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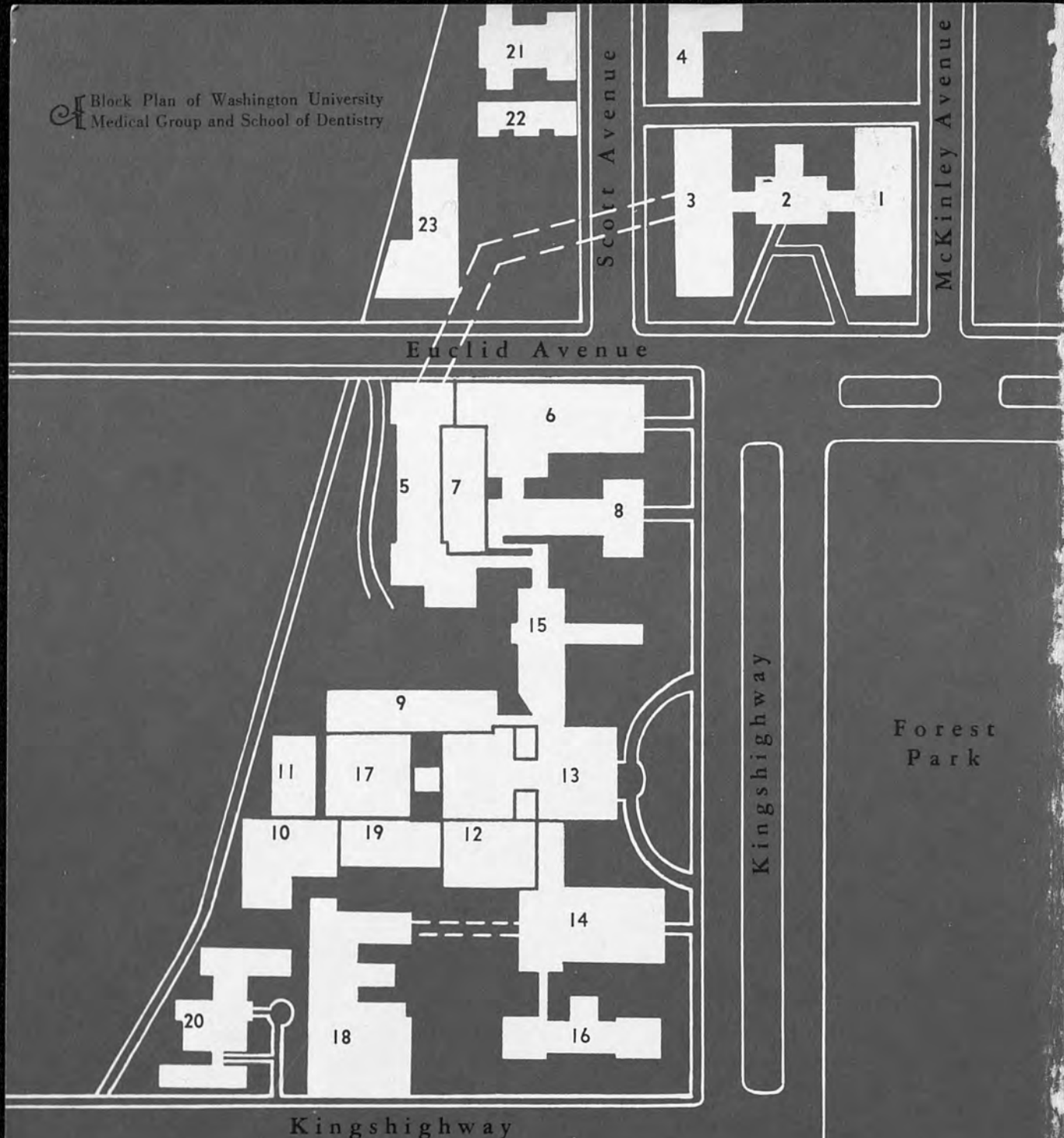


Bulletin  
of

WASHINGTON UNIVERSITY

SCHOOL OF MEDICINE

Block Plan of Washington University  
Medical Group and School of Dentistry



School of Medicine

- |  |   |  |   |
|--|---|--|---|
| 1—South Building<br>a. Biological Chemistry<br>b. Physiology<br>c. Pharmacology                                    | 5—West Building<br>a. Microbiology<br>b. Pathology<br>c. Preventive Medicine                | 10—Wohl Hospital.<br>Laboratories of<br>Experimental Medicine<br>and Surgery | 16—Private Pavilion and<br>Emergency Wards                        |
| 2—Research Building<br>a. Office of the Dean<br>b. Office of the Registrar<br>c. Department of Physical<br>Therapy | 6—McMillan Hospital and<br>Oscar Johnson Institute<br>a. Ophthalmology<br>b. Otolaryngology | 11—David P. Wohl, Jr.<br>Memorial—Washington<br>University Clinics           | 17—Service Building<br>a. Cafeteria<br>b. Diagnostic Laboratories |
| 3—North Building<br>a. Library<br>b. Auditorium<br>c. Anatomy  | 7—Irene Johnson<br>Rehabilitation Center  | 12—Edward Mallinckrodt<br>Radiological Institute                             | 18—St. Louis Children's<br>Hospital Pediatrics                    |
| 4—Spencer T. Olin<br>Residence Hall  | 8—St. Louis Maternity<br>Hospital<br>Obstetrics and Gynecology                              | Barnes Hospital  | 19—Barnard Free Skin and<br>Cancer Hospital                       |
|  | 9—Renard Hospital<br>Psychiatry and Neurology   | 13—Administration Building   | 20—School of Nursing<br>and Nurses Residence                      |
|  |   | 14—Rand-Johnson Memorial<br>Surgical Wing                                    | 21—School of Dentistry  |
|  |   | 15—Medical Wing  | 22—Department of Occupa-<br>tional Therapy                        |
|  |   |  | 23—Power Plant  |

*M. T. Truitt*  
*July 1962*



WASHINGTON UNIVERSITY

School  
of Medicine

St. Louis, Missouri

July, 1962

PUBLICATIONS OF WASHINGTON UNIVERSITY

SERIES II

VOLUME LX

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 30, Missouri. Second-class postage paid 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.



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<sup>1</sup> For the academic year 1961-62.

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

## ADMINISTRATIVE OFFICERS

### SCHOOL OF MEDICINE

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Edward W. Dempsey

*Dean*

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

M. Kenton King

*Associate Dean*

B.A., University of Oklahoma, 1947; M.D., Vanderbilt University, 1951.

William Bahlmann Parker

*Registrar and Secretary to  
the Executive Faculty*

A.B., University of Missouri, 1921.

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### OTHER OFFICERS OF THE SCHOOL OF MEDICINE

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*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

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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 five 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.

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## 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

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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.

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#### 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 West Building. The North Building contains the Medical School library, an auditorium, and the facilities of the Department of Anatomy. The Cancer Research Wing 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 West Building. The Student Health Service is also located in this building.

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#### 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 425. 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 163 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, 38 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 the late Dr. Evarts A. Graham and his associates, have been made at the Mallinckrodt Institute.

*David P. Wohl, Jr., Memorial Hospital.* The Wohl Hospital contains 83 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 building provides 34 beds for the treatment of indigent patients suffering from skin diseases and tumors. The Barnard

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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 106 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* provides training for personnel in rehabilitation procedures, facilities for treatment of disabled persons in the St. Louis metropolitan area, and an active research program relating to Chronic Diseases.

