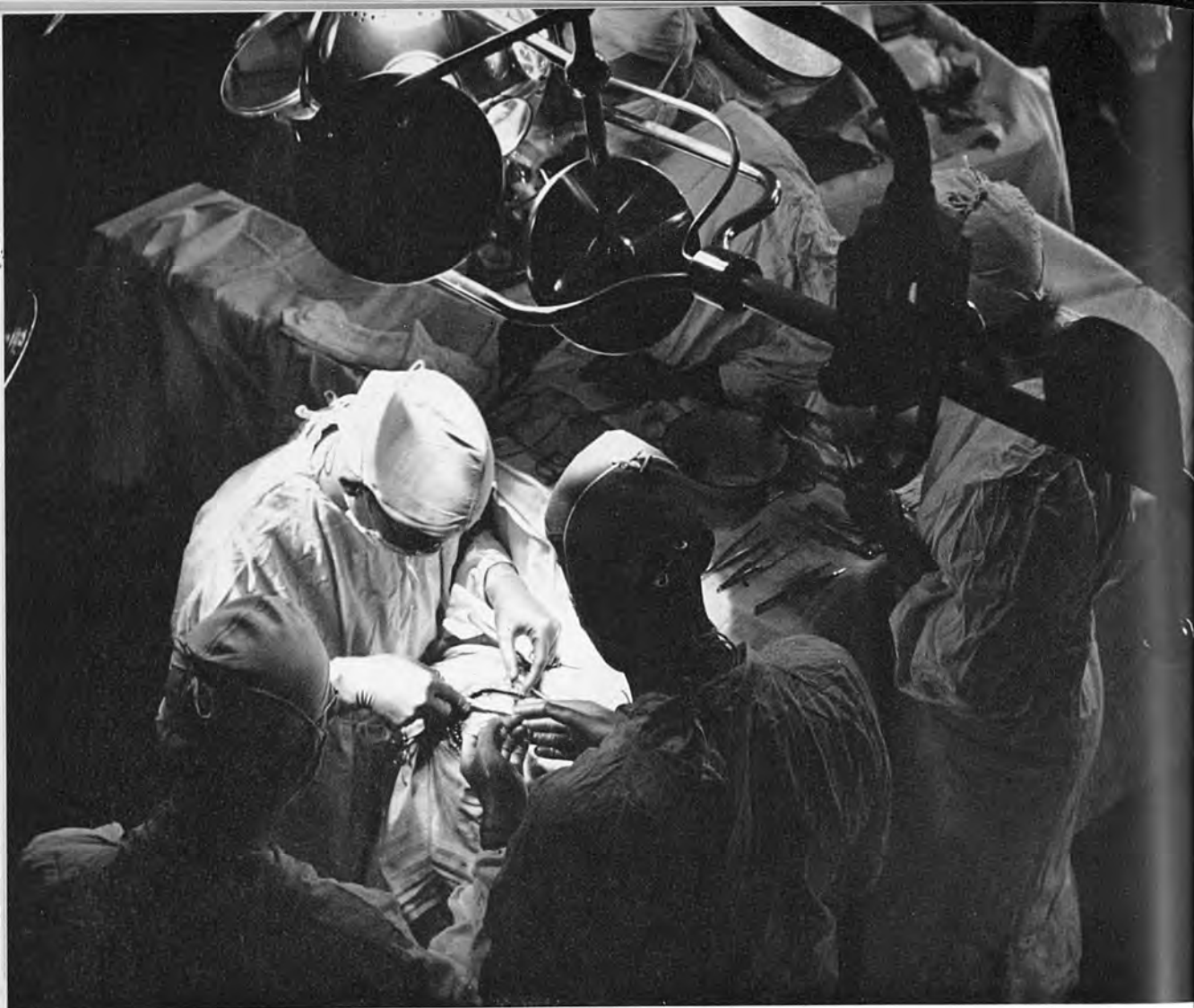
50. *Clerkships in Diagnostic or Therapeutic Radiology.* Electives may be chosen in any section of the Department. The student will spend full time as an extern working under the supervision of the residents and senior staff in that section. Limited to two students per section. Six weeks, full time.

- |  |              |
|--|--------------|
| a. Roentgenology of the Chest.....     | Dr. Wilson   |
| b. Cardiovascular Roentgenology.....   | Dr. Carlsson |
| c. Gastrointestinal Roentgenology..... | Dr. Margulis |
| d. Pediatric Roentgenology.....        | Dr. Humphrey |
| e. Therapeutic Radiology.....          | Dr. Holtz    |

51. *Special Elective Course.* By special arrangements students in groups of six or more may arrange for supervised group study of any diagnostic or therapeutic radiologic field of interest. Hours to be arranged.

52. *Research Electives.* Opportunity is available to carry out supervised research in the fields of diagnostic and therapeutic radiology, radiation physics, and radiochemistry under the direction and supervision of the heads of these sections.





*A professor performs an operation in Barnes Hospital. He is assisted by members of the resident staff and fourth year students.*

## THE MARY CULVER DEPARTMENT OF SURGERY

---

(The Department of Surgery includes General Surgery, Orthopedic Surgery, Neurological Surgery, Genitourinary Surgery, and Thoracic Surgery)

The instruction in the Department of Surgery begins with an introduction to surgical principles at the end of the second year. These surgical principles for the most part are derived from fundamental concepts in the preclinical sciences which have been occupying the student since the beginning of the freshman year. Although in this course a few patients are used for the demonstration of lesions which illustrate the principles of surgery, it is really in the junior year that the first actual contact with patients occurs. Each student then is assigned to a clinical clerkship in the hospital wards and in that way is given an opportunity to study the more common and important kinds of surgical diseases. The junior clerkship in surgery lasts for one trimester and is divided between the surgical services at Barnes and St. Louis



Children's Hospitals and at St. Louis City Hospital. Instruction during the clerkship in the junior year covers the field of general surgery and the major specialties excepting neurosurgery and urology, and the broad general principles of pathology, pathologic physiology, diagnosis, and treatment are extensively discussed. At St. Louis City Hospital special attention is given to the study of trauma and acute surgical emergencies. Students are given the opportunity of seeing all operations on patients assigned to them. Special instruction in history writing, in the examination of the patient, and in various diagnostic and therapeutic techniques is given to small groups of students by the resident and assistant resident house officers. These small groups are in the nature of tutorial classes.

During the junior year also the students attend a course in surgical pathology, and a weekly surgical clinic lasting throughout the year. During the latter part of the year there are various symposia on surgical subjects held in conjunction with other departments for the entire class.

In the senior year the students spend one-half of a trimester on a surgical clerkship, dividing the time between Neurological Surgery and Urology.

*Bixby Professor and  
Head of the Department*

Carl Alfred Moyer, A.B., Northern State Teachers College, 1930; M.S., University of Michigan, 1934; M.D., 1937.

*Henry E. Mallinckrodt Professor of  
Anesthesiology*

Robert B. Dodd, M.D., University of Nebraska, 1945.

*Professors*

Lauren V. Ackerman (Surgical Pathology), A.B., Hamilton College, 1927; M.D., University of Rochester, 1932. (See Department of Pathology.)

Thomas H. Burford (Thoracic Surgery), A.B., University of Missouri, 1931; B.S. in Medicine, 1933; M.D., Yale University, 1936.

Justin J. Cordonnier (Urology), B.S., Washington University, 1926; M.D., 1928.

Fred C. Reynolds (Orthopedic Surgery), A.B., Washington University, 1931; M.D., 1934.

Henry Gerard Schwartz (Neurological Surgery), A.B., Princeton University, 1928; M.D., Johns Hopkins University, 1932.

*Professors (Clinical)*

James Barrett Brown, M.D., Washington University, 1923.

Glover H. Copher, A.B., University of Missouri, 1916; M.D., Washington University, 1918.

Peter Heinbecker, B.S., McGill University, 1918; M.D., 1921.

*Professor Emeritus (Clinical)*

Dalton Keats Rose (G.U. Surgery), M.D., Washington University, 1915.

*Lecturer*

Henry W. Crouch (Clinical Anesthesiology), B.S., Military College of South Carolina, 1922; M.D., Medical College of South Carolina, 1927.

*Associate Professors*

Harvey R. Butcher, A.B., Central College, 1941; M.D., Harvard University, 1944. (Also Markle Fellow.)

Charles H. Nicolai (Urology), A.B., Washington University, 1943; M.D., 1946.

Morton Donald Pareira, A.B., Washington University, 1933; M.D., 1937.

Albert Roos (Physiology), M.D., University of Groningen (Holland), 1940. (See Department of Physiology.)

John R. Shields (Anesthesiology), M.B., University of Birmingham (England), 1941.

Harlan J. Spjut (Surgical Pathology), B.A., University of Utah, 1943; M.D., 1946.

Theodore E. Weichselbaum (Experimental Surgery) (Biochemistry), B.S., Emory University, 1930; Ph.D., University of Edinburgh (Scotland), 1935.

#### *Associate Professors (Clinical)*

Robert Wilson Bartlett, B.S., University of Michigan, 1926; M.D., 1930.

Eugene Myron Bricker, M.D., Washington University, 1934.

Louis T. Byars, B.S., University of Arkansas, 1928; M.D., Washington University, 1932.

Clarence Harrison Crego, Jr. (Orthopedic Surgery), B.S., Union University, 1921; M.D., University of Michigan, 1923.

Rogers Deakin (G.U. Surgery), M.D., Washington University, 1922.

Minot P. Fryer, A.B., Brown University, 1936; M.D., Johns Hopkins University, 1940.

Leonard Thompson Furlow (Neurological Surgery), B.S., Emory University, 1923; M.D., 1925.

Falls Bacon Hershey, B.S., University of Illinois, 1939; M.D., Harvard University, 1943.

H. Relton McCarroll (Orthopedic Surgery), A.B., Ouachita College, 1927; M.D., Washington University, 1931.

Frank McDowell, A.B., Drury College, 1932; M.D., Washington University, 1936.

Richard T. Odell (Orthopedic Surgery), A.B., Westminster College, 1935; B.S. in Medicine, University of Missouri, 1941; M.D., Washington University 1943.

J. G. Probst, M.D., Loyola University, 1917.

Franklin Edward Walton, B.S. Shurtleff College, 1923; M.D., Washington University, 1927; Sc.D. (hon.), Shurtleff College, 1952.

#### *Assistant Professors*

Harvey R. Bernard, M.D., Washington University, 1947.

Donald J. Dickler (Anesthesiology), B.A., New York University, 1942; M.D., New York University College of Medicine, 1945.

Thomas B. Ferguson (Thoracic Surgery), B.S., Duke University, 1947; M.D., 1947.

Sidney Goldring (Neurological Surgery), M.D., Washington University, 1947.

Howard S. Liang (Anesthesiology), M.D., National Sun Yat-sen University, College of Medicine (China), 1940.

Arthur H. Stein, Jr. (Orthopedic Surgery), A.B., Amherst College, 1946; M.D., Washington University, 1948.

James M. Stokes, M.D., Washington University, 1948.

#### *Assistant Professors (Clinical)*

Morris Abrams (G.U. Surgery), B.S., University of Illinois, 1936; M.D., 1937.

Cyril J. Costello, B.S., University of Texas, 1935; M.D., 1939.

Heinz Haffner, B.S., University of Arizona, 1931; M.D., Washington University, 1935.

Oscar Perry Hampton, Jr. (Orthopedic Surgery), M.D., University of Tennessee, 1928.

Carl J. Heifetz, B.S., Washington University, 1927; M.D., 1929.

Carl Edward Lischer, A.B., University of California, 1933; M.D., Washington University, 1937.

James Otto Lottes (Orthopedic Surgery), Ph.B., St. Louis College of Pharmacy, 1926; Ph.G., 1928; A.B., University of Missouri, 1934; B.S., 1935; M.D., University of Louisville, 1937.

Leo Aaron Sachar, A.B., Washington University, 1936; M.D., 1940.

William H. Sinkler, A.B., Lincoln University, 1928; M.D., Howard University, 1932.

Carl A. Wattenberg (G.U. Surgery), A.B., University of Kansas, 1934; M.D., 1937.

#### *Instructors*

Walter C. Bauer (Surgical Pathology), B.S., Ohio State University, 1946; M.D., Washington University, 1954. (See Department of Pathology.)

N. M. Bremner (Visiting Instructor in Anesthesiology), M.B., Ch.B., Edinburgh University, 1948.

William S. Coxe (Neurological Surgery), M.D., Johns Hopkins Medical School, 1948.

Robert C. Donaldson, A.B., University of Missouri, 1941; M.D., Washington University, 1944.

Francis Gerard Duffy (Anesthesiology-Clinical), M.B., National University of Ireland, 1951.

Felix G. Freund (Anesthesiology), M.D., Universidad Nacional De Buenos Aires, 1948.

Bela I. Hatfalvi (Anesthesiology), M.D., M. Kir. Tisza Istvan Tudomanyegyetem (Hungary), 1938.

Malcolm McGavran (Surgical Pathology), B.A., Bethany College, 1951; M.D., Washington University, 1954. (See Department of Pathology.)

Harry C. Morgan (Orthopedic Surgery), M.D., Harvard University, 1953.

William T. Newton (American Cancer Society Advanced Clinical Fellow), M.D., Yale University, 1950.

Robert W. Ogilvie (Surgical Pathology), B.A., University of Utah, 1943; M.D., 1946. (See Department of Pathology.)

Charles L. Roper (Thoracic Surgery), M.D., University of Colorado, 1953.

Kenneth D. Serkes, B.S., Yale University, 1950; M.D., Washington University, 1951.

Warren G. Stamp (Orthopedic Surgery), B.A., Westmar College, 1949; M.D., State University of Iowa, 1952.

#### *Research Instructor*

Victor Monsour (Bacteriologist in Surgery), B.S., Louisiana State University, 1948; M.S., 1950; Ph.D., University of Texas, 1954.

#### *Instructors (Clinical)*

Robert Anschuetz, M.D., Washington University, 1940.

J. Byron Beare (G.U. Surgery), B.S., St. Louis University, 1935; M.D., 1939; M.S., University of Minnesota, 1947.

Vilray P. Blair, Jr (Orthopedic Surgery), M.D., Washington University, 1939.

Marshall B. Conrad (Orthopedic Surgery), A.B., Westminster College, 1942; M.D., Washington University, 1945.

Arthur R. Dalton, B.S., University of Missouri, 1938; B.S. in Medicine, Northwestern University, 1940; M.D., 1941.

Clarence Eckert, M.D., St. Louis University, 1927.

Virgil Otto Fish, M.D., Washington University, 1930.

Lee T. Ford, Jr. (Orthopedic Surgery), M.D., University of Tennessee, 1940.

George L. Hawkins, Jr. (Neurological Surgery), A.B., University of Missouri, 1937; M.D., Columbia University, 1941.

Edward C. Holscher (Orthopedic Surgery), A.B., University of Missouri, 1931; B.S., 1933; M.D., Harvard University, 1935.

Earl P. Holt, Jr. (Orthopedic Surgery), A.B., Duke University, 1942; M.D., 1945.

Stanley M. Leydig (Orthopedic Surgery), A.B., Montana State University, 1930; M.D., Washington University, 1934.

C. Alan McAfee, B.S., Washington State College, 1938; M.D., Washington University, 1942.

Joseph C. Peden, Jr., B.S., Harvard University, 1940; M.D., 1943.

Mather Pfeifferberger, Jr., A.B., Yale University, 1941; M.D., Harvard University, 1944.

Robert Killian Royce (G.U. Surgery), B.S., University of Mississippi, 1939; M.D., Washington University, 1942.

George Scheer (Orthopedic Surgery), A.B., Municipal University of Wichita, 1940; M.D., Washington University, 1943.

Sam F. Schneider, A.B., Washington University, 1932; M.D., 1936.

Richard G. Sisson, B.A., Harvard University, 1943; M.D., Yale University, 1946.

Willard B. Walker, M.D., Washington University, 1946.

George L. Watkins, Jr., A.B., Washington University, 1938; M.D., 1942.

#### *Assistants*

Oscar L. Aguilar, M.D., Buenos Aires University, 1955.

- Lyndon U. Anthony (Neurological Surgery), M.D., University of North Carolina, 1957.
- John P. Arnot, B.A., Rice Institute, 1954; M.D., Yale University, 1958.
- Arthur I. Auer, B.S., Massachusetts Institute of Technology, 1952; M.D., Washington University, 1956.
- Gerald L. Behrens, A.B., Washington University, 1950; M.D., 1954.
- William T. Bowles (G.U. Surgery), A.B., William Jewell College, 1949; M.D., Washington University, 1953.
- S. Pearce Browning (Orthopedic Surgery), A.B., Princeton University, 1950; M.D., Columbia University, 1954.
- Ernest G. Caldwell, M.D., University of Buenos Aires, 1954. (Also Fellow.)
- Jose Castillo, M.D., Escuela Nacional de Medicina, 1953.
- William S. Costen (Orthopedic Surgery), A.B., Princeton University, 1950; M.D., Washington University, 1954.
- Loy E. Cramer (Orthopedic Surgery), M.D., University of Oregon, 1956. (On leave of absence.)
- Carlos Cuervo, B.S., Ginasio Cauteiro do Sul, 1939; H.S., Colegio Julio de Costilhos, 1942; Faculdade de Medicina de Porto Alegre, 1949. (Rockefeller Foundation Research Fellow.) (July 1, 1959, to January 27, 1960.)
- Burl M. Dillard, M.D., University of Texas, Southwestern Medical School, 1958.
- John S. Dillon, B.S., Georgetown University, 1952; M.D., 1956. (On leave of absence.)
- David D. Dobrow (Orthopedic Surgery), B.A., University of California at Los Angeles, 1948; M.D., University of California, 1953.
- William L. Donegan, B.A., Yale University, 1955; M.D., 1959.
- Harry L. Ellis, B.S., Southwest Missouri State College; M.D., Baylor College of Medicine, 1958.
- LaVerne Erickson (Neurological Surgery), B.S., University of Idaho, 1949; M.D., Washington University, 1953.
- Tanuus D. Faris, A.B., Providence College, 1955; M.D., Tufts University, 1959.
- David W. Ferguson, A.B., Grinnell College, 1955; M.D., Washington University, 1959.
- Hugh M. Foster, Jr., A.B., Denison University, 1954; M.D., Vanderbilt University, 1958.
- Koichi Fujii, M.D., Keio University, Tokyo, Japan, 1955.
- William Goettman, B.A., Wittenberg College, 1954; M.D., Washington University, 1958.
- Walter B. Goldfarb, A.B., Brown University, 1955; M.D., Tufts University, 1959.
- Patrick G. Graham, A.B., Williams College, 1951; M.D., Medical College of Virginia, 1958.
- Zora J. Griffio (Anesthesiology), B.S., St. Bonaventure University, 1952; M.D., University of Buffalo, 1959.
- A. Basil Harris (Neurological Surgery), A.B., Birmingham-Southern College, 1950; M.D., Medical College of Alabama, 1954.
- Alfred B. Hathecock, M.D., Washington University, 1956.
- John L. Hazlehurst, B.A., University of North Carolina, 1952; M.D., 1956. (On leave of absence.)
- Richard M. Hirshberg, A.B., Brandeis University, 1953; M.D., Baylor University, 1959.
- Lanny L. Johnson, B.S., Michigan State University, 1955; M.D., Wayne State University, 1959.
- Haskins K. Kashima, A.B., Stanford University, 1954; M.D., Yale University, 1958.
- Raymond M. Keltner, Jr., B.S., Drury College, 1950; B.S. in Med., University of Missouri, 1955; M.D., Washington University, 1957.
- John H. Kendig (Neurological Surgery), A.B., Washington University, 1952; M.D., 1956.
- Wolff M. Kirsch, A.B., Washington University, 1951; M.D., 1955.
- Edward R. Koger, B.S., University of Florida, 1952; M.D., Duke University, 1956.
- George L. Krause, M.D., University of Pennsylvania, 1954.
- Jerome F. Levy, A.B., Washington University, 1954; M.D., 1958.
- Robert T. L. Long, M.D., Medical College of Alabama, 1955. (On leave of absence.)
- Jack W. Love, M.D., Yale University, 1958.