*The David P. Wohl, Jr. Memorial—Washington University Clinics* building was opened in May, 1961. Five floors of the building are used for Washington University Clinics and five floors are devoted to facilities for research. In addition a 225-seat amphitheatre is located on the ground floor.

In addition to the above named facilities which make up 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.

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## 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.

## GRADUATE TRAINING

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- (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. The gymnasium in the Spencer T. Olin Residence Hall is available for the use of medical students.
  - (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 Medical School.
- 

## 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 Programs. It represents a valuable advance in this area and offers distinct advantages to applicants.

The class of 1962, as did its predecessors, obtained excellent appointments; more than 80% 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

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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 and several individual study carrels are provided for the use of students. Three levels of stacks, which are open to students and faculty alike, are situated below the reading room. The Library contains (May 1, 1962) approximately 90,000 bound volumes and monographs, 2,300 pamphlets and government documents, and receives currently 1,100 medical periodical titles.

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 p. m. on Saturdays.

*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.*



# 1962

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

# 1963

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

# 1964

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	1	1 2 3 4 5 6 7	1 2 3 4
5 6 7 8 9 10 11	2 3 4 5 6 7 8	8 9 10 11 12 13 14	5 6 7 8 9 10 11
12 13 14 15 16 17 18	9 10 11 12 13 14 15	15 16 17 18 19 20 21	12 13 14 15 16 17 18
19 20 21 22 23 24 25	16 17 18 19 20 21 22	22 23 24 25 26 27 28	19 20 21 22 23 24 25
26 27 28 29 30 31	23 24 25 26 27 28 29	29 30 31	26 27 28 29 30
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	1 2 3 4 5 6	1 2 3 4	1
3 4 5 6 7 8 9	7 8 9 10 11 12 13	5 6 7 8 9 10 11	2 3 4 5 6 7 8
10 11 12 13 14 15 16	14 15 16 17 18 19 20	12 13 14 15 16 17 18	9 10 11 12 13 14 15
17 18 19 20 21 22 23	21 22 23 24 25 26 27	19 20 21 22 23 24 25	16 17 18 19 20 21 22
24 25 26 27 28 29 30	28 29 30	26 27 28 29 30 31	23 24 25 26 27 28 29
31			30 31



## CALENDAR

### 1962-63

Registration for all new students, Wednesday, September 12, 1962.

Registration for all former students, Friday, September 14, 1962.

Examinations for Advanced Standing and Removal of Conditions,  
Wednesday, September 12, and Thursday, September 13, 1962.

Academic year begins Monday, September 17, 1962.

First Trimester ends Saturday, December 8, 1962.

Holiday, Thanksgiving Day, Thursday, November 22, 1962.

Second Trimester begins Monday, December 10, 1962; ends Saturday March 16, 1963.

Christmas Recess, Saturday, December 22, 1962, at 1:00 p. m., to  
Monday, January 7, 1963, at 8:00 a. m.

Registration for second half-year, Monday, February 4, 1963.

Third Trimester begins Monday, March 18, 1963; ends Saturday, June 8, 1963.

Holidays, Good Friday, April 12, 1963, and Saturday, April 13, 1963.

Senior Research Program, Wednesday, April 17, 1963.

Holiday, Memorial Day, Thursday, May 30, 1963.

Final Examinations for first- and second-year classes begin Monday, June 10, 1963.

Commencement, Monday, June 10, 1963.

### 1963-64

Summer term for seniors begins June 24, 1963; ends September 14, 1963.

Registration for all new students, Wednesday, September 11, 1963.

Registration for all former students, Friday, September 13, 1963.

First Trimester begins Monday, September 16, 1963; ends Saturday, December 7, 1963.

Second Trimester begins Monday, December 9, 1963; ends Saturday, March 14, 1964.

Christmas Recess, Saturday, December 21, 1963, at 1:00 p. m., to  
Monday, January 6, 1964, at 8:00 a. m.

Third Trimester begins Monday, March 16, 1964; ends Saturday, June 6, 1964.

Commencement, Monday, June 8, 1964.

64-65

Wed. 9th

Mon. 14

Sat. 19, 1:00  
Mon. 4:30

1 Semester, 2013  
Jan 30  
Thanksgiving  
Nov 26

Make-up exam  
after Sept. 9, 2010



## ENTRANCE REQUIREMENTS

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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 experience in the techniques of quantitative analysis and a minimum of 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. Extra work in chemistry, especially physical 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 September 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

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Fourth Year: Medicine, Obstetrics and Gynecology, Pediatrics, Surgery, Ophthalmology (1/2), Otolaryngology (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 promotions 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.

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## 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.

### 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<sup>1</sup> in not more than 3 departments. These units will satisfy a part of the A.B. requirements relative to advanced courses.
3. In addition to completing at least 90 units of work in the College of Liberal Arts, 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.
4. A transfer student, to be eligible for the degree of Bachelor of Arts under the combined plan, must complete at least the last 30 units of A.B. work in full-time residence in the College of Liberal Arts of Washington University. He must also fulfill all other conditions listed above.
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.

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 \$1,200, 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

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<sup>1</sup> Courses numbered 301-302 and 401-402 in Air or Military Science may not be counted as advanced courses.

## FEES AND OTHER EXPENSES

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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. The requirements for a microscope are relatively simple and any of a wide variety of makes and models is equally satisfactory. In addition to obtaining a microscope that possesses good quality lenses and is in good working order, it is necessary that it be equipped with a substage condenser, three objectives (approximately 10X, 40X, and oil immersion 90X), and fine as well as coarse focusing. A mechanical stage is useful, and so is a very low power objective, either as a separate lens or as a portion of the 10X lens. There is no necessity to buy a binocular microscope; monocular models magnify just as well. Microscopes do not wear out rapidly, and a used microscope in good condition is just as useful as a new one and very much less expensive. From these considerations it should be clear that it is not necessary to go heavily in debt to buy a microscope.

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.

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## 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 .....	\$1,200.00
Health Service Fee .....	60.00
Books and Instruments .....	\$ 100.00 to 200.00
Room, Board, and Incidentals .....	1,100.00 to 1,475.00
	<hr/>
	\$2,460.00 to \$2,935.00



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REGISTRATION

Registration for the first half-year of 1962-63 is scheduled for Wednesday, September 12 (new students) and Friday, September 14 (former students); for the second half-year, Monday, February 4, 1963.

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.

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## 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.

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## THE SPENCER T. OLIN RESIDENCE HALL

The Spencer T. Olin Residence Hall was made possible by generous gifts from Spencer T. Olin, alumni of the School of Medicine, and friends of the School.

This residence, located at 4550 Scott Avenue in the Medical Center, has accommodations for 295 single men and women students. The interior arrangement is much like a modern hotel. The main floor has a mail room, letter boxes, and a large lounge. The ground floor has a snack bar, music rooms, a laundry, and meeting rooms. A two-story gymnasium is 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, are available for use by the students.

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

Effective in June, 1963, the rates for rooms will be as follows:

*School year: September to June (9 months)*

\$450 per student in 2-room suite (2 students per suite)

400 for student in single room

325 per student in double room



## STUDENT RESEARCH FELLOWSHIPS

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### *Summer: For Three Months*

\$150 per student in 2-room suite  
135 per student in single room  
100 per student in double room

### *Summer: Weekly Rates*

\$11.50 per student in 2-room suite  
10.00 per student in single room  
8.50 per student in double room

### *Daily Rates for Visitors*

\$5.00 per person in 2-room suite  
4.50 per person in single room  
3.00 per person if undergraduate student, prospective student,  
or graduate student.