Zoltan J. Lucas, M.D., Johns Hopkins University, 1957.

Alexander Maitland (G.U. Surgery), M.D., Yale University, 1955.

Addison G. Mangum, B.S. in Med., University of North Carolina, 1955; M.D., 1958. (On leave of absence.)

Marvin H. Marx, A.B., Princeton University, 1954; M.D., Columbia University College of Physicians and Surgeons, 1958.

Henry N. Meiers, Jr., M.D., Vanderbilt University, 1955.

Roland B. Mernitz, B.S., Elmhurst College, 1954; M.D., Washington University, 1958.

John S. Meyer (Surgical Pathology), A.B., Yale University, 1952; M.D., Washington University, 1956.

Marvin R. Mishkin (Orthopedic Surgery), M.D., University of Illinois, 1955.

William W. Monafo, Jr., M.D., Tufts University, 1957.

Sam E. Myrick, Jr., B.S., Davidson College, 1953; M.D., Duke University, 1957.

Thomas M. Nall, B.A., Wesleyan University, 1955; M.D., Cornell University, 1959.

Cornelius A. Natoli (G.U. Surgery), B.S., Niagara University, 1952; M.D., Georgetown University, 1956.

David Ohlweiler (Plastic Surgery), A.B., Johns Hopkins University, 1950; M.D., University of Rochester, 1954. (July 1 to December 31, 1959.)

Henry D. Onken, M.D., Harvard University, 1957.

Carlos Perez-Mesa (Surgical Pathology), M.D., University of Havana, 1951.

Franklin Pfeifferberger, B.A., Yale University, 1951; M.D., Cornell University, 1955.

James J. Pollard, A.B., Providence College, 1955; M.D., Boston University, 1959.

William R. Richards (Orthopedic Surgery), M.D., Washington University, 1957.

J. Antonio Rodriguez, B.S., Externado de San Jose, 1948; Escuela de Medicina de El Salvador, 1955.

Herman E. Russell (Orthopedic Surgery), B.A., New York University, 1950; M.D., University of Geneva (Switzerland), 1955.

Miguel Santiago (Anesthesiology), B.A., Polytechnic Institute of Puerto Rico, 1948; M.D., St. Louis University, 1952. (Also Clinical Fellow.)

John V. Satterfield III, B.S., University of Arkansas, 1954; M.D., 1958.

Sheldon Schoen (G.U. Surgery), A.B., Syracuse University, 1950; M.D., State University of New York, 1954.

Mary Shannon, R.N.

William C. Simon (G.U. Surgery), B.A., Yale University, 1952; M.D., Washington University, 1957.

Jerry Sisler, B.S., University of Tulsa, 1954; M.D., Washington University, 1958.

William T. Snodgrass (G.U. Surgery), M.D., University of Texas, 1955.

Herbert A. Spady (Orthopedic Surgery), A.B., University of Oregon, 1951; M.D., Washington University, 1955.

Paul E. Stohr, M.D., Washington University, 1959.

Harold L. Stratton, A.B., Southeast Missouri State College, 1952; B.S. in Med., University of Missouri, 1953; M.D., Washington University, 1955.

Howard S. Sturim, M.D., University of Rochester, 1957. (On leave of absence.)

Winfred L. Sugg, M.D., University of North Carolina, 1957.

James M. Toomey, B.S., Holy Cross College, 1951; D.M.D., Harvard School of Dental Medicine, 1955; M.D., Boston University, 1958. (On leave of absence.)

Thomas Whitesides, Jr. (Orthopedic Surgery), M.D., Emory University, 1955.

David L. Winter, A.B., Columbia University, 1955; M.D., Washington University, 1959.

Sanford Wolfson, A.B., Williams College, 1954; M.D., Harvard University, 1958.

#### *Assistants (Clinical)*

Donald T. Behrens, M.D., Washington University, 1948.



Leslie F. Bond, A.B., University of Illinois, 1948; M.D., Meharry Medical College, 1952.

Richard V. Bradley, M.D., Washington University, 1952.

Carl H. Calman, M.D., St. Louis University, 1950.

William J. Cannon (Orthopedic Surgery), M.D., Washington University, 1949.

M. Richard Carlin (G.U. Surgery), B.A., Dartmouth College, 1944; M.D., Yale University, 1947.

Rudolph Catanzaro, A.B., Washington University, 1947; M.D., 1950.

James T. Chamness, M.D., University of Pennsylvania, 1944.

Katherine Jean Crawford, B.S., Michigan State College, 1942; M.D., Woman's Medical College of Pennsylvania, 1946.

Alex E. Fairshier (Anesthesiology), B.A., University of Pennsylvania, 1929; M.D., Chicago Medical School, 1937.

Gerhard E. Gruenfeld, M.D., Friedrich-Wilhelms University (Germany), 1923.

Fleming B. Harper, M.D., Medical College of Virginia, 1950.

Frederick W. Klinge, A.B., University of Missouri, 1938; M.D., Washington University, 1942. (See Department of Physiology.)

Allen P. Klippel, A.B., Amherst College, 1944; M.D., St. Louis University, 1946.

Jules H. Kopp (G.U. Surgery), M.D., University of Arkansas, 1931.

Stanley L. London, M.D., Washington University, 1949.

Robert Herluf Lund, M.D., Washington University, 1949.

Lester J. Nathan, B.A., University of Omaha, 1949; M.D., University of Nebraska, 1952.

Lawrence W. O'Neal, M.D., Washington University, 1946.

Meredith J. Payne, A.B., Washington University, 1947; M.D., 1950.

George B. Rader, M.D., Washington University, 1951.

Robert Rainey, B.S., Yale University, 1944; M.D., Washington University, 1947.

Frank O. Richards, A.B., Talladega College, 1944; M.D., Howard University, 1947.

# *Fellows*

Thomas D. Bartley, A.B., University of Colorado, 1950; M.D., 1953.

David James Bone (Anesthesiology), B.S., University of Illinois, 1953; M.D., 1957. (On leave of absence.)

Fang L. Chiu (Anesthesiology), M.B., Manchuria Premedical School, 1943; M.D., Manchuria Medical School, 1948.

Robert G. Cooper (Plastic Surgery), D.D.S., University of Louisville, 1945; M.D., 1952.

Shirley F. Dauncey (Anesthesiology), B.S., Kings College, 1950; M.D., Kings College Hospital Medical School, 1953. (July 1 to September 30, 1959.)

Dennis Dembeyiotis (Voluntary Fellow), M.D., Athens University Medical School, 1951.

Irmagard Dobrow (Anesthesiology), M.D., University of Munich Medical School, 1952.

David L. Edwards (Surgical Pathology), A.B., Yale University, 1951; M.D., Washington University, 1955. (American Cancer Society Clinical Fellow.)

Glen E. Edwards (Orthopedic Surgery), B.Sc., University of Alberta, 1950; M.D., 1954.

Ernesto Espaldon (Plastic Surgery), M.D., University of Santo Tomas, 1954.

James S. Harvin (Plastic Surgery), M.D., Medical College of South Carolina, 1953.

Thomas G. Holmes (Neurological Surgery).

Thomas Hornbein (Anesthesiology) (U. S. Public Health Service Postdoctoral Research Fellow), B.A., University of Colorado, 1942; M.D., Washington University, 1956. (July 1, 1959, to March 31, 1960.)

Loyde Hudson (Thoracic Surgery), B.S., University of Arkansas, 1948; M.D., 1952. (July 1 to December 31, 1959.)

Eric Jeanette (Plastic Surgery), M.D., Swiss Confederation, 1947. (July 1 to December 31, 1959.)

John Kline (Thoracic Surgery), A.B., Harvard University, 1948; M.D., New York University, 1952.

Robert E. Kuhlman (Orthopedic Surgery), M.D., Washington University, 1956.

Herbert Lourie (Neurological Surgery), B.S., University of South Carolina, 1948; M.D., Duke University, 1952.

Shemuel Nissan (Thoracic Surgery), M.D., Hadassah-Hebrew University Medical School, 1952. (July 1 to December 31, 1959.)

Roberto Porras (Orthopedic Surgery), M.D., University of El Salvador, 1956.

Virginia P. Porter (Anesthesiology), A.B., Duke University, 1954; M.D., 1958.

Alberto Rodriguez (Rockefeller Foundation Fellow in Surgical Pathology), M.D., Facultad de Medicina, Universidad Nacional de Colombia, 1952. (July 1 to December 31, 1959.)

Sidney L. Saltzstein (Surgical Pathology), (American Cancer Society Clinical Fellow).

William A. Sims, Jr. (Clinical Anesthesiology) A.B., University of Missouri, 1954; B.S. in Med., 1955; M.D., Washington University, 1957.

Kenneth Smith (Neurological Surgery), M.D., Washington University, 1957.

Lewis J. Thomas, Jr. (Anesthesiology), M.D., Washington University, 1957.

Mario Arthur Vasquez (Plastic Surgery), A.B., University of California, 1947; M.D., 1954. (U. S. Naval Fellow) (July 1 to December 31, 1959).

Mangesh Wagle (Plastic Surgery), M.B.Bs., University of Bombay, 1948; M.S., 1951.

## SECOND YEAR

20. *Introduction to Surgery.* A lecture course in which are studied certain fundamental principles of physiology, biochemistry, and pathology as applied to surgery. Recitations, demonstrations, and clinics to amplify the lectures are included. Three hours weekly during the second trimester. (Part of Conjoint Medicine. See page 60.)  
(Dr. Moyer)

## THIRD YEAR

30. *Surgical Clinic.* A weekly exercise throughout two trimesters. Patients presenting the more usual general surgical conditions are demonstrated and their diagnostic and therapeutic problems are discussed. 24 hours.  
(Surgical Staff)

31. (a) *Surgical Wards.* For nine weeks the student serves as a clerk in the surgical wards of Barnes, St. Louis Children's, and St. Louis City Hospitals. The time is divided between the Barnes Hospital service and that at City Hospital. While on the City Hospital service the student spends two weeks on emergency call at the hospital and sees all emergencies admitted. Ward conferences are held regularly both at City Hospital and at Barnes Hospital, and fundamental subject matter is systematically covered. The students take the case histories and make the physical examinations and the usual laboratory examinations on the patients assigned them. They assist at the operations and do some of the surgical dressings. Surgical pathological material is followed as an integral part of the case study. The students attend autopsies performed in the cases studied by them and are encouraged to be present at the pathological conference at which these cases are discussed. The student is encouraged to consult the library frequently in the solution of problems concerning his patients. Both at Barnes and St. Louis City Hospitals the students are met at regular intervals by the residents and assistant residents in informal conferences, at which times various

questions which have arisen during the day are discussed and various aspects of the care of the patient considered. Particular effort is made to see that the student comes in contact with the more frequent and important surgical lesions and that the cases assigned to him are sufficiently diversified to afford him an accurate perspective of surgery. 126 hours. (Various members of the staff)

(b) *Fractures*. All students are assigned to the fracture service of the City Hospital for two weeks (full time). In addition, a co-ordinated series of lectures and demonstrations on fractures is given to the entire clerkship group each Wednesday morning at City Hospital. The fundamentals of the diagnosis, treatment, and healing of common fractures are covered at this time. 12 hours. (Orthopedic Staff)

(c) *Outpatient Service*. In the junior year each student attends rectal clinic one morning a week for 4 weeks. He is assigned referred patients for examination and diagnosis and helps in carrying out simple procedures under the supervision of an instructor and members of the surgical house staff.

32. *Surgical Pathology*. Weekly exercises of two hours for three trimesters, at which time both early and late pathological changes are considered from the standpoint of their clinical manifestations. Pathological material from the operating room and the museum is studied both in the gross and microscopically. 72 hours. (Dr. Ackerman)

#### FOURTH YEAR

40. *Surgical Clinic*. A weekly exercise throughout the year. 36 hours. (Surgical Staff)

41. *Surgical Clerkship*. Six weeks. (Three weeks in Neurological Surgery and three weeks in Urology.)

##### *Urology*

Complete history, physical examination, and urologic work-up on all ward and semi-private patients, including assisting in cystoscopic study and surgery. These patients are assigned in rotation. Case presentations, three hours weekly, Dr. Nicolai and House Staff. Grand rounds, two hours weekly, Dr. Cordonnier and Staff. Pyelogram Conference, five hours weekly, Drs. Cordonnier, Zink, and Nicolai. Didactic study of special urologic subjects, two hours weekly, Dr. Cordonnier. Surgical Pathology Conference, one hour every other week, Drs. Cordonnier, Nicolai, and Spjut.

##### *Neurological Surgery*

1. Admission history and physical examination on all new patients (ward and private) in rotation.

2. Progress notes on all patients (except Infants Ward, Children's Hospital).

3. All clinical microscopy and laboratory work on ward patients (except Infants Ward, Children's Hospital).

4. Perform minor diagnostic procedures on ward patients (lumbar punctures, visual fields, etc.), with supervision.

5. Attend Neurosurgery Clinics (Monday and Thursday afternoon and Saturday morning), and work up all patients.

6. \*Attend morning rounds (8:00 to 9:30 a. m.), five days a week.

7. \*Attend lectures and clinical demonstrations on Tuesday, 9:00 to 10:00 a. m., and 10:00 to 11:00 a. m., in 1200 Classroom.

8. Attend Neuropathology and Neurology-Neurosurgery Conferences, Wednesday afternoon, 2:00 to 5:00 p. m.

9. \*Attend (optional) grand rounds Friday, 3:45 to 5:30 p. m.

10. At the end of each three-week period a written or oral quiz is given, and the results are then reviewed with the students. On rare occasions (three times) the quiz has not been given, when the students' performance as a group, during the clerkship, has been outstanding.

42. *Outpatient Service.* In the senior year the outpatient service in general surgery is part of a co-ordinated clinical clerkship shared with the other departments in the Washington University Clinics. One-third of the class is divided into four groups of about eight students each. Each group attends all clinics concurrently for one trimester of 12 weeks, one morning session each week being assigned to surgery. The student is able to follow a patient for this entire period and in most cases through any other clinic he attends for subsequent diagnosis and treatment. The student is the first to see the patient, take the initial history and examination, and to make his own diagnosis, following which he calls on one of the instructors for consultation and final disposition. In addition to instructors, advanced members of the surgical house staff are assigned to the surgical clinic for supervision and assistance. The student may also carry out or assist in carrying out the relatively simple surgical procedures done in the operating room of the clinic. Attendance at the urological clinic for 6 weekly afternoon sessions is part of this course. For other surgical specialties such as plastic, orthopedic, thoracic, and neurosurgery, time for outpatient service is provided during the senior clerkship.

43. *Tumor Clinic.* As part of the conjoint clinic program each student attends the general surgery tumor clinic one afternoon each week for half the trimester. During this time an attempt is made to integrate patient visits with other clinics to allow the student to follow patients whom he may have referred to this outpatient division. 18 hours.  
(Surgical Staff)

44. *Tumor Conference.* One hour each week for twelve weeks during the surgery, pediatric, and gynecology trimester. Problem cases are presented for illustration and discussion of all aspects of neoplastic disease. 12 hours.

(Dr. Ackerman and other members of the staff)

---

\*Students present their own cases.

ELECTIVE COURSES

50. *Surgical Pathology*. Two students full time for six weeks, all trimesters. The elective will consist of a correlation of the clinical records of hospital patients with the pathological findings. Time will be devoted to current surgical journals as related to surgical pathology, as well as a brief review of pathological techniques.

(Dr. Ackerman)

51. *Washington University Clinics*. General Surgery, six weeks for four students, mornings. The students will serve as clerks to outpatients, the time being spent in the study and care of the patients with special attention to minor surgical procedures.

52 (511). *Research in Surgery*. Six weeks, full time. This elective is for those students who have been carrying on surgical research in their spare time the previous year and who wish to devote their entire time toward the completion of their problems.

(Dr. Moyer)

53. *State Cancer Hospital*. Four students to serve as clinical clerks at the State Cancer Hospital, Columbia, Missouri, full time for six weeks. The duties assigned the student will be the routine duties required of any clinical clerk, consisting of both in and outpatient work, particularly related to malignant disease.

54. *Anesthesia*. One or two students. Six weeks, full time. Since the surgical operative schedules begin early each morning, the hour to report will be 7 o'clock. This will enable the student to inspect and test mechanical equipment prior to its use. The student will be assigned to certain nights on call duty with the supervisor to take emergency cases which arise. The course embraces a special training in the practical administration of anesthetics by approved modern techniques, this instruction taking place daily, except Sundays, during the weekly schedules in which the student participates in the operating room. The theoretical aspects are covered by specific periods of classroom instruction followed by examination at stated intervals. The administration of ether, nitrous oxide-oxygen, ethylene, cyclopropane, and basal anesthetics is taught and practiced.

55. *Urology Clerkship in Barnes Hospital*. One student, mornings for six weeks.

56. *Physical Medicine*. Four students. Mornings for six weeks.

57. *Advanced Clerkships*. Four students will be given advanced clerkships on the general surgery service at Barnes Hospital for periods of six weeks. Arrangements should be made with Dr. Moyer.

58. *Surgical Clerkship at Homer Phillips Hospital*. Full time for six weeks. Students will be given an opportunity to study selected patients admitted to the surgical wards.

59. *Advanced Surgery Clerkships*. Two students will be given an advanced surgical clerkship on the general surgery service at the Veterans Hospital for a minimum period of six weeks.

(Dr. Falls Hershey)



---

## DIVISION OF POSTGRADUATE STUDIES

Washington University does not have a separate Graduate School of Medicine, but postgraduate educational programs are conducted by the School of Medicine and graduate courses leading to a master's and a doctorate degree are offered by the Graduate School of Arts and Sciences. For further information, write the Assistant Dean, Division of Postgraduate Studies, Washington University School of Medicine, St. Louis 10, Missouri.

---

## MEDICAL JURISPRUDENCE

William W. Crowdus, LL.B.....*Lecturer in Medical Jurisprudence*

*Medical Jurisprudence.* A course given in the fourth year embracing medical evidence and testimony, expert testimony; dying declarations; rights of medical witnesses; establishing identity from living and dead bodies, sudden death from natural causes and by violence; criminal acts determined by medical knowledge; the legal relation of physician to patients and the public; insanity, and malpractice. 12 hours.

---

## TEACHING AND RESEARCH DIVISIONS

---

### DIVISION OF GERONTOLOGY

The Division of Gerontology is located at the St. Louis Chronic Hospital, 5600 Arsenal Street. The Division conducts a research laboratory at the Hospital.

Through a bequest from the late Mrs. Ina Champ Urbauer, a fund has been established for research in gerontology and allied fields.

#### *Director of Research*

John Esben Kirk, M.D., University of Copenhagen, 1929. (See Department of Medicine.)

#### *Research Assistant Professor*

Philip G. Ackermann, B.S., Oregon State College, 1931; Ph.D., Johns Hopkins University, 1936.

#### *Research Assistants*

Nathaniel C. Johnson, B.S., University of Illinois, 1951.

Teofil Kheim, M.D., University of Budapest, 1934.

Gelson Toro, B.S., National University of Mexico, 1955.

Jaime Toro, M.D., National University of Mexico, 1954.

I. Cheng Wang, B.S., National University of Chekiang, 1944; M.S., Kansas State College, 1956.

---

### INSTITUTE OF NEUROLOGY

The Beaumont-May Institute of Neurology was established in 1955 by gifts from the Louis D. Beaumont Foundation, Mr. Morton J. May, and Mrs. Charles M. Rice. It is the purpose of the Institute to foster basic and clinical research in Neurology with special reference to defects in the structuring of the nerve cell which occasion important neurological disorders having a high incidence of prolonged disability.

---

### DIVISION OF TUMOR SERVICES

#### *Cancer Co-ordinator and Director of Division of Tumor Services*

Harvey R. Butcher, Jr., A.B., Central College, 1941; M.D., Harvard University, 1944.

#### *Consultant in Radiology*

Sherwood Moore, M.D., Washington University, 1905.

The Division of Tumor Services was organized in 1949 as a co-ordinating committee for the Cancer Teaching Program. Inasmuch as cancer, as other subjects in the medical curriculum, is given in a departmental manner, the Tumor Clinic is the principal site on which this Service functions. An attempt is made in this center to give a supplementary picture of the cancer problem as it exists today. In the senior year, time is allotted from the period on gynecology and surgery for work in this clinic. The Tumor Conference, which is held for one-third of the senior class, post-graduate students, and visitors each week, serves the purpose of demonstrating some of the more complex problems in diagnosis and therapy which arise in patients with malignant disease.

---

EXECUTIVE COMMITTEE

Edward Reinhard.....	Internal Medicine
A. Norman Arneson.....	Obstetrics and Gynecology
Theodore Sanders.....	Ophthalmology
Joseph H. Ogura.....	Otolaryngology
Lauren V. Ackerman.....	Pathology
William G. Klingberg.....	Pediatrics
Sumner Holtz.....	Radiology
Harvey Butcher, Chairman.....	Surgery

---

IDA JORGENSEN FINKELNBURG AND EMMA JORGENSEN WERNSE  
LABORATORY OF CANCER RESEARCH

Through the generosity of Emma Jorgensen Wernse, the School has established a special laboratory of cancer research. Investigation is largely in the fundamental field. Similar and related studies are also carried on in other departments of the School.

*Research Professor Emeritus and  
Lecturer in Anatomy*

Edmund Vincent Cowdry, A.B., University  
of Toronto, 1909; Ph.D., University of Chi-  
cago, 1912.

*Research Assistant Professor*

Blake W. Moore

*Fellow*

Stojan Solaric (July 1 to March 15, 1960.)

*Research Associate Professor Emeritus  
and Lecturer*

Valentina Suntzeff, M.D., Women's Medical  
Institute (Petrograd, Russia), 1917.

---

WILLIAM GREENLEAF ELIOT DIVISION OF CHILD PSYCHIATRY

E. James Anthony, M.D.....Director

The Division of Child Psychiatry, under the direction of the Ittleson Professor of Child Psychiatry, carries on a series of joint enterprises with the Departments of Psychiatry and Neurology, Pediatrics, Psychology, Social Work, and Education. The Division operates a Child Guidance Clinic, and a Child Evaluation Clinic, both of which are housed with the Division at 369 North Taylor Avenue. The activities of these Clinics are assisted by funds supplied by the St. Louis Association for Retarded Children, the United Fund, the Mission Free School, and other agencies.

---

DIVISION OF AUXILIARY MEDICAL SERVICES

The Division of Auxiliary Medical Services of the School of Medicine provides instruction and training in professions associated with medicine and necessary to the physician in providing modern health care.

As with the educational program of the medical student, the Division of Auxiliary Medical Services is a joint enterprise of the School of Medicine and the affiliated hospitals—Barnes, Children's, McMillan, and Maternity Hospitals. As a matter of convenience some departments are administered by the School and others by the Barnes Hospital.

Departments conducted by the School of Medicine include Hospital Administration, Occupational Therapy, and Physical Therapy. Schools operated by the Barnes Hospital include Laboratory Technology, Medical Dietetics, and Anesthesiology. All of the courses are approved by the American Medical Association or other certifying agencies and graduates are admitted to examinations. For further information write the Director of the Department or School, Washington University School of Medicine, St. Louis 10, Missouri.

---

DEPARTMENT OF HOSPITAL ADMINISTRATION

*Professor and Director of the Course*

Frank R. Bradley, M.D., Washington University, 1928; LL.D., Central College, 1943.

*Associate Professor and Associate Director*

Harry E. Panhorst, A.B., Central College, 1936; B.S., University of Missouri, 1937; M.H.A., Washington University, 1949.

*Assistant Professor*

Donald J. Horsh (Hospital Jurisprudence), B.S., University of Nebraska, 1941; M.H.A., Washington University, 1951; LL.B., St. Louis University, 1953.

*Lecturers*

Gerald Aldridge (Financial Control), B.A., University of Denver, 1949; M.H.A., Washington University, 1951.

Hollis Allen (Medical Specialties), B.S., St. Louis University, 1924; M.D., 1926.

William Anderson (Hospital Accounting).

Howard Baer (Hospital Supplies), B.A., Princeton University, 1924.

Henrietta Becker (Dietetics), B.S., University of Kansas, 1937.

William H. Bedell (Personnel Health Facilities), A.B., Princeton University; M.A., New York University.

Albert Boulenger, B.S., Bowling Green State University, 1951; M.H.A., Washington University, 1953.

Ted Bowen, B.S., Austin State Teachers College, 1941; M.H.A., Washington University, 1948.

George Allen Bowles (Chaplaincy), A.B., Southern Methodist University, 1927; B.D., 1930; D.D., Central College, 1952.

Lee D. Cady, M.D., Washington University, 1922.

Ann Jones Campbell (Nursing), R.N., Vanderbilt University, 1930; B.S., 1933.

John W. Claiborne, Jr. (Veterans Administration Hospitals), A.B., Vanderbilt University, 1929; M.D., 1932.

Adalbert Dierks (Woman's Auxiliary), A.B., Ohio State University, 1937; B.S., 1951; M.B.A., 1952; M.H.A., Washington University, 1954.

Major Einstein (Trustee Relationship), B.S., Washington University, 1921.

David Gee (Hospital Housekeeping), B.S., DePauw University, 1949; M.H.A., Washington University, 1951.

Joseph T. Greco, B.S., Birmingham-Southern College, 1939; M.H.A., Washington University, 1953.

Raymond Gross (Hospital Supplies).

Henry Hardwicke (Public Health and Hospital Licensure), M.D., University of Rochester, 1943.

William Henry (Radiology Equipment), B.A., University of Kansas City, 1938.

Lilly Hoekstra, R.N., Washington University, 1933; B.S., 1947.

Cornelia S. Knowles, R.N., Washington University, 1925.

Julius Krasner (Hospital Laundries).

David Littauer, A.B., Cornell University, 1927; M.D., New York University, 1933.

Ted Lloyd.

Curtis H. Lohr, B.S., Washington University, 1920; M.D., 1922.

Eugene J. Mackey (Hospital Architecture), Bachelor of Architecture, Carnegie Institute of Technology, 1936; Master of Architecture, Massachusetts Institute of Technology, 1939.

Charles Martin (General Practice), M.D., Washington University, 1937.

Elizabeth McIntosh (Nursing), A.B., Scarritt College, 1930; B.S., University of Pennsylvania, 1942; M.S., Western Reserve University, 1947.

Harry J. Mohler (Industrial Hospitals).

Florence Mueller (Hospital Pharmacy), B.S., Fonthonne College; Ph.C., St. Louis College of Pharmacy, 1931.

Keaton Nixon, B.S., Drury College, 1952; M.H.A., Northwestern University, 1954.

Harry Piper, B.A., University of Missouri, 1936.

Paul I. Robinson, B.S., Washington University, 1926; M.D., 1928.

J. Earl Smith (Public Health), M.D., St. Louis University, 1926.

Albert Spradling, Jr. (Government Relations), LL.B., University of Missouri, 1942.

Crofford O. Vermillion, A.B., DePauw University, 1939; M.D., Washington University, 1947.

Neil Wortley, B.S., Southwest Missouri State College, 1950; M.H.A., Washington University, 1952.

Lilyan Zindell (Hospital Administration).

A two-year course leading to a certificate or the degree of Master of Hospital Administration. The first year is given on the main campus of the University and at the School of Medicine, and includes courses in accounting and statistics, social work, public health, and hospital administration. The second year is spent in field work in an approved hospital. A degree is conferred on completion of a satisfactory thesis.

Applicants must hold a bachelor's degree or be graduates of an approved school of medicine.

Tuition (academic year).....	\$765.00
Tuition (clinical year).....	200.00
Student Health Fee (academic year).....	60.00
Graduation Fee.....	10.00
Late Registration Fee.....	5.00



## DEPARTMENT OF OCCUPATIONAL THERAPY

### *Assistant Professor and Elias Michael Director of the Department*

Martha E. Matthews, A.B., Winthrop College, 1933.

### *Instructor and Associate Director of the Department in Charge of Clinical Training*

Elizabeth Withers, B.S., Memphis State University, 1957; M.A., 1959.

### *Lecturer Emeritus*

Geraldine R. Lermitt, B.A., Wellesley College, 1906; Ph.M., University of Chicago, 1907.

### *Instructors*

Ada Wells Ford.

Donald R. Rawe, B.M.E., American Conservatory of Music, 1951.

Garth D. Tubbs, B.S., Wisconsin State College, 1953.

### *Assistant*

Marie Miller, B.A., Bryn Mawr College, 1938.

The degree of Bachelor of Science in Occupational Therapy is conferred upon the completion of three academic semesters at the School of Medicine and nine months of supervised clinical application. During the academic and clinical programs, emphasis is placed on the patient's physical and psychological problems resulting from disease and trauma. Basic understanding of the techniques of creative, manual, and prevocational media and how these are correlated therapeutically to provide desired treatment are stressed.

The role of occupational therapy as it functions with various medical and social resources within the broad concepts of patient rehabilitation is an important part of the course.

The curriculum includes: sciences such as anatomy, physiology, psychology, and neurology; clinical subjects such as general medicine, orthopedics, and psychiatry; interpretation of principles and practices of occupational therapy; technical instruction in manual, creative, and prevocational activities. The period of supervised clinical application is spent in approved affiliation centers.

Applicants must present sixty semester hours of college credit, including a specified number of units in biology, physical science, psychology, and sociology.

### *Candidates for B.S. degree*

Tuition (three semesters).....	Per semester \$345.00
Student Health Fee (three semesters).....	Per semester 30.00
Tuition (clinical year).....	Per year 100.00
Late Registration Fee.....	5.00

### *Advanced Standing Course*

Tuition (academic year).....	\$690.00
Student Health Fee (academic year).....	60.00
Tuition (clinical year).....	100.00
Late Registration Fee .....	5.00

## DEPARTMENT OF PHYSICAL THERAPY

*Assistant Professor and Director  
of the Department*

Beatrice F. Schulz, B.S., Washington University, 1949; M.A., 1955.

*Assistant Professor and Associate  
Director of the Department in  
Charge of Clinical Training*

Lorraine F. Lake, B.S., Washington University, 1950; M.A., 1954. (See Department of Anatomy.)

*Instructor*

Ruth Lee, B.S., University of Missouri, 1934; M.S., St. Louis University, 1956.

*Lecturers*

Harry Acker (Physical Medicine), B.S., Clemson College, 1949; M.D., Medical College of South Carolina, 1950. (See Department of Preventive Medicine.)

Ruth Benz, R.N.

Robert Hickok, B.S., Washington University, 1953.

Diego Mattarella (Physical Medicine), B.S., Brooklyn College, 1934; M.D., University of Bologna (Italy), 1939. (See Department of Preventive Medicine.)

The program of instruction in physical therapy in the School of Medicine consists of the Junior and Senior years of a four-year college curriculum leading to the degree of Bachelor of Science in Physical Therapy.

Students entering this program must have satisfactorily completed sixty semester hours in an accredited college or university. Required are courses in English composition, literature, psychology, and the physical, biological, and social sciences.

The program in the School of Medicine includes courses in the basic medical sciences, medical and surgical lectures as applied to the practice of physical therapy, theory and application of physical therapy procedures, and a minimum of 800 hours of clinical experience.

The aim of the program is the development of competent physical therapists whose broad cultural background and thorough professional training prepare them to accept the appropriate responsibilities in the comprehensive care program of modern medicine.

Tuition (three semesters).....	Per semester \$345.00
Tuition (final semester).....	100.00
Student Health Fee.....	Per semester 30.00
Late Registration Fee.....	5.00

## SCHOOL OF X-RAY TECHNOLOGY

A course for X-ray technicians is offered by the Edward Mallinckrodt Institute of Radiology. The course will cover by lectures and group discussions the following subjects: Anatomy and Physiology; Radiographic Technic; Radiation Physics; Dark-room Processing Procedures; Nursing Procedures; Administration; Radiation Therapy; Professional Ethics.

---

The course is two years in length. On satisfactory completion of the first year's work, the student will be assigned to tours of duty in the various sections of diagnostic and therapeutic disciplines for practical experience, and during the second year will be paid a small monthly stipend of \$50.00.

Candidates for admission must present evidence of successful completion of four years' education in an accredited high school. Special consideration will be given to graduates of Schools of Nursing which are recognized by the State Board of Nurse Examiners and to students who have passed college entrance examinations for admission to an accredited college or university. The fees for the course are as follows:

Tuition (academic year).....	Per year \$100.00
Student Health Fee (academic year).....	Per year 60.00
Late Registration Fee.....	5.00

---

#### SCHOOL OF DIETETICS

Henrietta Becker, B.S.....Director

A twelve-months course for the training of dietitians leading to a certificate.

The course includes theoretical and practical training in food and personnel administration, food cost and control, diet therapy, Washington University Clinics, St. Louis Children's Hospital and teaching food and nutrition.

A bachelor's degree from an accredited college or university is required for admission. Certain courses in chemistry, biology, social science, education, foods, nutrition and dietetics, and institutional management are essential.

There is no tuition fee, but a matriculation fee of \$10.00 must be deposited as soon as an application is accepted.

---

#### SCHOOL OF MEDICAL TECHNOLOGY

Virgil Loeb, Jr., M.D.

Director of Laboratories and of the School of Medical Technology

Dorothy McGregor, B.S., M.T. (A.S.C.P.)

Assistant Director (Medical Technology)

A twelve-month course for the training of medical technologists leading to a certificate given by Barnes Hospital. Graduates are eligible to take the examination given by the American Society of Clinical Pathologists in order to become certified as Registered Medical Technologists. The course includes theoretical and practical training in blood banking, clinical microscopy, tissue pathology, parasitology, bacteriology and serology, clinical chemistry, electrocardiography, and basal metabolism.

Applicants must present at least two years of college training approved by the Registry of Medical Technologists, Muncie, Indiana. Effective January 1, 1962, the pre-technical educational requirements will be increased to three years of college background. The tuition is \$100 for the entire course.

---

SCHOOL OF ANESTHESIA FOR NURSE ANESTHETISTS

Robert B. Dodd, M.D.....Director  
Mrs. Dean E. Hayden, R.N.....Associate Director  
Miss Helen Vos, R.N., B.S.....Educational Director

An eighteen-months course for comprehensive special training in the practical administration of anesthetics by approved medical techniques, and the theory underlying their skilled administration. Upon satisfactory completion of the course, a certificate is awarded.

The theoretical aspect of the subject is covered by specific periods of organized instruction. Instruction in the practical administration of anesthetics takes place in the operating rooms, where at first the student observes, then administers anesthetics under an instructor's supervision, and eventually conducts complete anesthetics upon her own responsibility.

The course is open to graduates of accredited schools of nursing. The tuition is \$100.00. Full maintenance is provided. A stipend of \$50.00 per month is paid after six months, \$100 per month after twelve months.

## WASHINGTON UNIVERSITY

### MEDICAL ALUMNI ASSOCIATION

---

The Alumni Association, whose membership is made up of all graduates of the School of Medicine and all members of the faculty, is active in its support of the School and of the student body. Each year the President of the Association participates in the exercises welcoming the incoming class, and prior to commencement, the Association sponsors the annual Alumni dinner, at which the graduating seniors are guests. On the day of the dinner, a reunion is held. Feature events of the reunion include a scientific program presented by graduates and faculty members, and a buffet luncheon at which members of the alumni and senior students are guests of the School of Medicine and its faculty.

The Association maintains a loan fund for students, and through the contribution to the Class Endowment Fund made by the class celebrating its twenty-fifth reunion each year, provides a source of important financial aid for the School.