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## VETERANS ADMINISTRATION

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

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## 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 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. Paul E. Lacy, Dr. A. Duncan Chiquoine (Secretary),  
Dr. Edward W. Dempsey (Chairman).

## FELLOWSHIPS AND SCHOLARSHIPS

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**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:

<i>Central</i>	<i>Local—Central</i>	<i>Northern</i>
Arkansas	Missouri	Idaho
Kansas		Iowa
Louisiana		Michigan
Oklahoma		Minnesota
Texas		Montana
Canal Zone		Nebraska
		North Dakota
		South Dakota
<i>East—Southeast</i>	<i>Mid-Western</i>	Wisconsin
Alabama	Illinois	Wyoming
Delaware	Indiana	
Florida	Ohio	
Georgia		
Kentucky		
Maryland		<i>Western</i>
Mississippi		Alaska
New Jersey		Arizona
North Carolina		California
Pennsylvania	<i>Northeastern</i>	Colorado
South Carolina	Connecticut	Hawaii
Tennessee	Maine	Nevada
Virginia	Massachusetts	New Mexico
West Virginia	New Hampshire	Oregon
Washington, D. C.	New York	Utah
Puerto Rico	Rhode Island	Washington
Virgin Islands	Vermont	Pacific Islands

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, the stipends will vary with the financial resources of the students. If 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-around 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 consists 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 tuition remission 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 this endowment fund of \$15,000 provides one or more scholarships for qualified, worthy, and deserving students.

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 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 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 by the Chancellor on the recommendation of the Dean and the Professor of Pediatrics, preferably to a deserving young man who shows promise in the field of pediatrics.

BEULAH B. STRICKLING SCHOLARSHIP. Through the bequest of the late Mrs. Beulah B. Strickling, \$5000 has been given to the School of Medicine for scholarships.

## FELLOWSHIPS AND SCHOLARSHIPS

**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.

**THE TEAMSTERS LABOR-MANAGEMENT CHARITABLE FOUNDATION SCHOLARSHIP FUND** of \$1,500 is available for scholarships in the School of Medicine. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

**JOSEPH H. SCHARF SCHOLARSHIP.** Through the bequest of Dr. Joseph H. Scharf, the annual income from \$2,418 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.

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





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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 provides scholarships for students in the School of Medicine.

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 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.

THE GEORGE W. MERCK MEMORIAL LOAN FUND. Through the gift of the Merck Company Foundation, \$20,000 is available as a loan fund to encourage deserving interns and residents to seek the best possible postgraduate training.

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.

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## 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. CHOUKÉ 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 JAMES HENRY YALEM PRIZE IN DERMATOLOGY, established through the generosity of Mr. Charles Yalem, is awarded annually to a member of the senior class for outstanding work in dermatology.

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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 bona fide 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 bona fide 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 fifty dollars each are awarded to the outstanding members 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.

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LECTURESHIPS

The Mu Chapter of the Phi Beta Pi fraternity established an annual lectureship in honor of the late Dr. Leo Loeb.

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 lectureship honoring Dr. George H. Bishop has been established by his friends.

Friends of the late Dr. Philip A. Shaffer have established a lectureship in his honor.



*The Spencer T. Olin Residence Hall  
for medical students.*

## CLASS SCHEDULE • FIRST YEAR

FIRST SEMESTER—September 17, 1962, through February 2, 1963

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

\* Biostatistics for last 6 weeks of first semester.

Anatomy for first 12 weeks of first semester.

\*\* Health and Health Maintenance for first 12 weeks of first semester from 1:30 to 2:30.

Anatomy for last 6 weeks of first semester.

SECOND SEMESTER—February 4 through June 8, 1963

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

\* Biostatistics for first 6 weeks of second semester.

Physiology for last 12 weeks of second semester.

## CLASS SCHEDULE • SECOND YEAR

### FIRST TRIMESTER—September 17 through December 8, 1962

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	"	"	Free	"	Free	
3 to 4	"	"		"		
4 to 5	"	"		"		

### SECOND TRIMESTER, 1st half (6 weeks)—December 10-22, 1962, and January 7—February 2, 1963

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 Diagnosis	Microbiology	Free	Microbiology	Clinical Diagnosis	
3 to 4		"		"		
4 to 5		"		* "		

\* 12 hours of Parasitology during this period.

### SECOND TRIMESTER, 2nd half (6 weeks)—February 4 through March 16, 1963

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



CLASS SCHEDULE—SECOND YEAR

THIRD TRIMESTER—March 18 through June 8, 1963

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

\*\* 6 hours of Parasitology during this period.

## 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 17 through December 8, 1962 Group C—Second Trimester, December 10-22, 1962, and January 7 through March 16, 1963 Group B—Third Trimester, March 18 through June 8, 1963					
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					Medicine Clinic
2 to 3						
3 to 4						
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. 17 through Dec. 8, 1962			Radiology 8:30 to 10	CLERKSHIP	
10 to 11				Otolaryngology		
11 to 12	Group A—Second Trimester Dec. 10-22 and Jan. 7 through March 16, 1963			Ophthalmology		
12 to 1				C P C	Medicine Clinic	
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 17 through December 8, 1962 Group B—Second Trimester, December 10-22, 1962, and January 2 through March 16, 1963 Group A—Third Trimester, March 18 through June 8, 1963					
10 to 11						
11 to 12						
12 to 1	Section I—Pediatrics Section II—Ob. & Gyn. Sections change at end of 6-week period			C P C		Medicine Clinic
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 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—Second trimester, December 10-22, 1962, and January 7 through March 16, 1963 Group B—First trimester, September 17 through December 8, 1962 Group C—Summer term, June 18 through September 8, 1962 Group D—Third trimester, March 18 through June 8, 1963					
10 to 11						
11 to 12						
12 to 1		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), Pediatrics (Groups change at end of 3 weeks) Group (b), Obstetrics					
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 Tuesdays from 4 to 5 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—Summer term, June 18 through September 8, 1962 Group B—Third trimester, March 18 through June 8, 1963					
10 to 11						
11 to 12	Group C—Second trimester, December 10-22, 1962, and January 7 through March 16, 1963 Group D—First trimester, September 17 through December 8, 1962 Section I—Electives      Section II—Medicine					
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 Tuesdays from 4 to 5 p. m. This course is required of all senior students.

# CLASS SCHEDULE—FOURTH YEAR

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

Group A—Third trimester, March 18 through June 8, 1963

Group B—Second trimester, December 10-22, 1962, and January 7 through March 16, 1963

Group C—First trimester, September 17 through December 8, 1962

Group D—Summer term, June 18 through September 8, 1962

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

Hours	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 Tuesdays from 4 to 5 p. m. This course is required of all senior students.