The School of Medicine and its Alumni Association also maintain, in the David P. Wohl, Jr., Memorial Hospital, the Medical Center Alumni Lounge. A full-time receptionist, Miss Gwen Hixson, presides over this comfortable and convenient lounge, handling all Medical Alumni activities, contacting staff and students, and greeting visitors.

The Corporation of the University includes one representative elected by the Medical Alumni Association.

For the year 1958-59, the following alumni served as officers of the Washington University Medical Alumni Association:

President: Keith Wilson, '34

President-Elect: Richard W. Yore, '43

Vice-President: Frank R. Bradley, '28

Secretary-Treasurer: James W. Owen, Jr., '46

*Members of the Board of Alumni Association meeting in the Medical Center Alumni Lounge to discuss the activities of the Association. Left to right—Dr. James W. Owen, Secretary-Treasurer; Dr. Keith Wilson, President; Dr. Richard W. Yore, President-Elect*





## PRIZES AWARDED

---

1957-58

*Gill Prize in Anatomy*  
William Bradford DeLong

*Biochemistry Prize*  
William George Juergens, Jr.

*Bronfenbrenner Memorial Award*  
Robert Irving Lindemeyer, A.B.

*Borden Undergraduate Research Award*  
Bryce Leon Munger

*Alpha Omega Alpha Book Prize*  
Donald Richard Harkness, A.B.

*Prize of the Medical Fund Society in Surgery*  
Matthew Kurt Becker, B.S.  
Edwin King Burford, Jr.

*Prize of the Medical Fund Society in Medicine*  
Donald Richard Harkness, A.B.

*McCordock Book Prize*  
David Todd Hammond, B.A.

*Alexander Berg Prize*  
Gustav Schonfeld, A.B.

*Roche Award*  
David Todd Hammond, B.A.

*Medical Alumni Fund Scholarship*  
Richard David Aach, A.B.

*Missouri State Medical Association Annual Award*  
Jerome Fred Levy, A.B.

*C. V. Mosby Company Book Awards*  
Norman Duane Anderson, B.A.  
Benjamin Arthur Borowsky  
Richard Edward Bryant, A.B.  
David Morton Kessner, B.S.  
Jerome Lester Silverman, B.A.

## PRIZES AWARDED

---

### *Scholarships, 1958-59*

#### *Jackson Johnson Regional Scholarships*

J. David Bybee, B.A.	Christine Mackert
Harvey Cantor	R. Cameron McKnight
David Danoff, A.B.	Karl Muench, A.B.
W. Bradford DeLong	Laurence Muench, B.S.
Ruth E. Dinda, A.B.	Morris Reichlin, A.B.
Murray H. Helfant, A.B.	Barbara Shaw, B.A.
Duane C. Hellam, A.B.	R. Michael Sly, A.B.
James P. Kase, A.B.	Robert G. Smith, B.S.
John Kiser, B.S.	Maxwell M. Urata, B.A.
Stuart Kornfeld, A.B.	James F. Wallace, A.B.
Marvin E. Kuehner, B.S.	Phillip Winter, B.A.

#### *Danforth Memorial Fund Scholarships*

In Chang Kim, B.A.

Richard E. Thompson, B.A.

### *Honors, 1958*

Norman Duane Anderson, B.A., *cum laude*  
Benjamin Arthur Borowsky, *cum laude*  
Theodore James Brickner, Jr., B.S., *cum laude*  
Richard Edward Bryant, A.B., *cum laude*  
Donald Richard Harkness, A.B., *magna cum laude*  
David Morton Kessner, B.S., *cum laude*  
Jerome Fred Levy, A.B., *cum laude*  
Robert Irving Lindemeyer, A.B., *cum laude*  
Herbert Lubowitz, A.B., *cum laude*  
Byron Jackson Masterson, A.B., *cum laude*  
Bryce Leon Munger, *magna cum laude*  
Jerome Lester Silverman, B.A., *cum laude*  
Joseph Robert Williamson, A.B., *cum laude*

*The David P. Wohl, Jr., Memorial Hospital, which houses the administrative offices and laboratories of the Departments of Internal Medicine and Surgery; in addition, it provides three floors for the care of patients.*



## REGISTER OF STUDENTS

### FOURTH-YEAR CLASS (1958-59)

#### *Name*

#### *Internship (1959-60)*

- Aach, Richard David, A.B., Washington Univ., '55—Barnes Hospital, St. Louis, Missouri  
 Ashbell, Theodore S., B.A., Univ. of California, '50—Syracuse Medical Center, Syracuse, New York  
 Benson, James Robert, A.B., Washington Univ., '56—Walter Reed Hospital, Washington, D.C.  
 Bernstein, Irving, A.B., Brooklyn Coll., '55—Jersey City Medical Center, Jersey City, New Jersey  
 Bieber, William Parker, A.B., Washington Univ., '55—Philadelphia General Hospital, Philadelphia, Pennsylvania  
 Bookchin, Robert Martin, A.B., Univ. of Chicago, '55—Bronx Municipal Hospital, New York, New York  
 Boyce, John Milton, A.B., Grinnell Coll., '55—St. Luke's Hospital, St. Louis, Missouri  
 Bridgers, William Frank, B.A., Univ. of the South, '54—Barnes Hospital, St. Louis, Missouri  
 Brown, John Hodgen, B.A., Univ. of Colorado, '55—University of Minnesota Hospital, Minneapolis, Minnesota  
 Byrd, Walton Edward, B.S., West Texas State Coll., '55—St. Luke's Hospital, St. Louis, Missouri  
 Calton, Farrell Marlon, B.S., Univ. of Utah, '56—University of Utah Hospital, Salt Lake City, Utah  
 Colbert, Richard Martin, B.S., Stanford Univ., '55—Eastern Maine General Hospital, Bangor, Maine  
 Cordonnier, James Kermit—University Hospital, Ann Arbor, Michigan  
 Crank, Rawser Paul, Jr., A.B., Brown Univ., '52—St. Louis City Hospital, St. Louis, Missouri  
 Creveling, James Gordon, Jr., B.S., Univ. of the South, '55—University Hospital and Hillman Clinic, Birmingham, Alabama  
 Cross, James Allerton, B.A., Lehigh Univ., '55—Strong Memorial Hospital, Rochester, New York  
 Culp, Neil Walker, B.S., Univ. of Tulsa, '55—Strong Memorial Hospital, Rochester, New York  
 Curran, Joel Danforth, A.B., Brown Univ., '55—Bronx Municipal Hospital, New York, New York  
 Dawes, Robert Bethel, A.B., Central Coll., '55—University of Wisconsin Hospital, Madison, Wisconsin  
 De Bruine, Paul Harvey, B.S., Elmhurst Coll., '55—Gorgas Hospital, Canal Zone  
 Deitch, Milton Joseph, A.B., Princeton Univ., '55—Jewish Hospital, St. Louis, Missouri  
 Dickey, Ward Eugene, Jr., B.S., Univ. of Idaho, '57—University of Oregon Hospital, Portland, Oregon  
 Dinda, Ruth Ellen, A.B., Marietta Coll., '55—St. Luke's Hospital, St. Louis, Missouri  
 Elsea, William Robert, A.B., Westminster Coll., '55—Eastern Maine General Hospital, Bangor, Maine  
 Farmer, Howard Stephen—Jewish Hospital, St. Louis, Missouri  
 Ferguson, David Willett, A.B., Grinnell Coll., '55—Barnes Hospital, St. Louis, Missouri  
 Finch, John Emmett, B.A., Univ. of Illinois, '55—Ancker Hospital, St. Paul, Minnesota  
 Flipse, Ann Randolph, B.A., Univ. of Texas, '54—St. Louis Children's Hospital, St. Louis, Missouri  
 Garfinkel, Lester Simon, A.B., Washington Univ., '55—Barnes Hospital, St. Louis, Missouri  
 Goldman, Arnold Milton, A.B., Harvard Univ., '55—Johns Hopkins Hospital, Baltimore, Maryland  
 Hanks, Gerald Eugene, B.S., The State Coll. of Washington, '57—Grace - New Haven Community Hospital, New Haven, Connecticut  
 Helfant, Murray Howard, A.B., Harvard Univ., '55—Johns Hopkins Hospital, Baltimore, Maryland  
 Hellam, Duane Conrad, A.B., Arizona State Coll., at Tempe, '55—Barnes Hospital, St. Louis, Missouri  
 Hippensteel, John Leslie—Presbyterian - St. Luke's Hospital, Chicago, Illinois  
 Hirsch, Carl Alvin, B.S., California Institute of Technology, '51—Eastern Maine General Hospital, Bangor, Maine  
 Hopper, Betty Ilene, B.S., The State Coll. of Washington, '56—Butterworth Hospital, Grand Rapids, Michigan  
 Jacob, Karl Adolph, Jr., A.B., Washington Univ., '54—St. Luke's Hospital, St. Louis, Missouri

Keister, Hugh F. Sidney, A.B., Washington Univ., '55—Jewish Hospital, St. Louis, Missouri  
 Kilo, Charles—St. Luke's Hospital, St. Louis, Missouri  
 Kim, In Chang, B.A., Evansville Coll., '56—Syracuse Medical Center, Syracuse, New York  
 Kinney, Paul Gustave, B.S., The State Coll. of Washington, '50—Sacramento County Hospital, Sacramento, California  
 Kuhn, Charles III, A.B., Harvard Univ., '55—Barnes Hospital, St. Louis, Missouri  
 Kuten, Jay, A.B., Cornell Univ., '55—Syracuse Medical Center, Syracuse, New York  
 Laatsch, Robert Henry, B.A., Park Coll., '55—University Hospitals, Cleveland, Ohio  
 Lane, Daniel Kerns, A.B., Princeton Univ., '55—Barnes Hospital, St. Louis, Missouri  
 Leahy, David Armstrong, B.A., Pomona Coll., '55—Highland-Alameda County Hospital, Oakland, California  
 Leff, Wenzel Albert, B.A., Yankton Coll., '55; B.S. in Med., Univ. of South Dakota, '57—Barnes Hospital, St. Louis, Missouri  
 Lemon, Franklin Calvin, A.B., Univ. of California, '55—Highland - Alameda County Hospital, Oakland, California  
 Levenson, David, A.B., Cornell Univ., '55—Montefiore Hospital, New York, New York  
 Malison, Robert Francis, A.B., Washington Univ., '56—St. Luke's Hospital, St. Louis, Missouri  
 Moon, Thomas Roy, Jr., A.B., De Pauw Univ., '55—St. Luke's Hospital, St. Louis, Missouri  
 Mundt, William Edward, B.S., U. S. Military Academy, West Point, '49—St. Luke's Hospital, St. Louis, Missouri  
 Munneke, Lyle, B.S. in Med., Univ. of South Dakota, '57—St. Luke's Hospital, Duluth, Minnesota  
 Nagel, Eugene Louis, B.E.E., Cornell Univ., '49—St. Luke's Hospital, St. Louis, Missouri  
 Nathenson, Stanley Gail, B.A., Reed Coll., '55—Barnes Hospital, St. Louis, Missouri  
 Near, David Myron, B.S., Montana State Coll., '55—St. Luke's Hospital, St. Louis, Missouri  
 Noren, George Robert, B.S., Hamline Univ., '53—University of Minnesota Hospital, Minneapolis, Minnesota  
 Norland, Charles Carssow, B.S., The State Coll. of Washington, '55—Albany Hospital, Albany, New York  
 Obayashi, Nobuko, B.A., Univ. of Hawaii, '55—Barnes Hospital, St. Louis, Missouri  
 Oberman, Albert, A.B., Washington Univ., '55—Jewish Hospital, St. Louis, Missouri  
 O'Rourke, Thomas Kevin, B.S., Univ. of Portland, '55—King County Hospital, Seattle, Washington  
 Owen, Nicholas Loyd, A.B., Harvard Univ., '55—St. Louis City Hospital, St. Louis, Missouri  
 Parelman, Allen Grover, A.B., Washington Univ., '55—Grace - New Haven Community Hospital, New Haven, Connecticut  
 Peppers, Gerald Franklyn, B.S., South Dakota State Coll., '53; B.S. in Med. Univ. of South Dakota, '57—Barnes Hospital, St. Louis, Missouri  
 Reed, Louis Juden, A.B., Washington Univ., '55—Bronx Municipal Hospital, New York, New York  
 Reichlin, Morris, A.B., Washington Univ., '55—Bronx Municipal Hospital, New York, New York  
 Rhoton, Albert Loren, Jr., B.S., Ohio State Univ., '54—Presbyterian Hospital, New York, New York  
 Rosenberg, Richard Irwin, B.S., Purdue Univ., '55—Mount Sinai Hospital, New York, New York  
 Schultze, Raymond Gilbert, A.B., Washington Univ., '55—University of California Hospital, Los Angeles, California  
 Severin, Sanford Lewis—University Hospital, Ann Arbor, Michigan  
 Smith, Robert Gene, B.S., Univ. of Oklahoma, '56—Royal Victoria Hospital, Montreal, Canada  
 Sperling, David S., A.B., Birmingham-Southern Coll., '49; M.S., Univ. of Kentucky, '51; B.S., Univ. of Alabama, '55—Jewish Hospital, St. Louis, Missouri  
 Srebro, Richard—Syracuse Medical Center, Syracuse, New York  
 Stillman, Irving Mayer, B.S., Queens Coll., '55—Jersey City Medical Center, Jersey City, New Jersey  
 Stohr, Paul Edward—Barnes Hospital, St. Louis, Missouri  
 Stone, Dwight Howard, B.A., State Univ. of Iowa, '55—University of Wisconsin Hospital, Madison, Wisconsin



Sullivan, William Wallace, B.A., Pomona Coll., '55—Barnes Hospital, St. Louis, Missouri  
 Talbert, Clifford Rosco, Jr.—Jewish Hospital, St. Louis, Missouri  
 Tallman, Edward Ringwood, B.A., Reed Coll., '55—Harbor General Hospital, Torrance, California  
 Taylor, William John, Jr.—North Carolina Memorial Hospital, Chapel Hill, North Carolina  
 Thompson, Richard Elliott, B.A., Vanderbilt Univ., '55—Denver General Hospital, Denver, Colorado  
 Urata, Maxwell Michio, B.A., Univ. of Hawaii, '55—Indiana University Medical Center, Indianapolis, Indiana  
 Walker, Samuel Ray, B.A., Vanderbilt Univ., '55—New York Hospital, New York, New York  
 Webb, David Robert, Jr.—Parkland Memorial Hospital, Dallas Texas  
 Wegner, Wallace William—Barnes Hospital, St. Louis, Missouri  
 West, John Roger, A.B., Princeton Univ., '55—St. Luke's Hospital, St. Louis, Missouri  
 Winter, David Leon, A.B., Columbia Univ., '55—Barnes Hospital, St. Louis, Missouri  
 Wolff, Dolores Paskar, A.B., Washington Univ., '54—Jewish Hospital, St. Louis, Missouri

### THIRD-YEAR CLASS (1958-59)

Abramowicz, Mark, A.B., Harvard Univ., '56—Cambridge, Massachusetts  
 Anderson, Maurice Sidney, B.A., Univ. of Texas, '56—San Antonio, Texas  
 Armstrong, Clay Margrave, B.A., Rice Institute, '56—Dallas, Texas  
 Black, Paul William, A.B., Knox Coll., '56—Golden, Illinois  
 Bloom, Floyd Elliott, A.B., Southern Methodist Univ., '56—Dallas, Texas  
 Boren, Charles William, A.B., Earlham Coll., '56—Poseyville, Indiana  
 Briggs, Dick Dowling, Jr., B.S., Univ. of the South, '56—York, Alabama  
 Bybee, Joseph David, B.A., Rice Institute, '56—Beaumont, Texas  
 Clayton, Paula Limberg, B.S., Univ. of Michigan, '56—St. Louis, Missouri  
 Cooperman, Lee Herschel, B.S., Ohio State Univ., '56—University Heights, Ohio  
 Dismukes, William Paul, Jr., B.A., Vanderbilt Univ., '56—Coral Gables, Florida  
 Donnell, Henry Denny, Jr., B.A., Greenville Coll., '57—Greenville, Illinois  
 Eades, Joseph William, A.B., Amherst Coll., '56—St. Louis, Missouri  
 Eberstein, Alan Eugene, A.B., Southern Methodist Univ., '56—Dallas, Texas  
 Edmonds, Robert Wallace, A.B., Univ. of Missouri, '56—Kansas City, Missouri  
 Fahien, Leonard August, A.B., Washington Univ., '56—Warrenton, Missouri  
 Fahrenwald, Myron Ellis, B.A., Univ. of South Dakota, '57—Crandall, South Dakota  
 Fechner, Robert Eugene, B.A., Univ. of Utah, '56—Salt Lake City, Utah  
 Felkner, Richard Sidney—Kansas City, Missouri  
 Fogg, Lyman Babcock, A.B., Harvard Univ., '54—Newton Centre, Massachusetts  
 Givhan, Edgar Gilmore, B.A., Washington and Lee Univ., '56—Montevallo, Alabama  
 Glick, Aaron, B.S., McGill Univ., '56—Montreal, Canada  
 Goell, Robert Stephen, A.B., Middlebury Coll., '49; A.M., Univ. of Pennsylvania, '50—New York, New York  
 Grubb, William Burl, Jr.—Decatur, Illinois  
 Hammond, David Todd, B.A., Indiana Univ., '57—Bluffton, Indiana  
 Harmon, Ben Calvin, B.A., Texas Christian Univ., '56—Fort Worth, Texas  
 Hoech, George Paul, Jr., B.A., William Jewell Coll., '54—Winfield, Missouri  
 Jackson, Edward Kurz, B.S., Union Coll., '54—St. Louis, Missouri  
 Jekel, James Franklin, B.A., Wesleyan Univ. (Conn.) '56—Kirkwood, Missouri  
 Johnson, Floyd George, A.B., Northwest Nazarene Coll., '56—Nampa, Idaho  
 Jystad, Gary Ronald, B.A., Montana State Univ., '56—Columbia Falls, Montana  
 Kalkhoff, Ronald Kenneth, B.A., Yale Univ., '56—Milwaukee, Wisconsin  
 Kam, Calvin Chock Ming, A.B., Washington Univ., '56—Honolulu, Hawaii  
 Keoshian, Leo Arman, A.B., Fresno State Coll., '56—Fresno, California  
 Kreager, John Arthur, Jr., A.B., Washington Univ., '56—Tulsa, Oklahoma