## ELECTIVE OR FREE TIME (12 weeks)

Group A—First trimester, September 17 through December 8, 1962

Group B—Summer term, June 18 through September 8, 1962

Group C—Third trimester, March 18 through June 8, 1963

Group D—Second trimester, December 10-22, 1962, and January 7 through March 16, 1962



# TABLE OF REQUIRED HOURS — 1962-1963

<i>First Year</i>	<i>Clock Hours</i>
Anatomy .....	636
Biological Chemistry .....	324
Physiology .....	294
Biostatistics .....	24
Medical Psychology .....	18
	<hr/>
	1296 Total Hours
 <i>Second Year</i>	
Pharmacology .....	216
Microbiology .....	252
Pathology .....	336
Conjoint Medicine	
Clinical Diagnosis .....	144
Laboratory Methods of Diagnosis .....	144
Pathologic Physiology .....	30
Introduction to Surgery .....	18
Pathology of Behavior .....	60
Prevention and Control of Disease .....	12
Parasitology .....	36
	<hr/>
	1248 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 5310 clock hours

DEPARTMENTS OF  
THE SCHOOL OF MEDICINE

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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 and Head of the Department of Anatomy, demonstrating a new electron microscope to Dr. Jack Davies, Professor of Anatomy, and Dr. E. Amoroso and Dr. J. Dixon Boyd, visitors from England.*

## 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*

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)

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., Mount Holyoke College, 1920; Sc.M., Washington University, 1921; Ph.D., 1924; Sc.D. (hon.), Western College, 1956; Sc.D. (hon.), Mount Holyoke College, 1960. (See Department of Radiology)

*Professors Emeriti*

Edmund Vincent Cowdry, A.B., University of Toronto, 1909; Ph.D., University of Chicago, 1912.

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

*Associate Professors*

Estelle Brodman (Medical History in Anatomy), A.B., Cornell University, 1935; B.S., Columbia University, 1936; M.S., 1943; Ph.D., 1953.

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

Sarah A. Luse, A.B., Rockford College, 1940; M.D., Western Reserve University, 1949. (See Department of Pathology)

*Associate Professor Emeritus*

Valentina Suntzeff, M.D., Women's Medical Institute (Petrograd, Russia), 1917. (Also holds title of Lecturer)

## 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 comple-

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

*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.

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

Bryce L. Munger, M.D., Washington University, 1958.

Roy Reed Peterson, A.B., University of Kansas, 1948; Ph.D., 1952.

*Instructor*

Robert H. Laatsch, B.A., Park College, 1955; M.D., Washington University, 1959.

*Research Instructor**(Cancer Research)*

Guy Rodman Davenport, B.S., University of New Hampshire, 1953; M.S., 1955; Ph.D., University of Wisconsin, 1960.

*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 Assistants*

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

Helen B. Ferguson, A.B., Ohio State University, 1940.

ment the current dissections; cine-radiographs are presented regularly; and a collection of radiographs is loaned to each student. Fresh organs are provided for demonstration 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, Peterson)

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, Cohen, Davies, Laatsch, Munger)

#### 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.

### *Professors*

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

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

*Associate Professors*

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

Luis Glaser, B.A., University of Toronto, 1953; Ph.D., Washington University, 1956.

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

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

*Assistant Professors*

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

Hiromichi T. Narahara, B.A., Columbia University, 1943; M.D., 1947.

*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.

*Research Assistant*

Carmelita Lowry, B.S., University of Illinois, 1944.

*Fellow*

Hulda Wohltmann (Research) (July 1 to Oct. 31, 1962) (See Department of Pediatrics), B.S., College of Charleston, 1944; M.D., Medical College of South Carolina, 1949.

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; second semester. 306 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. Sol Sherry, Professor of Medicine, demonstrates significant physical findings on a patient who is being presented to a clinical conference attended by junior and senior medical students, house staff and members of the medical faculty.*

## THE JOHN MILLIKEN DEPARTMENT OF MEDICINE

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(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
Dermatology .....	Dr. Lane
Gastroenterology .....	Dr. M. Peterson
Hematology .....	Dr. Harrington
Hypertension .....	Dr. H. M. Perry
Immunology .....	Dr. Charles Parker
Infectious Diseases .....	Dr. Harford
Malignant Disease .....	Dr. Reinhard
Metabolic Disease .....	Dr. Daughaday

Nutrition .....	Dr. Shank
Psychosomatic Medicine .....	Dr. Guze
Pulmonary Diseases .....	Dr. A. Goldman, Dr. Kilburn
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 juniors. 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*

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*

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

Hugh Chaplin, Jr., A.B., Princeton University, 1943; M.D., Columbia University, 1947. (Commonwealth Fund Fellow on leave of absence for study in London, England, effective September 1, 1962.) (See Department of Preventive Medicine)

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)

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

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

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

B. V. Jager, A.B., Harvard University, 1934; M.D., 1938. (See Department of Preventive Medicine and Public Health)

David M. Kipnis, A.B., Johns Hopkins University, 1945; M.A., 1949; M.D., University of Maryland, 1951.

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)

Eric Reiss, B.S., Randolph-Macon College, 1943; M.D., Medical College of Virginia, 1948. (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.

#### *Lecturers*

Mary M. Lewis (Medical Social Work), A.B., University of Iowa, 1933; M.S.W., Washington University, 1946.

Hiromu Tsuchiya, A.B., University of Missouri, 1913; Sc.D., Johns Hopkins University, 1930. (See Department of Microbiology)

#### *Assistant Professors*

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

Elmer B. Brown, Jr. (National Institute of Arthritis and Metabolic Diseases Trainee) (Hematology), A.B., Oberlin College, 1946; M.D., Washington University, 1950.

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

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

Kaye H. Kilburn, B.S., University of Utah, 1951; M.D., 1954.

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

David Miller, B.S., City College of New York, 1949; M.D., Harvard University, 1953.

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

Horace Mitchell Perry, M.D., Washington University, 1946.

Malcolm L. Peterson, B.S., Stanford University, 1950; M.D., University of Washington, 1954; Ph.D., The Rockefeller Institute, 1960.

#### *Visiting Assistant Professor*

Evert Joost Dorhout Mees (U.S.P.H.S. Advanced Trainee) (Renal), M.D., Utrecht State University, 1951.

#### *Research Assistant Professors*

Ann Reubenía Dubach, A.B., Bryn Mawr College, 1919; M.S., University of Colorado, 1935; Ph.D., 1938.

Norma A. Fletcher, M.S. (Chemical Engineering), The Technical University, Copenhagen, Denmark, 1949.

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.

John W. Berry, B.S., University of Toledo, 1943; M.D., St. Louis University, 1946.

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

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

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

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

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

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

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

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

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.

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

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.

Norman P. Knowlton, Jr., B.S., Harvard University, 1942; M.D., 1945.

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

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

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

Morris Moore (Mycology) (Dermatology), S.B., Boston University, 1923; 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, 1923; M.D., Washington University, 1932.

Thomas Joseph Walsh, B.S., University of Richmond, 1946; M.D., Washington University, 1949.

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)*

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

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.

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

#### *Instructors*

Greta Camel, A.B., University of Wisconsin, 1946; M.D., 1949. (On leave of absence)

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

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

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

Robert Packman, A.B., Washington University, 1953; B.S. in Medicine, University of Missouri, 1954; M.D., Washington University, 1956.

Charles Ward Parker, M.D., Washington University, 1953.

James C. Peden, Jr., A.B., Haverford College, 1951; M.D., Washington University, 1955. (See Department of Preventive Medicine and Public Health)

John D. Vavra, B.A., University of Colorado, 1950; M.D., Washington University, 1954. (See Department of Preventive Medicine and Public Health)

Adel A. Yunis (Leukemia Society Scholar), B.A., American University of Beirut, 1950; M.D., 1954.

#### *Research Instructor*

Mary C. Parker, B.S., Florida State University, 1946; M.S., 1949; M.D., Washington University, 1953.

#### *Instructors (Clinical)*

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

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

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, A.B., Washington University, 1948; M.D., Chicago Medical School, 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. (On leave of absence)

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.

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.

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. F lance, 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.

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

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

Neville Grant, A.B., Yale University, 1950; M.D., Columbia 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.
- 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.
- Milton Kardesch, B.A., University of Buffalo, 1950; M.D., 1954.
- 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.
- 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.
- Oliver A. McKee (Dermatology), L.R.C.P., Royal College of Physicians and Surgeons (Dublin), 1949; S.M., 1949.
- Robert S. Mendelsohn, B.A., Washington and Lee University, 1950; M.D., Washington University, 1954.
- Arnold S. Moe, B.S., University of Minnesota, 1938; M.B., 1939; M.D., 1940.
- Austin F. Montgomery, M.D., University of Pittsburgh, 1954.
- Arlen E. Morrison, A.B., Washington University, 1954; M.D., 1958.
- 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.
- Robert F. Owen, B.A., Princeton University, 1948; M.D., Yale University, 1952.
- Kenneth C. Price, M.D., University of Washington, 1951.
- Herman Joseph Roodman, 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.
- James W. Walsh, A.B., Washington University, 1950; M.D., 1954.
- 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.

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

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

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

#### *Instructors Emeriti (Clinical)*

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

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

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

#### *Assistants*

Robert H. Alford, B.A., Vanderbilt University, 1958; M.D., 1961.

Daniel D. Beard, A.B., DePauw University, 1957; M.D., Washington University, 1961.

Paul Beck, A.B., Harvard University, 1955; M.D., University of Colorado, 1961.

Ruth Berg, R.N.

Clifford A. Birge, A.B., Amherst College, 1956; M.D., Washington University, 1961.

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

Margaret Brady, R.N.

Homer L. Brannell, B.A., University of Connecticut, 1957; M.D., McGill University, 1961.

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

Lynn Brownell, R.N.

George Leslie Cohen, A.B., New York University, 1958; M.D., 1962.

Zoros Patterson Colglazier, M.D., Southwestern Medical School, 1962.

John P. Conder, B.S., University of Oregon, 1960; M.D., Washington University, 1962.

Josephine Davis, R.N.

Gilles M. Desmarais, A.B., Harvard University, 1957; M.D., New York University, 1961.

Diane Dunn, R.N.

William E. Eggerton (Dermatology), B.S., Louisiana State University, 1953; M.D., 1956.

H. Kenneth Fisher, B.A., Carleton College, 1955; M.D., Washington University, 1962.

Monroe A. Gross, A.B., Harvard University, 1957; M.D., Washington University, 1962.

Susan Hackman, R.N.

G. Randolph Hand, B.A., Southern Illinois University, 1958; M.D., Johns Hopkins University, 1962.

Susanne Harrison, R.N.

James N. Heins, A.B., University of Louisville, 1957; M.D., 1961.

Jane Henderlite, R.N.

Marianne Hoffner, R.N.

John S. Holcenberg, A.B., Harvard University, 1956; M.D., University of Washington, 1961.

Seymour Jotkowitz, B.A., Yeshiva University, 1958; M.D., Albert Einstein University, 1962.

William G. Juergens, M.D., Washington University, 1961.

Harvey S. Kantor, M.D., Washington University, 1962.

Charles M. Kantrow, Jr., M.D., Louisiana State University, 1961.

Robert E. Kleiger, B.A., Yale University, 1956; M.D., Harvard University, 1960.

Guy E. Knolle, Jr., B.A., University of Texas, 1958; M.D., Tulane University, 1962.

Raymond Steven Koff, B.A., Adelphi College, 1958; M.D., Albert Einstein University, 1962.

Stuart Arthur Kornfeld, A.B., Dartmouth College, 1958; M.D., Washington University, 1962.

James Lawrence III, A.B., Harvard University, 1958; M.D., Boston University, 1962.

Charles L. Lutchner, A.B., Whitman College, 1957; M.D., Washington University, 1961.

Edwin J. Macon, A.B., Haverford College, 1958; M.D., University of Chicago, 1962.

John Maesaka, B.A., Harvard University, 1957; M.D., Boston University, 1961.

Richard E. Marshall, B.A., Wesleyan University, 1954; M.D., Yale University, 1962.

Hiroshi Matsuo, M.D., University of Tokyo, 1960.

- Eileen Mattingly, R.N.  
 Kathryn McCain, R.N.  
 Ronald Baker Miller, A.B., Princeton University, 1954; M.D., Columbia University, 1958.  
 Carl E. Mitchell, A.B., Washington University, 1957; M.D., 1961.  
 David L. Murphy, M.D., Northwestern University, 1961.  
 John A. Nickell, Jr., A.B., Oklahoma Baptist University, 1957; M.D., Baylor University, 1961.  
 Margaret O'Connell, R.N.  
 Alan Jay Ominsky, B.A., University of Pennsylvania, 1958; M.D., 1962.  
 George Perlstein, B.S., Yale University, 1957; M.D., University of Florida, 1962.  
 Helen Petty, R.N.  
 Peter E. Pool, B.A., Yale University, 1958; M.D., New York University, 1962.  
 David L. Ralphing, B.A., George Washington University, 1958; M.D., 1962.  
 Dorothy Clara Rasinski, A.B., Cornell University, 1949; LL.B., 1951; M.D., University of Buffalo, 1959.  
 Carl E. Reiner, M.D., Tufts University, 1962.  
 David M. Reisler, A.B., Harvard University, 1957; M.D., Washington University, 1961.  
 Francis M. Rembert, B.S., University of the South, 1958; M.D., Washington University, 1962.  
 Max Robinowitz, B.S., Georgetown University, 1957; M.D., 1961.  
 Michael A. Rossi, B.S., Fairfield University, 1958; M.D., St. Louis University, 1962.  
 Thomas M. Schenk, B.A., Wayne State University, 1958; M.D., 1962.  
 Sheldon Schlaff, A.B., Columbia University, 1958; M.D., Washington University, 1962.  
 Gabriel H. Schwartz, A.B., Princeton University, 1958; M.D., Columbia University, 1962.  
 Robert M. Senior, A.B., Oberlin College, 1957; M.D., George Washington University, 1961.  
 William H. Sheffield, B.A., Yale University, 1957; M.D., George Washington University, 1961.  
 David Frederick Silbert, A.B., Harvard University, 1958; M.D., 1962.  
 Charles M. Singleton II, A.B., Princeton University, 1958; M.D., Washington University, 1962.  
 Jay Wesley Smith, A.B., Columbia University, 1958; M.D., Washington University, 1962.  
 John C. Soucy, Jr., B.S., University of Notre Dame, 1957; M.D., St. Louis University, 1961.  
 Marshall Sparberg, A.B., Northwestern University, 1956; M.D., 1956.  
 C. Craig Tisher, A.B., B.S., University of South Dakota, 1958; M.D., Washington University, 1961.  
 Marjorie Tittsworth, R.N.  
 James E. Vance, M.D., University of Tennessee, 1962.  
 Clarissa Walker, R.N., A.B., Southwestern University, 1930.  
 James F. Wallace, A.B., Washington University, 1957; M.D., 1961.  
 Peter N. Walsh, B.A., Amherst College, 1957; M.D., Washington University, 1961.  
 Shirley S. Wang, B.A., Fresno State College, 1958; M.D. Stanford University, 1962.  
 Charles A. Winterling, B.A., Oberlin College, 1954; M.D., University of Rochester, 1958.  
 Lawrence Kenneth Wolfe, A.B., Vanderbilt University, 1957; M.D., 1960.  
 Raymond B. Wuerker, A.B., Johns Hopkins University, 1955; M.D., 1959.  
 Jackson J. Yium, B.A., University of Texas, 1958; M.D., 1962.  
 Rae Ziern, R.N.
- Research Assistants*  
 Grace K. Arimura, B.S., Harding College, 1950.  
 Frank R. Deitz, B.S., University of Illinois, 1950.  
 Mary Chapman Johnson, A.B., Washington University, 1938.  
 Victoria Kirchoff.  
 Jasper P. Lewis, B.A., University of Virginia, 1946; M.S., University of Louisville, 1958.  
 Ida Kozak Mariz, A.B., Washington University, 1940.  
 Mary Louise Rother, A.B., Valparaiso University, 1956.  
 Aniece A. Yunice, B.A., American University of Beirut, 1948; M.S., Wayne State University, 1958.