Landau, Samuel, A.B., Cornell Univ., '56—Bronx, New York  
 Livingston, Alan William, B.S., New York Univ., '52—New York, New York  
 Mayo, Marvin Glen, A.B., Florida State Univ., '56—Lynn Haven, Florida  
 McGonagle, Thomas John, A.B., Colorado Coll., '56—Denver, Colorado  
 Medart, William Sherman, Jr., A.B., Washington Univ., '52—St. Louis, Missouri  
 Miller, Gordon Roth, B.S., Univ. of Miami, '56—Miami, Florida  
 Miller, Louis Howard, A.B., Haverford Coll., '56—Baltimore, Maryland  
 Moore, Richard Taylor—Ogden, Utah  
 Muench, Karl Hugo, A.B., Princeton Univ., '56—Evanston, Illinois  
 Olson, Ross Gustav, B.A., Univ. of South Dakota, '57—Sioux Falls, South Dakota  
 Palmer, Lily Ann, B.S., Univ. of Denver, '57—St. Louis, Missouri  
 Payne, John Henry—Idaho Falls, Idaho  
 Pfeiffer, Eric Armin, A.B., Washington Univ., '56—St. Louis, Missouri  
 Reynolds, Harry Edward, B.A., Claremont Men's Coll., '56—Glendale, California  
 Richardson, Raymond Gregg—Long Beach, California  
 Rosen, Peter, A.B., Univ. of Chicago, '55—Brooklyn, New York  
 Rosenbaum, David Leon, A.B., Cornell Univ., '56—Teaneck, New Jersey  
 Rosenquist, Carl John, B.A., Univ. of Texas, '56—Austin, Texas  
 Rubenberg, Martin L., A.B., Columbia Univ., '56—Brooklyn, New York  
 Rubin, Laurence Edward, A.B., Washington Univ., '56—St. Louis, Missouri  
 Sauer, Donald Carl, A.B., Washington Univ., '56—University City, Missouri  
 Sayfie, Eugene Joe, A.B., West Virginia Univ., '56—Charleston, West Virginia  
 Schaumburg, Herbert Howard, A.B., Harvard Univ., '56—Houston, Texas  
 Schoentag, John Sigmund, A.B., Univ. of Missouri, '56—St. Joseph, Missouri  
 Schonfeld, Gustav, A.B., Washington Univ., '56—East St. Louis, Illinois  
 Scott, Russell Carter, A.B., Knox Coll., '56—Glen Ellyn, Illinois  
 Shelmire, David Sutton, B.A., Univ. of Texas, '56—Dallas, Texas  
 Shuter, Eli Ronald, A.B., Cornell Univ., '56—Spring Valley, New York  
 Silbert, Cynthia Korb, B.S., Tufts Univ., '56—St. Louis, Missouri  
 Simons, Ronald Charles, A.B., Univ. of Rochester, '56—Rochester, New York  
 Sirota, David King, A.B., Harvard Univ., '56—Jamaica, New York  
 Sisson, Joseph Andrew, A.B., San Diego State Coll., '55—San Diego, California  
 Skaggs, Jerome Donley—Mountain View, Missouri  
 Sly, Ridge Michael, A.B., Kenyon Coll., '56—Yakima, Washington  
 Smith, Julius Steve—Los Angeles, California  
 Stacy, Gilbert S., B.A., Univ. of Arkansas, '54; M.A. '56—Joplin, Missouri  
 Steiger, Barry W.—Danville, Illinois  
 Steinberg, Lawrence Sheldon, A.B., Washington Univ., '56—Richmond Heights, Missouri  
 Taylor, Richard Loren, B.S., Southern Illinois Univ., '56—Carbondale, Illinois  
 Terry, Boyd Earl—St. Anthony, Idaho  
 Terry, Carolyn White, A.B., Washington Univ., '56—Louisville, Kentucky  
 Tobias, Hillel, A.B., Columbia Univ., '56—Brooklyn, New York  
 Tustison, Winston Andrew, B.A., Montana State Univ., '54—Billings, Montana  
 Utley, Joe Roy, B.A., Oklahoma City Univ., '57—Elk City, Oklahoma  
 Voss, Richard Gerald, B.A., Colorado Coll., '56—Osborne, Kansas  
 Winter, Phillip Emil, B.A., Carroll Coll., '56—Milwaukee, Wisconsin  
 Wishnow, Donald Elliott—Flushing, New York  
 Wochnner, Raymond Dean, A.B., Arizona State Coll., '56—Tempe, Arizona  
 Wolfe, Edward Martin, B.A., Hobart Coll., '56—Brooklyn, New York  
 Zatlín, Gabriel Stanley, B.S., Univ. of Miami, '56—Miami Beach, Florida

## SECOND-YEAR CLASS (1958-59)

Aginsky, Jack Guy, A.B., Univ. of Rochester, '57—Flushing, New York  
 Ause, Robert Gordon, B.A., Williams Coll., '57—Hinsdale, Illinois  
 Balfour, John Frederick, A.B., Univ. of Missouri, '57—Kauai, Hawaii  
 Beard, Daniel Dean, A.B., De Pauw Univ., '57—Decatur, Illinois  
 Birge, Clifford Allen, A.B., Amherst Coll., '56—St. Louis, Missouri  
 Blaustein, Mordecai Phineas, A.B., Cornell Univ., '57—Carmel, New York  
 Boonschaft, Benje, A.B., Washington Univ., '57—Clayton, Missouri  
 Braun, William Thomas III, B.S., Univ. of Notre Dame, '57—Pittsburg, Kansas  
 Clements, Arthur Morgan, B.A., Univ. of Texas, '56—San Antonio, Texas  
 Colvin, Oliver Michael—Princeton, Indiana  
 Cooper, Richard Alan—Milwaukee, Wisconsin  
 Crosson, John Tevis, A.B., Oberlin Coll., '57—Clayton, Missouri  
 Davis, Gerald Norman—Beaumont, Texas  
 De Kuyper, Henry, A.B., Long Beach State Coll., '56—Long Beach, California  
 De Long, William Bradford—Evanston, Illinois  
 Ducker, George Edgar, A.B., Washington Univ., '57—St. Louis, Missouri  
 Finkelstein, Elliot Marvin, A.B., Harvard Univ., '57—Revere, Massachusetts  
 Finkelstein, Harvey Ira, A.B., Harvard Univ., '57—Beechwood Village, Ohio  
 Fischer, Don Arthur, B.S., Univ. of Illinois, '57—Staunton, Illinois  
 Fischer, Martin—Akron, Ohio  
 Frieske, David Allen, A.B., Univ. of Chicago, '56—Fort Lauderdale, Florida  
 Gaither, James Comer, B.S., Davidson Coll., '57—Newton, North Carolina  
 Goldstein, Michael Allan, A.B., Cornell Univ., '57—Brooklyn, New York  
 Goldstein, William Burton—Monticello, New York  
 Graber, Alan Lee, A.B., Princeton Univ., '57—Memphis, Tennessee  
 Gray, Herbert, B.A., Reed Coll., '57—South Laguna, California  
 Gross, Monroe Alfred, A.B., Harvard Univ., '57—Chestnut Hill, Massachusetts  
 Herrmann, Paul William, A.B., Washington Univ., '57—Affton, Missouri  
 Holley, Herbert Steele, Jr., A.B., Central Coll., '57—Webster Groves, Missouri  
 Hollingsworth, James Gaylord, A.B., San Diego State Coll., '57—San Gabriel, California  
 Hurwitz, Aryeh, A.B., Columbia Univ., '57—Brooklyn, New York  
 Huston, Howard Harry, B.S., Purdue Univ., '57—Logansport, Indiana  
 Isely, Raymond Bruce, A.B., Taylor Univ., '57—Minneapolis, Minnesota  
 Juergens, William George, Jr.—Chester, Illinois  
 Kase, James Philip, A.B., Princeton Univ., '57—Brecksville, Ohio  
 Keller, Kent Earl, A.B., Univ. of Chicago, '57—Jonesboro, Illinois  
 Khazin, Azmi Hanna, A.B., Washington Univ., '57—Nazareth, Israel  
 King, Phillip Eugene, B.A., William Jewell Coll., '53—Liberty, Missouri  
 Kouchoukos, Nicholas Thomas—Grand Rapids, Michigan  
 Kuelner, Marvin Ernest, B.S., Univ. of Texas, '57—Taylor, Texas  
 Lackner, Lewis Henry, A.B., Stanford Univ., '57—San Mateo, California  
 Leigh, Elbert Herman, B.S., Central Missouri State Coll., '57—Warrensburg, Missouri  
 Lewis, Charles Richard, B.A., Phillips Univ., '57—Paonia, Colorado  
 Loercher, Richard John, A.B., DePauw Univ., '57—Danville, Illinois  
 Londe, Alan Merle, A.B., Washington Univ., '57—University City, Missouri  
 Lutchter, Charles Lawrence, A.B., Whitman Coll., '57—Milton-Freewater, Oregon  
 Majerus, Philip Warren—Quincy, Illinois  
 Marchick, Richard, A.B., Harvard Univ., '56—Cheyenne, Wyoming  
 Max, Leslie Alan, B.A., Hobart Coll., '57—Bronx, New York

McKnight, Robert Cameron—Phoenix City, Alabama  
 McNamara, Joseph Judson—Neosho, Missouri  
 Mitchell, Carl Edward, A.B., Washington Univ., '57—Herrin, Illinois  
 Morgan, John Doyle, B.A., Millsaps Coll., '57—Sumrall, Mississippi  
 Oppenheimer, Steven—San Francisco, California  
 Pearlman, Alan Lee—Des Moines, Iowa  
 Perley, Michael Jerome, A.B., New York Univ., '57—Brooklyn, New York  
 Philpott, Gordon Wilson, B.S., Yale Univ., '57—Webster Groves, Missouri  
 Reisler, David Martin, A.B., Harvard Univ., '57—Tucson, Arizona  
 Rosenthal, Ronald Evan—Newark, New Jersey  
 Salmon, Robert Bruce, B.S., Alabama Polytechnic Institute, '54—Auburn, Alabama  
 Scarborough, Charles Dunn—Murray, Kentucky  
 Schaaf, Bernard John, Jr., A.B., Washington and Lee Univ., '57—South Bend, Indiana  
 Schneider, Arthur John Louis, A.B., Washington Univ., '57—St. Louis, Missouri  
 Sebransky, Allen, A.B., Miami Univ., '57—Cleveland, Ohio  
 Shimoda, Stanley Sueo—Haleiwa, Oahu, Hawaii  
 Simon, Robert Currie, A.B., Stanford Univ., '57—Arlington Heights, Massachusetts  
 Skimming, William Lee, B.S., Denison Univ., '57—Wilmington, Ohio  
 Springate, Charles Stephen II, A.B., State Univ. of Iowa, '57—Des Moines, Iowa  
 Stevens, Joseph Chauncy, B.A., Yale Univ., '53—West Springfield, Massachusetts  
 Storey, Gary Albert, A.B., Fresno State Coll., '57—Fresno, California  
 Sugiki, Shigemi, A.B., Washington Univ., '57—Wailuku, Maui, Hawaii  
 Thieme, William Terrance—Wallingford, Pennsylvania  
 Thompson, Harry Goff, Jr., A.B., Washington Univ., '57—Mt. Vernon, Illinois  
 Wacker, Glenda Rae Emily, A.B., Washington Univ., '57—Owensville, Missouri  
 Walker, Wesley Charles, B.A., Reed Coll., '57—Yakima, Washington  
 Wallace, James Findlay, A.B., Washington Univ., '57—Ft. Sam Houston, Texas  
 Walsh, Peter Newton, B.A., Amherst Coll., '57—St. Louis, Missouri  
 Willms, Janice Lou—Gooding, Idaho  
 Wilson, David Merle—Idaho Falls, Idaho  
 Woerner, Philip Irvin, A.B., Princeton Univ., '57—Homewood, Illinois  
 Wolff, Gerald Allan, A.B., Harvard Univ., '55—Clayton, Missouri  
 Yim, Theodore Kenton, A.B., Univ. of California, '52—San Francisco, California  
 Zarkowsky, Harold Stanley, A.B., Washington Univ., '57—University City, Missouri

#### FIRST-YEAR CLASS (1958-59)

Anderson, Douglas Richard, A.B., Univ. of Miami, '58—Coral Gables, Florida  
 Anderson, Rolf Lyman, B.S., San Diego State Coll., '58—San Diego, California  
 Baer, Stanley, A.B., Western Reserve Univ., '58—Cleveland, Ohio  
 Bailey, Rita Ann, B.S., Florida State Univ., '58—Miami, Florida  
 Bauman, Gerald Charles, A.B., Gonzaga Univ., '58—Bonners Ferry, Idaho  
 Baumann, Billy Ben, A.B., Harvard Univ., '58—Salem, Oregon  
 Beguelin, Jerry Louis, A.B., Washington Univ., '58—Centralia, Illinois  
 Bisno, Alan Lester, A.B., Princeton Univ., '58—Memphis, Tennessee  
 Brown, Michael Wade, A.B., Washington Univ., '58—Ardmore, Oklahoma  
 Cantor, Harvey Edward—St. Louis, Missouri  
 Carhart, Isaac Whitfield, Jr., B.A., Rice Inst., '58—Lake Jackson, Texas  
 Carpenter, Stanley John, A.B., Oberlin Coll., '58—Loudonville, Ohio  
 Cohen, Sheftel Japhe—Brooklyn, New York  
 Conder, John Phillip—Salem, Oregon

Cuatrecasas, Pedro, A.B., Washington Univ., '58—Washington, D. C.  
 Dace, Melvin Carol, A.B., Washington Univ., '58—Sikeston, Missouri  
 Dahms, Alan Martin—Brush, Colorado  
 Danoff David, A.B., Johns Hopkins Univ., '58—Baltimore, Maryland  
 Dietert, Scott Edward, B.A., Rice Institute, '58—Bartlesville, Oklahoma  
 Donabedian, Richard Kasper, B.A., Clark Univ., '58—Worcester, Massachusetts  
 Dunn, Bruce Laurence, A.B., Washington Univ., '58—Kirkwood, Missouri  
 Eckstein, William Louis, A.B., Washington Univ., '58—Kansas City, Missouri  
 Edelman, Robert, A.B., Washington Univ., '58—St. Louis, Missouri  
 Edminster, Ralph Roy, B.A., De Pauw Univ., '58—Muncie, Indiana  
 Fenlon, John Wichman, A.B., Washington Univ., '58—Clinton, Iowa  
 Fisher, Henry Kenneth, A.B., Carleton Coll., '55; B.A., Univ. of Oxford, '57—St. Louis, Missouri  
 Fredman, Steven Mark, A.B., Washington Univ., '58—St. Louis, Missouri  
 Gaston, William Robert, B.A., Univ. of Texas, '58—Wichita Falls, Texas  
 Gilcrest, Harry Roger, B.A., Kent State Univ., '58—Kent, Ohio  
 Goggin, James Roosevelt, B.A., Southern Illinois Univ., '54—Ellis Grove, Illinois  
 Gondring, William Henry III, A.B., Univ. of Missouri, '58—St. Joseph, Missouri  
 Grossman, Richard Arnold—The Bronx, New York  
 Gulinson, Jordan Eugene—Kansas City, Missouri  
 Gustafson, Jon Erik, B.A., Yale Univ., '58—Independence, Missouri  
 Hoff, Eugene Raymond—St. Louis, Missouri  
 Horwitz, Bruce Alex—Piedmont, California  
 Jacobsen, Richard Harvey, A.B., Fresno State Coll., '58—Fresno, California  
 Kirkpatrick, Joel Brian, B.A., Rice Institute, '58—Phillips, Texas  
 Kagle, Leroy Ellwood, Jr., B.S., University of Maryland, '58—Sparrows Point, Maryland  
 Kanefield, Donald Gene, A.B., Washington Univ., '58—St. Louis, Missouri  
 Kantor, Harvey Sherwin—Miami Beach, Florida  
 Kaplan, Edward Lawrence, A.B., Univ. of Rochester, '58—Cleveland, Mississippi  
 Kasser, Irwin Stanley, A.B., Princeton Univ., '58—Trenton, New Jersey  
 Kestle, Donald Gene, B.S., Washington State Coll., '58—Seattle, Washington  
 Kilpe, Vilis Ervins, B.A., De Pauw Univ., '58—Fairborn, Ohio  
 Kimball, Harry Raymond, A.B., Stanford Univ., '58—Atherton, California  
 Kirkpatrick, Joel Brian, B.A., Rice Institute, '58—Phillips, Texas  
 Kiser, John Loren, B.S., Southern Methodist Univ., '58—Wichita, Kansas  
 Kornfeld, Stuart Arthur, A.B., Dartmouth Coll., '58—St. Louis, Missouri  
 Krause, John Lawrence, B.S., Univ. of Notre Dame, '58—Detroit, Michigan  
 Lewis, Ernest Loran, A.B., Fresno State Coll., '58—Fresno, California  
 Long, Wendell McLean, Jr., A.B., Princeton Univ., '58—Oklahoma City, Oklahoma  
 Lyss, Stanley Bernard, A.B., Harvard Univ., '58—St. Louis, Missouri  
 Mackert, Christine Louise—St. Anthony, Idaho  
 Medoff, Gerald, A.B., Columbia Univ., '58—Brooklyn, New York  
 Muench, Laurence Walter, B.S., Trinity Coll. (Conn.), '59—Evanston, Illinois  
 Murdock, Gerald Earl, Jr., B.S., Univ. of Wyoming, '58—Buffalo, Wyoming  
 Orme, Burton M.—St. Anthony, Idaho  
 Pakula, Stephen Bruce, A.B., Harvard Univ., '58—Kansas City, Missouri  
 Provines, Richard Lee—Olney, Illinois  
 Rembert, Francis Marion, B.S., Univ. of the South, '58—Asheville, North Carolina  
 Reynolds, Mary Ann, B.A., Pomona Coll., '56—Riverside, California  
 Rich, John Douglas, A.B., Southwest Missouri State Coll., '58—Springfield, Missouri  
 Ritter, Raymond August, Jr., A.B., Washington Univ., '58—Cape Girardeau, Missouri