*Fellows and Trainees*

Michiyasu Awaii (U.S.P.H.S. Trainee in Hematology), B.S., Osaka College, 1948; M.D., Okayama University, 1953; Ph.D. (Medicine), 1959.

Fedor Wolfgang Bachmann (U.S.P.H.S. Trainee in Enzymology), M.D., University of Zurich, 1953.

Frank Cary (U.S.P.H.S. Trainee in Infectious Diseases), B.S., St. Bonaventure College, 1951; M.D., St. Louis University, 1959.

Koo-Young Chung (Cardiology), B.S., Seoul National University, 1953; M.D., 1957.

Mark H. Cooley (U.S.P.H.S. Trainee in Hematology), M.D., Boston University, 1960.

Raymond V. Damadian (Renal), B.S., University of Wisconsin, 1956; M.D., Albert Einstein College of Medicine, 1960.

Alinaghi Farrokh (U.S.P.H.S. Trainee in Cardiology), M.D., University of Tehran, 1956.

Sharon Fischer (U.S.P.H.S. Trainee in Enzymology), M.D., University of Bucharest, 1949.

Johannes Gormsen (U.S.P.H.S. Postdoctoral Research Fellow), M.D., University of Copenhagen, 1957.

Mark J. Halloran (U.S.P.H.S. Trainee in Hematology), M.D., Marquette University, 1959.

Reginald C. S. Ho (Hematology), M.D., St. Louis University, 1959.

Ronald Kalkhoff (U.S.P.H.S. Trainee in Metabolism), B.A., Yale University, 1956; M.D., Washington University, 1960.

Chanan Karsai (Hematology), M.D., University of Vienna, 1953.

Philip Dib Khuri (U.S.P.H.S. Trainee in Hematology), B.A., American University of Beirut, 1952; M.D., 1956.

Saulo Klahr (U.S.P.H.S. Trainee in Renal Disease), M.D., Universidad Nacional de Colombia Facultad de Medicina, 1959.

Jan Henri Theopliel Koumans (U.S.P.H.S. Trainee in Metabolism), M.D., University of Louvain (Belgium), 1956.

Nobuko Obayashi Kuhn (U.S.P.H.S. Trainee in Infectious Diseases), B.A., University of Hawaii, 1955; M.D., Washington University, 1959.

Douglas R. Lilly (Cardiology), A.B., Princeton University, 1952; M.D., Washington University, 1956.

Robert Malassenet (U.S.P.H.S. International Postdoctoral Research Fellow in Hematology), M.D., University of Paris, 1961.

Dominic Moore-Jones (U.S.P.H.S. Trainee in Hypertension), M.D., National University of Ireland, 1957.

James Edward Parrish (Metabolism), B.S., Duquesne University, 1953; M.D., St. Louis University, 1957.

William Arno Peck (U.S.P.H.S. Trainee in Metabolism), A.B., Harvard University, 1955; M.D., University of Rochester, 1960.

Reginald P. Pugh (American Cancer Society Advanced Clinical Fellow in Hematology), M.D., University of Michigan, 1955.

Richard E. Rieselbach (U.S.P.H.S. Postdoctoral Research Fellow in Renal Disease), B.S., University of Wisconsin, 1955; M.D., Harvard University, 1958.

Martin C. Robinson (U.S.P.H.S. Trainee in Cardiology), B.S., McGill University, 1953; M.D., University of Manitoba, 1958.

Stuart F. Schlossman (U.S.P.H.S. Trainee in Hematology), B.A., New York University, 1955; M.D., 1958.

Emond I. Shwayri (U.S.P.H.S. Trainee in Renal Disease), B.A., American University of Beirut, 1942; M.D., 1946.

Martin Francis Stein (U.S.P.H.S. Trainee in Metabolism), M.D., St. Louis University, 1959.

Elizabeth Ann Stoddard (U.S.P.H.S. Trainee in Cardiology), B.S., Montana State College, 1954; M.D., Washington University, 1957.

David Stone (U.S.P.H.S. Trainee in Gastroenterology), B.A., Vanderbilt University, 1954; M.D., University of Virginia, 1958.

Cornelis L. Voute (U.S.P.H.S.) Trainee in Renal Disease), M.D., University of Basel, 1956.

Per B. Wallen (U.S.P.H.S. Trainee in Enzymology), B.M., Karolinska Institutet (Sweden), 1952.

Nathaniel Winer (U.S.P.H.S. Trainee in Metabolism), A.B., Harvard University, 1955; M.D., New York University, 1960.

## 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. 30 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)

(d) *Parasitology.* Lectures, demonstrations, and laboratory exercises. 36 hours.

(Dr. H. Tsuchiya)

## 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. Reinhard, Brittingham, Paine, M. Perry, W. Perry, J. Berry, 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 students 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. Shank, V. Jager, Brooks, Vavra, and Staff)

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

(Dr. 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; 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.  
(Drs. Brittingham, Paine, Berry, and Staff)

53. *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)

54. *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)

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

56. *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)

57. *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.  
(Drs. Daughaday, Kipnis)

58. *Infectious Diseases.* Two students. Six or twelve weeks. Study of infectious diseases both from clinical and from basic points of view. Participation in rounds, conferences, and seminars.  
(Drs. Harford, King)

59. *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, E. Brown, Brittingham, Reinhard)

60. *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.

(Drs. J. Smith, B. Parker, and Staff)

61. *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.

62. *Pulmonary Diseases*. One or two senior students may be accepted for special training in technics applied to study of pulmonary function and disease.

(Dr. Kilburn and Staff)

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. J. Smith, B. Parker

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

Gastroenterology—Dr. M. Peterson

Hematology—Drs. Harrington, Brown, Chaplin, Brittingham, C. Moore, Reinhard,  
A. Yunis, Vavra

Hypertension—Dr. H. M. Perry

Immunology—Dr. C. Parker

Infectious Diseases—Drs. Harford, King

Malignant Disease—Drs. Loeb, Reinhard

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

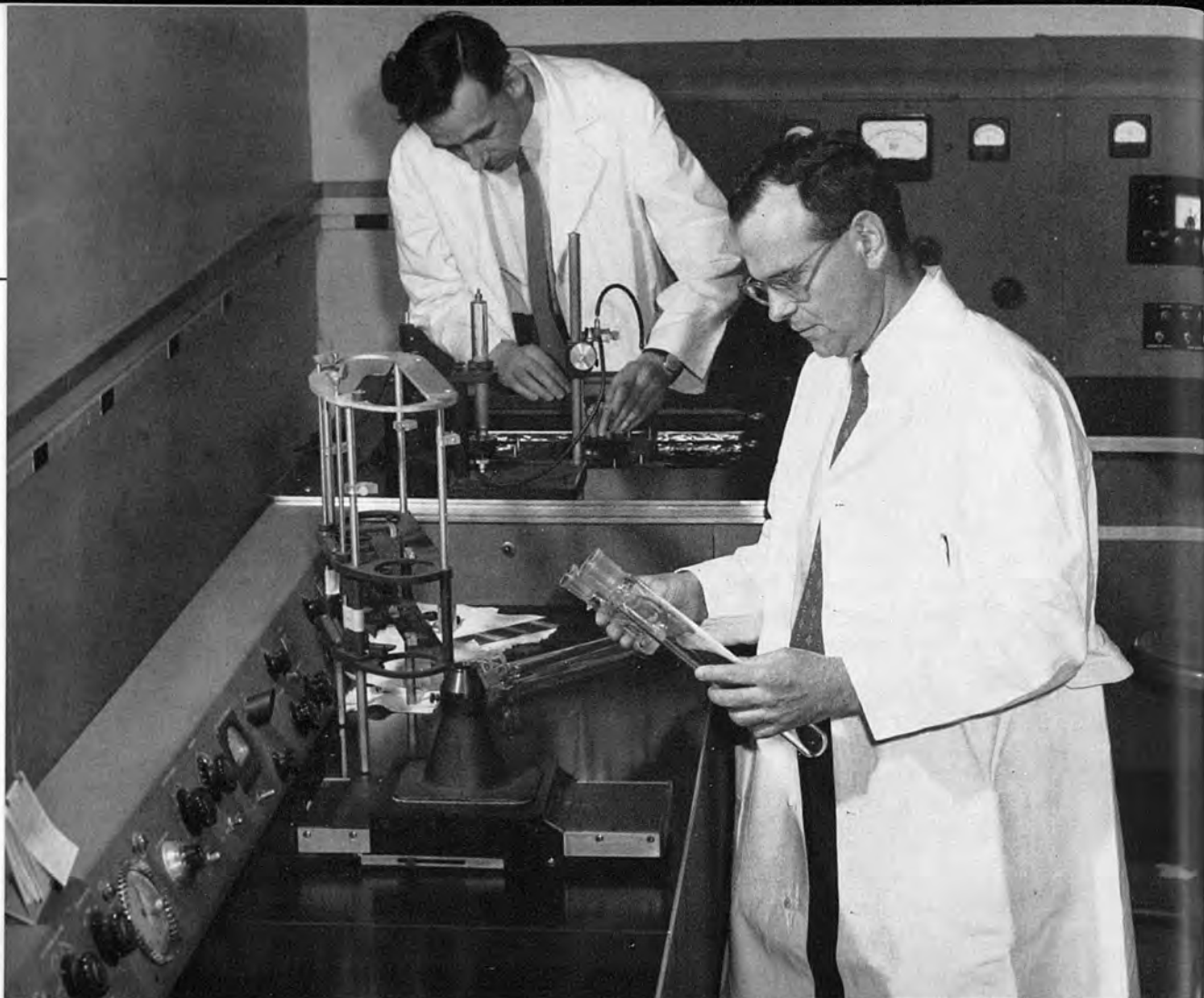
Nutrition—Drs. Shank, Eisenstein

Psychosomatic Disease—Dr. Guze

Pulmonary Diseases—Dr. K. Kilburn

Renal Disease—Dr. Bricker

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



*Dr. Herman N. Eisen, Professor of Microbiology, at work in the department's research laboratories.*

## DEPARTMENT OF MICROBIOLOGY

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### *Professor and Head of Department*

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

### *Professor*

Jack Strominger, A.B., Harvard University, 1946; M.D., Yale University, 1948. (See Department of Pharmacology)

### *Associate Professor Emeritus*

Hiromu Tsuchiya (Parasitology), A.B., University of Missouri, 1913; Sc.D., Johns Hop-

kins University, 1930. (Also holds title of Lecturer) (See Department of Medicine)

### *Assistant Professors*

John W. Josse, B.A., University of Minnesota, 1953; B.S., 1954; M.D., 1956. (Effective Dec. 1, 1962)

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

Alexander C. Sonnenwirth, A.B., University of Nebraska, 1950; M.S., Purdue University, 1953; Ph.D., Washington University, 1960.

*Instructors*

David Epperson Kennell, A.B., University of California, 1955; Ph.D., 1959.

David Schlessinger, B.A., University of Chicago, 1955; B.S., 1957; Ph.D., Harvard University, 1961. (Effective Aug. 1, 1962)

*Research Instructors*

Kengo Horibata, M.C.E., Hiroshima Technical College (Japan), 1945; Ph.D., Kyoto University (Japan), 1961.

Ernest S. Simms.

*Research Fellows*

Natalie Aronson, A.B., Hunter College, 1942; M.D., New York University, 1947. (See Department of Pediatrics)

Cynthia Lark, B.S., Mt. Holyoke College, 1950; Ph.D., St. Louis University, 1961.

J. Russell Little, Jr., A.B., Cornell University, 1952; M.D., University of Rochester, 1956.

Lisa A. Steiner, B.A., Swarthmore College, 1954; M.A., Radcliffe College, 1956; M.D., Yale University, 1959.

## 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. 252 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

The Department of Obstetrics and Gynecology is divided for convenience of administration, teaching, and research into divisions under the following directors:

Gynecological Cancer .....	Dr. Sherman
Gynecological Endocrinology .....	Dr. Woolf
Human Reproductive Biology .....	Dr. Masters
Ob-Gyn. Service at Max Starkloff Hospital .....	Dr. Esslinger
Ob-Gyn. Service at Homer G. Phillips Hospital .....	Dr. Monat

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 1800 new patients are seen and about 20,000 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.

#### *Professors (Clinical)*

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

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

#### *Professor Emeritus (Clinical)*

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

#### *Associate Professors*

William H. Masters (Division of Reproductive Biology), 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)*

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.

#### *Associate Professor Emeritus (Clinical)*

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

#### *Research Assistant Professor*

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

#### *Assistant Professors (Clinical)*

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

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

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

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

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

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.

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

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

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

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

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

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

#### *Instructor*

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

*Research Instructor*

Virginia E. Johnson (Division of Reproductive Biology).

*Instructors (Clinical)*

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

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.

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

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

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

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

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

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.

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.

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

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

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.

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*

Lee M. Adams, A.B., Stanford University, 1953; M.D., 1956.

Volker Brandt, B.A., Upsala College, 1953; M.D., Cornell University, 1957.

Robert Stuart Cohen, B.S., Union College, 1958; M.D., State University of New York Upstate Medical Center, 1962.

Robert H. Duemler, A.B., Washington University, 1952; M.D., 1956. (National Cancer Society Fellow.) (On leave of absence)

Dale R. Dunnihoo, B.S., Gannon College, 1949; M.S., University of Michigan, 1950; M.D., Washington University, 1956. (U.S.A.F.)

Jack S. Galloway, B.A., Cornell College, 1953; M.D., University of Iowa, 1957. (On leave of absence)

Robert S. Goell, A.B., Middlebury College, 1949; A.M., University of Pennsylvania, 1950; M.D., Washington University, 1960.

Harold Christian Halvorsen, B.S., University of South Dakota, 1953; M.D., University of Nebraska, 1955.