Rittmann, John Edgar, B.A., Valparaiso Univ., '58—Nagarecoil, South India  
 Rubin, Donald Martin, A.B., Washington Univ., '58—St. Louis, Missouri  
 Salmon, Sydney Elias, A.B., Univ. of Arizona, '58—Tucson, Arizona  
 Schlaff, Sheldon, A.B., Columbia Univ., '58—Brooklyn, New York  
 Schmidt, Baruch Samson, A.B., Harvard Univ., '58—New Braunfels, Texas  
 Sessions, Donald Gordon, A.B., Princeton Univ., '58—La Grange, Illinois  
 Shaw, Barbara Lee, B.A., Pomona Coll., '55—Temple City, California  
 Singer, Jack Donald—Tucson, Arizona  
 Singleton, Charles McEntree, A.B., Princeton Univ., '58—Kansas City, Missouri  
 Smith, Jay Wesley, A.B., Columbia Univ., '58—Grand Island, Nebraska  
 Smith, Kent—Sherman, Texas  
 Snider, Ned LeRoy,—Nyssa, Oregon  
 Spivack, Samuel David—St. Louis, Missouri  
 Stevens, Timothy Watson, B.A., Rice Institute, '58—Houston, Texas  
 Stewart, Edward Turlington, B.S., Davidson Coll., '58—Kirkwood, Missouri  
 Stone, John Henry III, B.A., Millsaps Coll., '58—Jackson, Mississippi  
 Sweatt, James Leonard III, A.B., Middlebury College (Vermont), '58—Dallas, Texas  
 Vasconez, Luis Oswaldo, B.S., Univ. of Miami, '58—Miami, Florida  
 Vashaw, Walter Carl, Jr.—Rochester, Pennsylvania  
 Wehner, Nancy Sharon, B.S., Univ. of Michigan, '58—Detroit, Michigan  
 Williams, David Arnold, B.S., Univ. of New Mexico, '58—Hobbs, New Mexico  
 Wool, Gerald, A.B., Princeton Univ., '58, St. Louis, Missouri

#### SUMMARY OF STUDENTS IN THE SCHOOL OF MEDICINE

Fourth-Year Class .....	88
Third-Year Class .....	85
Second-Year Class .....	83
First-Year Class .....	86
Total	342



*The Rand-Johnson Surgical Pavilion,  
one of the major units of the  
Barnes Hospital*

## INDEX OF STAFF MEMBERS

---

- Aach, Richard D., 57  
 Abel, Charles C., 57  
 Abel, Oliver III, 58  
 Abrams, Morris, 108  
 Acker, Harry L., 91, 123  
 Ackerman, Lauren V., 77, 107  
 Ackermann, Philip G., 118  
 Adler, Benard, 74  
 Aff-Drum, Helen, 81  
 Agress, Harry, 54  
 Aguilar, Oscar L., 109  
 Ahlvin, Robert C., 77  
 Aitken, Louis F., 55  
 Akyol, Turhan, 58  
 Alden, Arthur M., 74  
 Aldridge, Gerald, 120  
 Alex, Morris, 55  
 Alexander, France, 68  
 Alexander, Harry Louis, 52  
 Alexander, Robert N., Jr., 58  
 Alkjaersig, Norma K., 53  
 Allbrook, David B., 47  
 Allen, Hollis, 120  
 Allen, Hubert L., 66  
 Allen, Irving E., Jr., 82  
 Allen, Willard Myron, 7, 66  
 Alvarez, Luis, 78  
 Alvis, Bennett Young, 71  
 Alvis, Edmund B., 71  
 Amaral, Fernando Medina do, 75  
 Anderson, David M., Jr., 67  
 Anderson, John M., 98  
 Anderson, William, 120  
 Anschuetz, Robert, 109  
 Anthony, E. James, 95, 119  
 Anthony, Lyndon U., 110  
 Arimura, Grace K., 58  
 Arkonac, Oguz, 98  
 Arkonac, Yildiz, 82  
 Arneson, A. Norman, 66, 104  
 Arnot, John P., 110  
 Audia Lo Polito, Marino, 59  
 Auer, Arthur I., 110  
 Azarnoff, Daniel L., 86  
 Baer, Howard, 120  
 Bagby, James W., 55  
 Banson, Bernabe, 78  
 Barajas, Luiciano, 78  
 Barnes, Charles R., 71  
 Barrow, Jack, 55  
 Bartlett, Robert Wilson, 108  
 Bartley, Thomas D., 112  
 Bass, Libby G., 97  
 Bauer, John D., 77  
 Bauer, Joseph A., 81  
 Bauer, Walter C., 77, 108  
 Baumgarten, Walter M., Jr., 55  
 Beam, Sim F., 55  
 Beare, J. Byron, 109  
 Becke, William G., 55  
 Becker, Bernard, 7, 70  
 Becker, Henrietta, 120, 124  
 Becker, Stanley, 72  
 Beckman, Mary Elizabeth, 82  
 Bedell, William H., 120  
 Behrens, Donald T., 111  
 Behrens, Gerald L., 110  
 Behrer, M. Remsen, 81  
 Bell, Robert M., 97  
 Bennett, David W., 105  
 Bennett, Thomas T., 97  
 Benson, George A., Jr., 96  
 Benz, Ruth, 123  
 Berg, Leonard, 96  
 Bergmann, John F., 98  
 Bergner, Grace E., 53  
 Berman, William, 66  
 Bernard, Harvey R., 108  
 Bernstein, Aaron M., 55  
 Bewie, Dorothy, 57  
 Biddy, Ralph L., 98  
 Binder, Morton A., 55  
 Bing, Richard John, 52  
 Birenbaum, Aaron, 55  
 Bishop, Ethel Ronzoni, 95  
 Bishop, George Holman, 95  
 Bishop, Mary McFayden, 96  
 Bisno, Daniel, 71  
 Blache, Julian, 77  
 Blackman, Nathan, 96  
 Blair, Vilray P., Jr., 109  
 Blalock, William N., 55  
 Bleisch, Virgil R., 77  
 Bleyer, Adrien S., 81  
 Bloch, Henry S., 54  
 Blumenthal, Malcolm N., 57  
 Boles, Clifford Read, 81  
 Bond, Leslie F., 112  
 Bondurant, Bryce H., 66  
 Bone, David James, 112  
 Borowsky, Benjamin A., 57

- Bortnick, Arthur R., 66  
Bottom, Donald, 105  
Boulenger, Albert, 120  
Bowen, Ted, 120  
Bowles, George Allen, 120  
Bowles, William T., 110  
Bradley, Frank R., 7, 120  
Bradley, Richard V., 112  
Breckenridge, Bruce, 86  
Bremner, N. M., 109  
Bricker, Eugene Myron, 108  
Bricker, Neal S., 53, 91  
Bridgers, William F., 57  
Brittingham, Thomas, 53  
Brookes, Robert D., 97  
Brooks, Arthur Charles, 53  
Brown, Barbara Illingworth, 50  
Brown, David H., 50  
Brown, Elmer B., Jr., 53  
Brown, James Barrett, 107  
Browning, S. Pearce, 110  
Bryan, James Howard, 71  
Bryan, Marian Pfingsten, 74  
Bryan, William T. K., 74  
Bryant, John H., 59  
Bublitz, Deborah K., 82  
Bulger, Harold Aten, 53  
Burch, Helen B., 86  
Burford, Thomas H., 107  
Burn, J. Harold, 86  
Burstein, Robert, 66  
Burton, Robert M., 86  
Busch, Anthony K., 96  
Butcher, Harvey R., 107, 118  
Byars, Louis T., 108
- Cady, Lee D., 120  
Caldwell, Ernest G., 110  
Calman, Carl H., 112  
Calodney, Martin, 83  
Camel, Greta, 54  
Camel, H. Marvin, 66  
Campbell, Ann Jones, 7, 120  
Canaan, Samuel A., Jr., 71  
Canepa, Francis J., 66  
Cannady, Edward W., 55  
Cannon, Marguerite, 96  
Cannon, William J., 112  
Carino, Milenda, 82  
Carlin, M. Richard, 112  
Carlsson, Erik, 104
- Carr, Archie D., 96  
Carroll, John J., 67  
Cary, John M., 57  
Castillo, Jose, 110  
Catanzaro, Francis Joseph, 55  
Catanzaro, Ronald J., 98  
Catanzaro, Rudolph, 112  
Chalvardjian, Ara M., 78  
Chamness, James T., 112  
Chaplin, Hugh, Jr., 7, 53, 91  
Charles, Benjamin H., 55  
Charles, Cecil Marvin, 47, 55  
Chavannes, Albert H., 82  
Chenard, Jacques P., 78  
Chieffi, Margaret, 55  
Chiquoine, A. Duncan, 47  
Chiu, Fang L., 112  
Chrysohou, A., 59  
Cibis, Paul A., 70  
Claiborne, John W., Jr., 120  
Clare, Margaret H., 96  
Clark, Sam L., Jr., 47  
Coben, Lawrence A., 98  
Cohen, Adolph Irvin, 47  
Coleman, Stan, 72  
Coleman, William G., 55  
Comens, Phillip, 55  
Cone, Alfred J., 74  
Cone, William, 96  
Conrad, Adolph H., Jr., 55  
Conrad, Marshall B., 109  
Constant, Marguerite A., 71  
Contreras, Julio, 67  
Cook, Jerome Epstein, 54  
Cooper, Robert G., 112  
Copher, Glover H., 107  
Copp, Ralph, Jr., 55  
Cordero, Gladys, 98  
Cordonnier, Justin J., 107  
Cori, Carl F., 49  
Costello, Cyril J., 108  
Costen, James B., 74  
Costen, William S., 110  
Cove, Laurence A., 57  
Covell, Walter Page, 47, 74  
Cowdry, Edmund Vincent, 47, 119  
Cowdry, Edmund V., Jr., 100  
Cox, Mary A., 97  
Coxe, Willam S., 109  
Cozart, Duane E., 57  
Cramer, Loy E., 110

Crane, Robert K., 50  
Crawford, Charles, 83  
Crawford, Katherine Jean, 112  
Crego, Clarence Harrison, Jr., 108  
Croninger, Adele B., 97  
Crossen, Philip S., 67  
Crossen, Robert J., 66  
Crouch, Henry W., 107  
Crowdus, William W., 117  
Cruvant, Bernard A., 95  
Cuervo, Carlos, 110  
Cutler, Harold M., 74

Dalton, Arthur R., 109  
Danforth, William H., 54  
Daniels, Richard E., 98  
Dankner, Arnold, 55  
Das, K. C., 98  
Datuin, Alejandro M., 98  
Daughaday, William Hamilton, 52  
Dauncey, Shirley F., 112  
Davidson, John D., 55  
Davidson, Morris, 74  
Davies, Jack, 47  
Davis, Hallowell, 73, 87  
Davis, Josephine, 57  
Davis, Myron W., 66  
Day, Anthony B., 57  
Deakin, Rogers, 108  
Dean, Lee W., Jr., 74  
Deitchman, Robert Bailey, 97  
Dembeyiotis, Dennis, 112  
Dempsey, Edward W., 7, 46  
Deutch, Max, 81  
deWeck, Alain L., 59  
Dibbs, Riad Mikhail, 74  
Dickler, Donald J., 108  
Dierks, Adalbert, 120  
Dietz, Frank R., 58  
Dietzler, David N., 86  
Dillard, Burl M., 110  
Dillon, John S., 110  
Dobrow, David D., 110  
Dobrow, Irmagard, 112  
do Carmo, Romualdo, 100  
Dodd, Robert B., 7, 107, 125  
Donaldson, Robert C., 109  
Donegan, William L., 110  
Doronila, Querico D., 98  
Drake, Truman Guthred, 53  
Drews, Leslie C., 71

Drews, Robert C., 71  
Drubin, Lester, 96  
Drysdale, George R., 50  
Dubach, Ann Reubenja, 53  
Duden, Charles W., 53  
Duemler, Louis P., 57  
Duemler, Robert H., 67  
Duffy, Francis Gerard, 109  
Dugan, Mildred, 82  
Duggins, Oliver H., 47  
Dunn, Marilyn, 91  
Dunniho, Dale R., 67

Eagleton, Mark D., Jr., 105  
Easom, Harry, 71  
Eckert, Clarence, 109  
Edwards, David L., 112  
Edwards, Glen E., 112  
Edwards, Joseph C., 55  
Einstein, Major, 121  
Eisen, Herman Nathaniel, 52  
Eisen, Natalie Aronson, 81  
Eisenstein, Albert B., 52, 91  
Eldredge, Donald H., 74  
Eller, C. Howe, 91  
Ellis, Calvin C., 55  
Ellis, Harry L., 110  
Elson, Julius, 55  
Engel, Howard R., 57  
Engman, Martin F., Jr., 55  
Enoch, Jay M., 71  
Erickson, LaVerne, 110  
Erlanger, Herman, 53, 91  
Erlanger, Joseph, 88  
Erwin, Herbert J., 97  
Eskeles, Irwin H., 58  
Espaldon, Ernesto, 112  
Esslinger, Arthur T., 66  
Estrada, Tulio, 96  
Evans, Louise, 96  
Eyermann, Charles H., 54

Fairshter, Alex E., 112  
Farah, Fuad Salim, 59  
Faris, Tanuous D., 110  
Feldaker, Mauri, 55  
Ferguson, David W., 110  
Ferguson, Thomas B., 108  
Ferro, Anthony, 100  
Finger, Donald H., 55  
Fingert, Hyman H., 96



Firkin, Barry George, 59  
 Fish, Virgil Otto, 109  
 Fitzgibbons, John F., 78  
 Flance, I. J., 55  
 Fleishman, Alfred, 55  
 Fletcher, Anthony P., 53  
 Flipse, Ann R., 82  
 Flipse, Thomas E., 57  
 Floyd, Bill G., 67  
 Forbes, Max, 71  
 Ford, Ada Wells, 122  
 Ford, Lee T., Jr., 109  
 Forsyth, Bruce Todd, 55  
 Foster, Hugh M., Jr., 110  
 Foster, Leon, 66  
 Fozzard, Harry A., 57  
 Frank, Ernest L., 77  
 Fraser, Sydney A., 55  
 Freedman, Ruth Schreiber, 71  
 Freeman, David Merrill, 71  
 Freund, Felix G., 109  
 Fricke, Albert F., 58  
 Frieden, Carl, 50  
 Friedman, Bernard, 53  
 Friedman, Robert H., 81  
 Friedrich, Ernst R., 67  
 Froelich, Wolfgang, 97  
 Fryer, Minot P., 108  
 Fujii, Koichi, 110  
 Furlow, Leonard Thompson, 108  
 Fusillo, Michael G., 57

Gall, Ira Clyde, 67  
 Gallegos, Olga, 82  
 Galloway, Jack S., 67  
 Galvao, Paulo Augusto Ayroza, 59  
 Garber, Malcolm, 82  
 Garcia, Luis, 86  
 Garfinkel, Bernard T., 54  
 Garfinkel, Lester S., 57  
 Gatfield, Paul D., 98  
 Gay, Andrew J., 71  
 Gee, David, 121  
 Geller, David M., 86  
 Gerber, Carl Joseph, 100  
 Gessert, Carl F., 74  
 Gieselman, Ralph V., 55  
 Gildea, Edwin Francis, 7, 95  
 Gildea, Margaret C.-L., 95  
 Gilson, Arthur S., Jr., 88  
 Gilster, John, 81

Gitt, Joseph J., 96  
 Glaser, Luis, 50  
 Glassberg, Bertrand Y., 55  
 Glick, Harry N., 74  
 Glidewell, John C., 97  
 Goettman, William, 110  
 Goldberg, Ivan K., 57  
 Golden, Janet, 97  
 Goldfarb, Walter B., 110  
 Goldman, Alfred, 53  
 Goldman, Melvin Leonard, 55  
 Goldring, David, 81  
 Goldring, Sidney, 108  
 Gollub, Samuel, 82  
 Goodman, Allan, 74  
 Gorham, Arwin E., 97  
 Gowen, Leo Francis, 82  
 Grabau, Gene, 82  
 Graham, Frances K., 81  
 Graham, Helen Tredway, 86  
 Graham, Patrick G., 110  
 Grant, John M., 55  
 Grant, Naomi I. Rae, 97  
 Grant, Quentin Rae, 97  
 Grant, Samuel B., 54  
 Gray, Dean W., 75  
 Greco, Joseph T., 121  
 Greditzer, Arthur S., 97  
 Greendonner, Dorothy May, 82  
 Greene, Reams Glenn, 59  
 Greenman, Marshall B., 82  
 Greiver, S. Philip, 57  
 Griffo, Zora J., 110  
 Grisham, Joe W., 78  
 Gronau, Axel Reinhold, 55  
 Gross, Raymond, 121  
 Groves, Nancy M., 98  
 Gruenfeld, Gerhard E., 112  
 Guerra, Francisco, 86  
 Gulick, Charles R., 66  
 Guze, Samuel B., 53, 95

Haddock, James N., 97  
 Haffner, Heinz, 108  
 Hagemann, Paul O., 54  
 Hagemann, Virginia, 82  
 Halloran, Mark J., 57  
 Halpern, Lawrence K., 54  
 Hameed, Khalid, 78  
 Hampton, Oscar Perry, Jr., 108  
 Hampton, Stanley Forrest, 54

- Hankin, Norman, 83  
Hansel, French K., 74  
Hanser, S. Albert, 71  
Hardwicke, Henry, 121  
Hardy, Guerdan, 74  
Harford, Carl Gayler, 52  
Harkness, Donald R., 57  
Harper, Fleming B., 112  
Harrington, William J., 52  
Harris, A. Basil, 110  
Harris, Albert J., 75  
Harris, Jane, 98  
Harrison, Lee B., 55  
Harrison, Stanley Leonard, 82  
Hartmann, Alexis F., 7, 81  
Hartmann, Alexis F., Jr., 81  
Hartroft, Phyllis Merritt, 77  
Hartroft, Walter Stanley, 7, 77  
Hartstein, Jack, 72  
Harvin, James S., 112  
Hasson, Jack, 77  
Hatfalvi, Bela I., 109  
Hathecock, Alfred B., 110  
Hauk, Rosalind, 50  
Hawker, William D., 66  
Hawkins, George L., Jr., 109  
Hawkins, Kenneth A., 50  
Hawkins, Lee W., 55  
Hawkins, Rowland D., 98  
Hayden, Dean Eberhardt, 125  
Hayward, Samuel J., 68  
Hazlehurst, John L., 110  
Healy, Lucile, 97  
Heifetz, Carl J., 108  
Heinbecker, Peter, 107  
Hellam, Duane C., 57  
Helmreich, Ernst, 53  
Henry, William, 121  
Hershey, Falls Bacon, 108  
Herweg, John C., 7, 81  
Hess, Arthur, 47  
Hickok, Robert, 123  
Hicks, Robert S., 98  
Hildreth, Howard Rommel, 71  
Hilgartner, C. Andrew, 98  
Hines, Kenneth K., 105  
Hirsh, Ira J., 74  
Hirshberg, Richard M., 110  
Hixon, Barbara, 91  
Hobbs, John E., 7, 66  
Hodges, Fred J. III, 104  
Hoekstra, Lilly, 121  
Hofstatter, Leopold, 97  
Hogancamp, Charles, 55  
Holemon, Ralph E., 98  
Holmberg, Ake Sigurd, 71  
Holmes, David R., 68  
Holmes, Thomas G., 112  
Holscher, Edward C., 109  
Holt, Earl P., Jr., 109  
Holtz, Sumner, 105  
Hornbein, Thomas, 112  
Horner, John L., 55  
Hornung, Franz E., 97  
Horowicz, Paul, 88  
Horsh, Donald J., 120  
Huck, Richard F., 55  
Hudson, Loyde, 112  
Hug, George R., 50  
Hughes, Arthur L., 104  
Hulbert, Bernard, 55  
Humphrey, Harvey A., 104  
Hunter, Francis Edmund, Jr., 86  
Hutchinson, James Herbert, Jr., 55  
Hutto, Herman, 66  
Ilten, Patricia S., 7  
Imai, Hideshige, 78  
Irvin, William M., 98  
Ito, Eiji, 86  
Jabbari, Manzar, 67  
Jacobs, Charles C., 74  
Jacobs, Frederick August, 81  
Jacoby, Louise, 7  
James, William Mahlon, 71  
Jaudon, Joseph C., 81  
Jean, J. Ted, 56  
Jeanette, Eric, 112  
Jick, Sidney, 56  
Johnson, Alan G., 98  
Johnson, David S., 77  
Johnson, Lanny L., 110  
Johnson, Laverne C., 96  
Johnson, Margaret, 100  
Johnson, Mary Chapman, 58  
Johnson, Nathaniel C., 118  
Johnston, Glen Paul, 71  
Jones, Andrew B., 96  
Jones, Barbara, 81  
Jones, Dorothy Jeannette, 82  
Joseph, Harold J., 56

Jovanovich, Anica, 105  
Juden, Alexander G., Jr., 67  
Justus, Bertram William, 59

Kahn, Lawrence I., 82  
Kaiser, Helen, 7  
Kako, Kyohei, 59  
Kaku, Toshio Roy, 75  
Kaplan, Alex H., 96  
Karl, Michael M., 54  
Karsh, Robert S., 56  
Kashima, Haskins K., 110  
Kausch, Donald F., 99  
Kawasaki, Masashi, 75  
Kay, Foster, 57  
Kayes, Jack, 72  
Keating, Jose, 99  
Keating, Maria, 99  
Keller, Maurice J., 83  
Kelley, Isaac Dee, Jr., 74  
Kelley, Robert W., 56  
Keltner, Raymond M., Jr., 110  
Kempinsky, Warren H., 96  
Kendall, Barbara S., 97  
Kendig, John H., 110  
Kendis, Joseph B., 97  
Kern, Milton, 53  
Kerr, David Nafe, 56  
Kerr, Sara, 82  
Kettelkamp, George D., 54  
Khayat, Alexander V., 99  
Kheim, Teofil, 118  
Kienast, H., 99  
Kime, S. Wesley, 59  
King, Lucy J., 99  
King, M. Kenton, 7, 53, 91  
Kingsland, Robert C., 54  
Kinsky, Stephen C., 86  
Kipnis, David M., 53  
Kirchoff, Victoria, 58  
Kirk, John Esben, 52, 118  
Kirsch, Wolff M., 110  
Kirstein, Melvin B., 56  
Kissane, John, 78  
Klafl, Daniel D., 74  
Klein, Richard Lewis, 59  
Klein, William S., 56  
Kline, John, 112  
Klingberg, William, 81  
Klinge, Frederick W., 88, 112  
Klippel, Allen P., 112

Klosterman, Mary Agnes, 82  
Knock, Henry L., 83  
Knowles, Cornelia S., 121  
Knowlton, Norman P., Jr., 56  
Koch, Robert E., 56  
Koch, William E., Jr., 104  
Koenig, Karl F., 56  
Koerner, Kenneth Albert, 82  
Koger, Edward R., 110  
Kolker, Allan, 72  
Konicoff, Donald, 72  
Konikov, Nadya F., 78  
Kopp, Jules H., 112  
Korfhage, Quentin, 72  
Korner, Harold, 97  
Kountz, William Bryan, 54  
Kowert, Edward H., 97  
Kozak, Ida, 58  
Kraner, Justin F., 67  
Krasner, Julius, 121  
Krasnoff, Alan G., 97  
Krause, George L., 110  
Krause, James, 72  
Krebs, Otto St. Clair, 66  
Kubitschek, Paul Edward, 82, 97  
Kuhlman, Robert E., 113  
Kuhn, Charles, 78  
Kuttner, Marian, 83

Lacy, Paul E., 77  
Lake, Lorraine, 47, 123  
Lakes, John D., 58  
Lam, Robert L., 96  
Lamb, Wanda L., 97  
Lamberti, Joseph W., 97  
Landau, William M., 95  
Lane, Clinton Welsh, 52  
Lane, Daniel K., 57  
Lang, Stanley, 88  
Lange, Adolph Charles, 71  
Lange, Robert D., 53  
Larimore, Joseph W., 53  
Larson, Paul U., 56  
Lawrence, John V., 54  
Lee, Henry A., 105  
Lee, Ruth, 123  
Leff, Wenzel A., 57  
Lehrer, Gerard M., 86  
Leider, Robert J., 99  
Lermit, Geraldine R., 122  
Levin, Marvin E., 56

- Levitt, Joseph, 56  
Levy, Irwin, 95  
Levy, Jerome F., 110  
Lewis, David B., 105  
Ley, Albert P., 71  
Leydig, Stanley M., 109  
Liang, Howard S., 108  
Licklider, William L., 75  
Lieberman, David M., 56  
Liese, Grover Bernard, 67  
Liggett, Hiram S., 56  
Lipschitz, Ervin, 97  
Lischer, Carl Edward, 108  
Littauer, David, 121  
Lloyd, Ted, 121  
Loeb, Leo, 77  
Loeb, Virgil, Jr., 54, 77, 124  
Loeffler, John D., 99  
Lohr, Curtis H., 121  
Londe, Sol, 82  
London, Stanley L., 112  
Lonergan, Warren M., 56  
Long, Frank B., Jr., 67  
Long, Robert T. L., 110  
Longley, Neill B., 105  
Lonsway, Maurice J., 82  
Lonsway, Maurice J., Jr., 83  
Lottes, James Otto, 108  
Lourie, Herbert, 113  
Love, Jack W., 110  
Lowry, Oliver Howe, 7, 86  
Lucas, Zoltan J., 111  
Lund, Robert Herluf, 112  
Luse, Sarah A., 77  
Luten, Drew W., 53  
Lyman, Edward H., 74  
  
MacBryde, Cyril M., 53  
MacClure, J. Santiago, 74  
Mackey, Eugene J., 121  
Magee, William E., 56  
Maitland, Alexander, 111  
Mandelstam, Marilyn H., 86  
Mandelstam, Paul, 86  
Mangum, Addison G., 111  
Manting, George, 57  
Marco, Philip J., 99  
Marcus, Morris D., 54  
Margulis, Alexander R., 104  
Marieb, Norman J., 57  
Martin, Charles, 121  
  
Martin, John Barlow, 67  
Martin, Ruth E., 81  
Martinez-Okrassa, Gustavo, 99  
Martz, John C., 82  
Marx, Marvin H., 111  
Massie, Edward, 53  
Masters, William H., 66  
Mattarella, Diego, 91, 123  
Matthews, Martha E., 122  
Maughs, Sydney B., 96  
Max, Paul F., 67  
Maxwell, Richard W., 56  
Maze, Laurence E., 67  
Mazur, Herbert Arthur, 82  
McAfee, C. Alan, 109  
McCarroll, H. Relton, 108  
McClinton, Kathleen Doris, 82  
McClure, David, 82  
McClure, James N., Jr., 99  
McDonald, David G., 100  
McDougal, David B., Jr., 86  
McDowell, Frank, 7, 108  
McGavran, Malcolm, 78, 109  
McGregor, Dorothy, 124  
McIntosh, Elizabeth, 121  
McKee, Oliver A., 58  
McKinney, Joe Kent, 99  
McKinsey, John J., 57  
McKnelly, William V., Jr., 99  
McMahan, John H., 97  
McNalley, Frank P., 66  
McNalley, Michael, 67  
McNicol, George P., 59  
Meiers, Henry N., Jr., 111  
Meinberg, William H., 71  
Mernitz, Roland B., 111  
Merrims, Theodore, 68  
Meyer, John S., 111  
Meyer, Rose A., 91  
Meyerhardt, Milton H., 67  
Michael, Kenneth D., 97  
Middelkamp, J. Neal, 81  
Mikata, Atsuo, 78  
Mikhail, Girgis, 68  
Milder, Benjamin, 71  
Miles, Paul W., 71  
Miller, Alma, 99  
Miller, Dorothy I., 7  
Miller, James E., 71  
Miller, Marie, 122  
Mills, Dan C., 67

Mills, Warren B., 97  
Minnich, Virginia, 53  
Mishkin, Marvin R., 111  
Moe, Arnold S., 56  
Mohler, Daniel N., Jr., 59  
Mohler, Harry J., 121  
Monafo, William W., Jr., 111  
Monat, Seymour, 66  
Monsour, Victor, 109  
Montgomery, Austin F., 58  
Moor, William A., 72  
Moore, Blake W., 119  
Moore, Carl Vernon, 7, 52  
Moore, John D., Jr., 67  
Moore, Morris, 54  
Moore, Sherwood, 104, 118  
Morgan, Harry C., 109  
Morrin, Kevin Charles, 66  
Morrin, Peter A. F., 59  
Morrison, Frank Andrew, 67  
Morrison, George R., 57  
Morrisey, Thomas E., 82  
Mortensen, Frede, 56  
Moses, Robert A., 71  
Moses, Sylvia G., 72  
Mowrer, Marie, 100  
Moyer, Carl Alfred, 7, 107  
Mueller, Florence, 121  
Mueller, Robert J., 97  
Murphy, George E., 96  
Muschany, Norman K., 67  
Myrick, Sam E., Jr., 111

Nadler, Charles F., 57  
Naegle, Siegfried, 58  
Nakajima, Shinshu, 100  
Nall, Thomas M., 111  
Narahara, Hiromichi T., 50  
Nash, Helen, 82  
Nash, Homer, 83  
Nathan, Lester J., 112  
Nathenson, Stanley G., 57  
Natoli, Cornelius A., 111  
Neavles, Jackson C., 97  
Nelson, J. Roger, 56  
Newport, Gerald, 68  
Newton, Gordon, 57  
Newton, W. Neal, 82  
Newton, William T., 109  
Nickel, James F., 54  
Nicolai, Charles H., 107

Nissan, Shemuel, 113  
Nixon, Keaton, 121  
Noah, Joseph W., 54  
Noall, Matthew W., 66  
Noyori, Satoshi, 72  
Nunez, Nicholas, 99

Obayashi, Nobuko, 57  
Ochs, Lamar H., 56  
O'Connell, Margaret, 58  
Oda, Ruth, 83  
Odell, Richard T., 108  
Ogilvie, Robert W., 78, 109  
Ogura, Joseph H., 74  
Ohlwiler, David, 111  
Oikawa, Toshihiko, 100  
Okcuoglu, Ayhan, 83  
O'Keefe, Joseph Damon, 68  
Okun, Edward, 72  
O'Leary, James Lee, 95  
Olmsted, William H., 53  
O'Neal, Lawrence W., 112  
O'Neal, Patricia L., 96  
O'Neal, Robert M., 77  
O'Neill, John B., 67  
Onken, Henry D., 111  
Oppler, W., 97  
Orlowski, Tadeusz, 59  
Orup, Hans L., 67  
Ostrom, Andrew G., 72  
Ottensmeyer, Charles D., 99  
Owen, James W., Jr., 7, 56  
Owen, Robert F., 58  
Ozsoylu, Sinasi N., 83

Paddock, Richard S., 66  
Paine, Robert, 54  
Painter, Paul H., 82, 98  
Palmer, Kalman M., 78  
Panhorst, Harry E., 7, 120  
Papathanassiou, Socrates C., 59  
Pareira, Morton Donald, 107  
Parker, Brent Mershon, 54  
Parker, Charles Ward, 59  
Parker, William Bahlman, 7  
Parsons, Ernest Holden, 96  
Passonneau, Janet V., 86  
Patponpanij, Nongnuch, 59  
Patton, James R., Jr., 72  
Patton, Leslie E., 67  
Pauker, Jerome D., 98



Paul, Rajaiah, 99  
 Payne, Meredith J., 112  
 Peden, James C., Jr., 58  
 Peden, Joseph C., Jr., 109  
 Pennoyer, James, 67  
 Pennoyer, Miriam M., 81  
 Peppers, Gerald F., 58  
 Perez-Mesa, Carlos, 111  
 Perry, Horace Mitchell, 53  
 Perry, William David, 54  
 Petersen, Martin J., 58  
 Petersen, Robert J., 75  
 Peterson, Frederick D., 83  
 Peterson, Roy Reed, 47  
 Pettigrew, John D., 58  
 Pettit, Thomas H., 72  
 Pfeiffenberger, Franklin, 111  
 Pfeiffenberger, Mather, Jr., 109  
 Picken, Bruce F., 99  
 Pieniek, Rosemary, 83  
 Pierce, Eugenia M., 83  
 Piper, Harry, 121  
 Pittman, David J., 96  
 Pitts, Ferris N., Jr., 99  
 Platt, William R., 77  
 Pollack, Irvin Paul, 72  
 Pollard, James J., 111  
 Pollie, Donald M., 97  
 Porras, Manuel Vicente R., 75  
 Porras, Roberto, 113  
 Porta, Eduardo A., 78  
 Porter, George H. III, 58  
 Porter, Virginia P., 113  
 Post, Lawrence T., Jr., 71  
 Post, Martin Hayward, 70  
 Post, Stephen L., 99  
 Potter, Allen B., 74  
 Potter, Reese H., 98  
 Powers, William E., 104  
 Preisler, Paul W., 50  
 Price, Kenneth C., 56  
 Primakoff, Mildred Cohn, 50  
 Probst, J. G., 108  
 Proetz, Arthur W., 74  
 Purkerson, Mable L., 83  
 Quinn, Harold J., Jr., 75  
  
 Rachlin, Maxwell, 72  
 Rader, George B., 112  
 Raines, Jack A., 99  
 Rainey, Robert, 112

Rawe, Donald R., 122  
 Ray, Rathindra Nath, 59  
 Reas, Herman W., 83  
 Recant, Lillian, 52, 91  
 Regan, Michael J., 58  
 Reichlin, Seymour, 53, 91, 96  
 Reinhard, Edward Humphrey, 52, 104  
 Reiss, Eric, 53, 91  
 Renda, Yavuz A., 83  
 Rennard, Marvin, 68  
 Renzi, Eugene, 67  
 Reynolds, Fred C., 107  
 Richard, Frank O., 112  
 Richards, William R., 111  
 Richardson, Keith C., 47  
 Riddick, Frank A., Jr., 58  
 Rivera, Amelia, 68  
 Rizk, Mahfouz H., 67  
 Roark, Kenneth L., 83  
 Roberts, Harold K., 54  
 Roberts, Rufus, 72  
 Robins, Eli, 95  
 Robins, Lee N., 96  
 Robinson, Edith C., 82, 98  
 Robinson, Martin C., 58  
 Robinson, Paul I., 121  
 Roblee, Melvin A., 66  
 Rodriguez, Alberto, 113  
 Rodriguez, J. Antonio, 111  
 Rohlfing, Edwin H., 82  
 Rolf, Doris, 88  
 Rome, Leonard P., 83  
 Roodman, Herman Joseph, 56  
 Roos, Albert, 88, 107  
 Roper, Charles L., 109  
 Rose, Dalton Keats, 107  
 Rosecan, Marvin, 54  
 Rosenbaum, Harry David, 71  
 Rosenbaum, Herbert E., 98  
 Rosenzweig, Saul, 95  
 Roth, F. Dale, 72  
 Roth, Jesse, 58  
 Rothman, David, 67  
 Rouse, Ernest T., 54  
 Royce, Robert Killian, 109  
 Royston, Grandison D., 66  
 Rubin, Robert, 56  
 Ruch, Walter A., 67  
 Ruivivar, Felix, 99  
 Rupe, Wayne Arthur, 82  
 Russell, Herman E., 111

Sachar, Leo Aaron, 108  
 Sale, Llewellyn, 53  
 Sale, Llewellyn, Jr., 54  
 Saltzstein, Sidney L., 113  
 Salvador, Richard A., 86  
 Sanchez, Celestino, 59  
 Sanders, Theodore Eugene, 71  
 Sanderson, Arnold R., 86  
 Sands, Clarence J., 75  
 Sandstead, Harold H., 58  
 Santiago, Miguel, 111  
 Sargent, Frederick, 83  
 Sato, George, 83  
 Satterfield, John V. III, 111  
 Satterfield, Val B., 96  
 Sawyer, William D., 59  
 Schaefer, Robert F., 78  
 Schechter, Samuel E., 56  
 Scheer, George, 109  
 Scheff, Harold, 54  
 Schlansky, Seymour M., 83  
 Schlunk, Franz F., 78  
 Schneeberger, Eveline E., 58  
 Schneider, Sam F., 109  
 Schoen, Sheldon, 111  
 Schoepfle, Gordon Marcus, 88  
 Schultz, Earl R., 99  
 Schulz, Beatrice F., 123  
 Schuman, Stanley H., 82  
 Schwartz, Alfred S., 81  
 Schwartz, Frederick Oscar, 71  
 Schwartz, Henry Gerard, 107  
 Schwartz, Melvin M., 68  
 Schwartzman, Bernard, 82  
 Selafford, Ursula, 78  
 Scott, Wendell G., 104  
 Scrivner, Willard C., 66  
 Seddon, John Wickham, 56  
 Senturia, Ben H., 74  
 Serkes, Kenneth D., 109  
 Shaffer, Philip Anderson, 49  
 Shahan, Philip T., 71  
 Shank, Robert Ely, 7, 52, 91  
 Shannon, Mary, 111  
 Shapleigh, John Blasdel II, 56  
 Shatz, Burton A., 56  
 Shaw, Gordon, 78  
 Sherman, Alfred L., 66, 104  
 Sherry, Sol, 52  
 Shields, John R., 108  
 Shine, Lee C., 58  
 Shobe, Frank O., 98  
 Shore, Bernard, 88  
 Shore, Virgie G., 88  
 Shuman, Joseph, 100  
 Shumrick, Donald, 75  
 Siegel, Howard H., 72  
 Sierra, Gregorio, 78  
 Sila, Basri A., 99  
 Sila, Ulgan I., 83  
 Silberberg, Martin, 77  
 Silberberg, Ruth, 77  
 Silverman, Sol Richard, 74  
 Simon, Kenneth A., 72  
 Simon, William C., 111  
 Simril, Wayne A., 104  
 Sims, William A., Jr., 113  
 Sines, Jacob O., 97  
 Singleton, John M., 58  
 Sinkler, William H., 108  
 Sisk, James C., 56  
 Sisler, Jerry, 111  
 Sisson, Richard G., 109  
 Skerjance, Jeannette A., 86  
 Skilling, David Miller, Jr., 56  
 Skinner, John Spalding, 56  
 Sleator, William, Jr., 88  
 Sloan, James M., 67  
 Small, Jean E., 47  
 Smiley, William L., 67  
 Smit, Herbert M., 75  
 Smith, Carl H., 78  
 Smith, Catherine A., 74  
 Smith, J. Earl, 121  
 Smith, John Russell, 52  
 Smith, Kathleen, 96  
 Smith, Kenneth R., 47, 113  
 Smith, Margaret Gladys, 77  
 Smith, Milton, 56  
 Smith, Robert M., 56  
 Snodgrass, William T., 111  
 Solaric, Stojan, 119  
 Sommer, Conrad, 96  
 Sommer, Ross B., 56  
 Sorenson, George D., 78  
 Soule, Samuel D., 66  
 Spady, Herbert A., 111  
 Spivy, Dixon Flemen, 99  
 Spjut, Harlan J., 108  
 Spradling, Albert, Jr., 121  
 Stamp, Warren G., 109  
 Stead, George J., 105

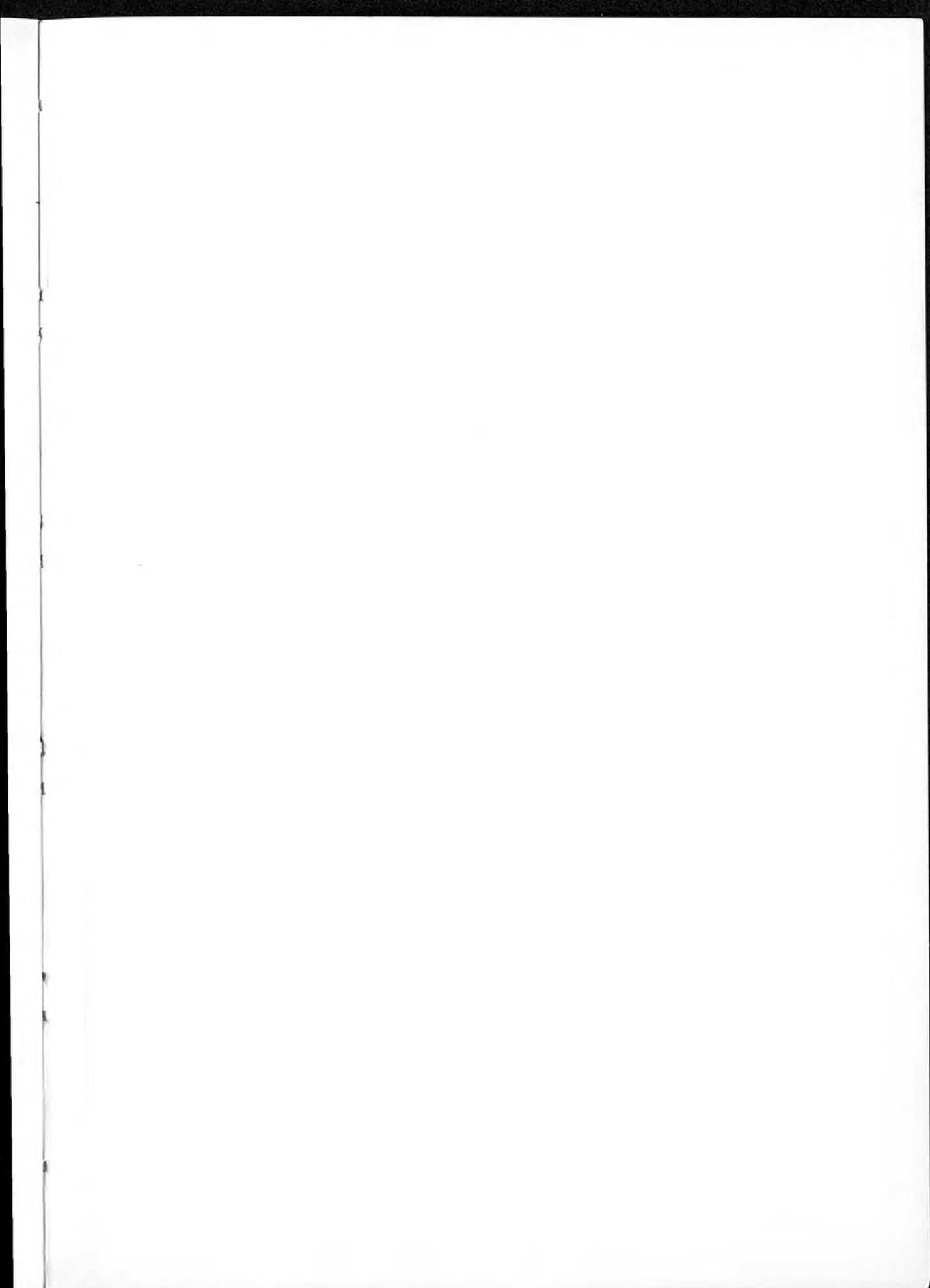
- Stears, John C., 105  
 Stein, Arthur H., Jr., 108  
 Stein, Martin F., 58  
 Steinberg, Franz U., 56  
 Steiner, Albin, 105  
 Stern, John A., 95  
 Stevenson, J. L., 72  
 Stewart, Frances Helen, 67  
 Stewart, Mark A., 99  
 Stickle, Arthur W., Jr., 72  
 Stohr, Paul E., 111  
 Stokes, James M., 108  
 Stratton, Harold L., 111  
 Strauss, Arthur E., 54  
 Strittmatter, Philipp, 50  
 Strominger, Jack, 86  
 Stroud, Malcolm H., 74  
 Stroud, Robert M., 58  
 Sturim, Howard S., 111  
 Stutsman, A. Chesterfield, 75  
 Sudholt, Alfred F., 68  
 Sugg, Winfred L., 111  
 Sullivan, William W., 58  
 Sumer, Emel Aktan, 99  
 Sumer, M. Cengiz, 99  
 Suntzeff, Valentina, 119  
 Surphlis, William, 100  
 Suzuki, Minoru, 78  
  
 Tabbert, Ellinere, 58  
 Tannenberg, Walter J., 58  
 Taussig, Barrett L., 54  
 Ter-Pogossian, Michel M., 104  
 Terry, Robert James, 47  
 Thomas, L. Dexter, 105  
 Thomas, Lewis J., Jr., 113  
 Thompson, Lawrence D., 54  
 Thornton, Helen Knott, 81  
 Thurston, Donald Lionell, 81  
 Thurston, Jean Holowach, 81  
 Thurston, Thomas W., 83  
 Tibbs, William A., Jr., 56  
 Tickle, Dewey Reid, 105  
 Tihen, Frances, 83  
 Tillman, Roosevelt L., 78  
 Tittsworth, Marjorie, 58  
 Tolmach, Leonard J., 104  
 Toomey, James M., 111  
 Toro, Gelson, 118  
 Toro, Jaime, 118  
 Tosteson, Dan C., 88  
  
 Trotter, Mildred, 47, 104  
 Trotter, William Yates, 58  
 Trueblood, Alva C., Jr., 67  
 Tsifutis, Argyrios A., 83  
 Tsuchiya, Hiromu, 54  
 Tuason, Vincente B., 100  
 Tubbs, Garth D., 122  
 Turner, James K., 83  
  
 Ulett, George Andrew, 95  
 Utiger, Robert David, 59  
 Utley, James H., 59  
  
 Vanderpearl, Robert H., 100  
 Vasquez, Mario Arthur, 113  
 Vavra, John D., 54  
 Veeder, Bordon Smith, 81  
 Velick, Sidney F., 50  
 Venable, Howard P., 72  
 Vermillion, Crofford O., 121  
 Viers, Wayne A., 75  
 Vitner, Saul, 67  
 Voegel, Barbara Nancy, 83  
 Vos, Helen, 125  
 Votaw, Robert E., 74  
  
 Wagle, Mangesh, 113  
 Wald, Stanley M., 56  
 Walker, Willard B., 109  
 Walsh, James W., 58  
 Walsh, Theodore E., 7, 73  
 Walsh, Thomas Joseph, 56  
 Walton, Franklin Edward, 108  
 Wang, I. Cheng, 118  
 Wang, Mae, 88  
 Wasserman, Helman C., 66  
 Waters, Hugh R., 56  
 Watkins, George L., Jr., 109  
 Watson, M. Frances, 91  
 Watson, Ronald K., 74  
 Wattenberg, Carl A., 108  
 Weathers, Marqua E., 7  
 Weber, Eugene P., 56  
 Weddell, Graham, 47  
 Wegner, Carl Reinhard, 66  
 Wegner, Wallace W., 58  
 Weichselbaum, Theodore E., 108  
 Weinstein, Willy J., 100  
 Weisman, Sol, 67  
 Weiss, Larry, 72  
 Weiss, Richard S., 52

Weiss, Stuart, 98  
Wender, Paul H., 58  
Wenneker, Alvin S., 57  
Wesley, Mary Elizabeth, 83  
Wessen, Albert F., 96  
West, Joseph Warren, 75  
White, Harvey Lester, 87  
White, Park J., 81  
Whitener, Betty Jean, 83  
Whitesides, Thomas, Jr., 111  
Wiegand, Herbert C., 57  
Wiener, Meyer, 70  
Wiese, Harry W., 57  
Williams, Carol F., 68  
Williams, Edward B., Jr., 57  
Williams, Margaret, 83  
Williams, Ray David, 54  
Williams, William J., 53  
Williamson, Joe R., 78  
Wilson, Hugh Monroe, 7, 47, 104  
Wilson, Keith Singleton, 54  
Wilson, William, 78  
Windhorst, Dorothy, 58  
Winokur, George, 95  
Winter, David L., 111  
Wissmath, Frank S., 82

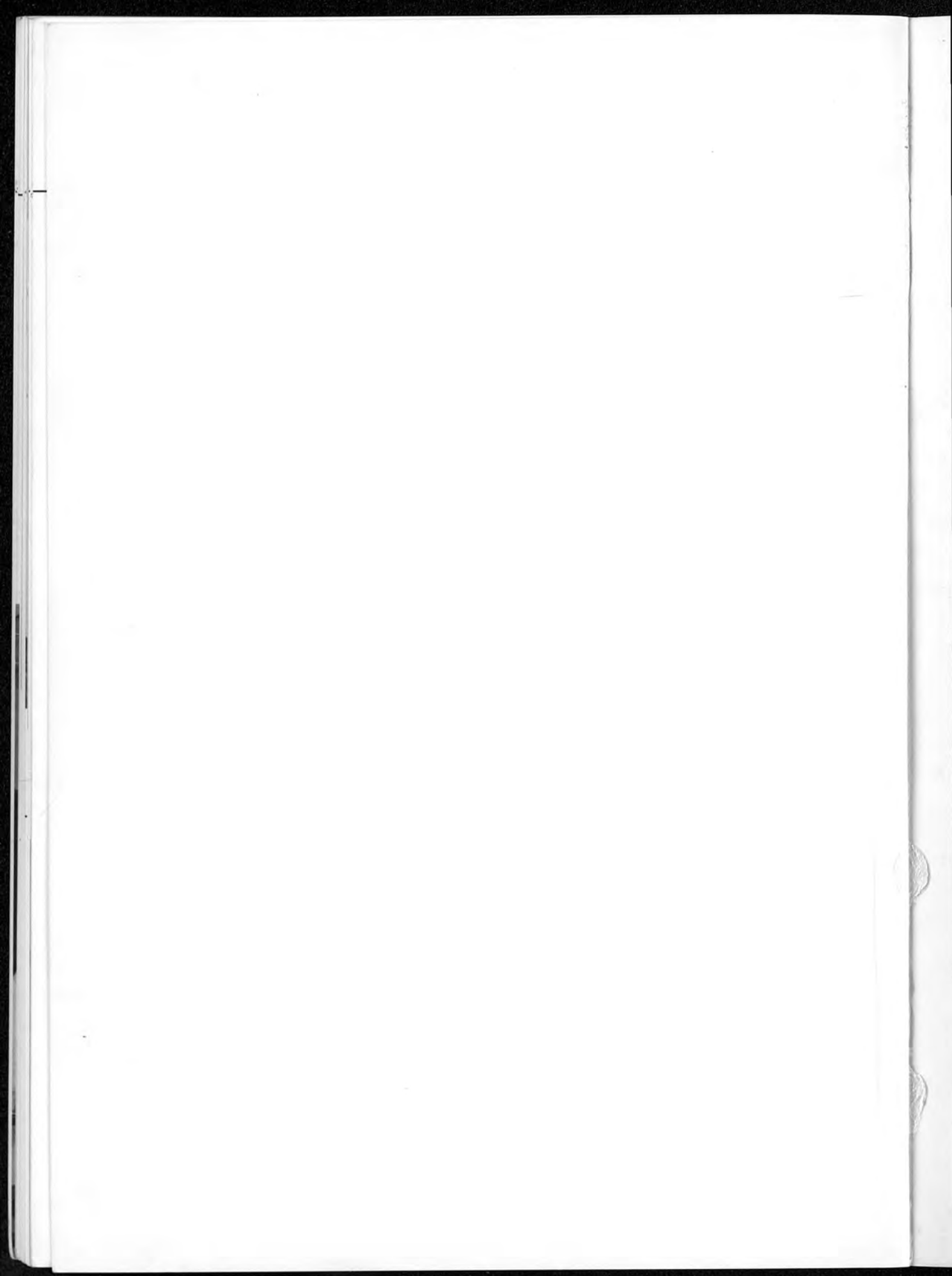
Wissner, Seth E., 67  
Withers, Elizabeth, 122  
Wohltmann, Hulda J., 81  
Wolff, Ray J., 67  
Wolfson, Sanford, 111  
Wood, James A., 57  
Woodruff, Frederick Eno, 71  
Woolf, Ralph B., 66  
Wortley, Neil, 121  
Wortman, Bernard, 71  
Wuerker, Raymond B., 58  
Wulff, George J. L., Jr., 66

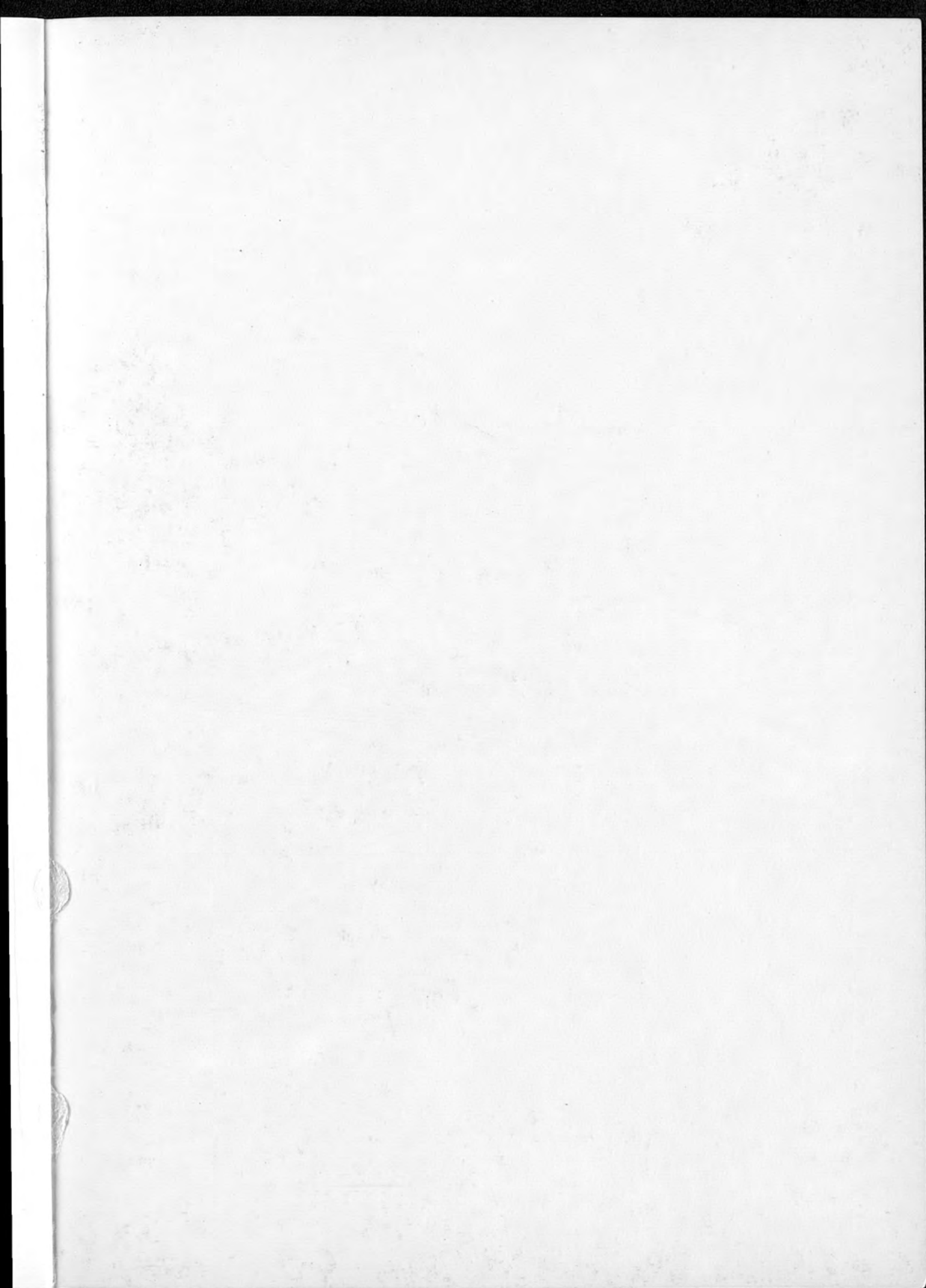
Yamashita, Tsuyoshi, 72  
Yanow, Mitchell, 67  
Yuan, Louis S. K., 78

Zentay, Paul J., 81, 98  
Zervos, Costas A., 83  
Ziern, Rae, 58  
Zimmerman, Herbert B., 57  
Zindell, Lilyan, 121  
Zink, Oscar C., 105  
Zwillinger, Eugene L., 100  
Zwillinger, Patricia G., 100









WASHINGTON UNIVERSITY • SCHOOL OF MEDICINE • SAINT LOUIS