Richard Marchick, A.B., Harvard University, 1956; M.D., Washington University, 1961.

Mohammad Parvis Mirhadi, M.D., University of Teheran, 1960.

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

Harry A. Raybuck, Jr., M.D., Medical College of Georgia, 1959.

Eugene Renzi, B.A., Cornell University, 1953; M.D., 1957. (On leave of absence)

Abe G. Rodriguez, B.S., University of Houston, 1955; M.D., University of Texas, 1959.

Edward Howard Theis, A.B., Washington University, 1956; M.D., University of Illinois, 1960.

James Leslie Walker, B.A., Vanderbilt University, 1957; M.D., University of Tennessee, 1960.

Thomas Jefferson Whitaker, Jr., M.D., University of Arkansas, 1960.

*Assistants (Clinical)*

Peter Bartsch, M.D., Johann Wolfgang Goethe University, 1952.

S. Michael Freiman, A.B., Montana State University, 1951; M.D., Washington University, 1955.

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

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.

Grady W. Phillips, B.S., Howard College, 1939; M.D., Emory University, 1944.

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

Alexander Max Roter, A.B., University of Illinois, 1948; M.D., 1951.

James Sawyer, A.B., Ohio State University, 1949; M.D., 1951.

Herman Taute, M.D., Philipps University (Marburg/Lahn, West Germany), 1954.

Eugene D. Taylor, B.S., Virginia State College, 1948; M.D., Howard University, 1954.

Wilfred B. Weisbrod, M.D., University of Toronto, 1947.

Parker H. Word, B.S., Virginia State College, 1941; M.D., Howard Medical School, 1944.

*Research Assistant*

Samuel J. Hayward.

*Fellows*

France Alexander, A.B., Indiana University, 1950; M.D., 1953. (Senior Clinical Fellow)

Donald L. Grieme, M.D., University of Illinois, 1949. (Clinical Fellow)

Girgis Mikhail, M.D., Alexandria University (Egypt), 1955. (On leave of absence)

Carol F. Williams, B.A., University of Tennessee, 1952; M.D., 1955. (American Cancer Society Advanced Clinical Fellow)

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.

a. Obstetrical and Gynecological problems are considered from both a clinical and laboratory point of view. Emphasis is placed on Gynecological Endocrinology. 12 hours. (Dr. Allen and Staff)

b. The anatomy and physiology of sexual response, together with some of the social and legal implications of sexuality, will be discussed. 6 hours. (Dr. Masters 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

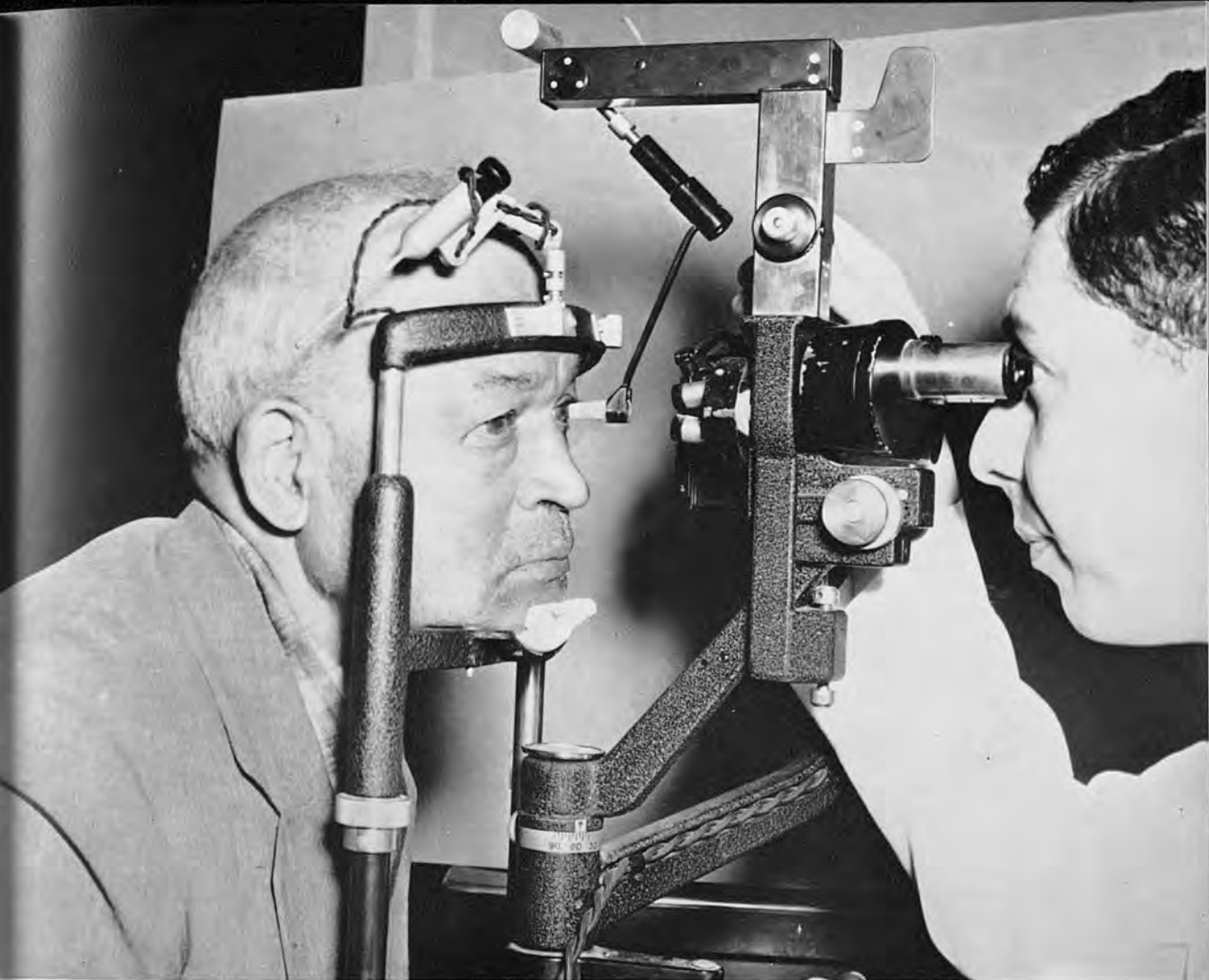
50. *Gynecological Pathology.* Two students at a time may serve as assistants in the laboratory. Six weeks, full time, all trimesters. (Dr. Hobbs)

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.





*Measuring intraocular pressure in the Eye Clinic.*

## 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.

### *Professors Emeriti (Clinical)*

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

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

### *Associate Professors*

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

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.

#### *Associate Professors (Clinical)*

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

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.

#### *Research Assistant Professors*

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

Bernard Wortman (Established Investigator of the American Heart Association), A.B., Syracuse University, 1948; Ph.D., Ohio State University, 1955.

#### *Assistant Professor*

Andrew J. Gay, B.S., University of Alabama, 1950; M.A., 1954; M.D., Medical College of Alabama, 1955. (Also Neurology)

#### *Assistant Professors (Clinical)*

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

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.

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

#### *Instructors*

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

Kurt Hahn, M.D., University of Kiel (Germany), 1950.

Edward Okun (National Institute of Neurological Diseases and Blindness Special Fellow), M.D., University of Vermont, 1956.

#### *Instructors (Clinical)*

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

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. (On leave of absence)

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.

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

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

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

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

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

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

#### *Assistants*

Stan Coleman (National Institute of Neurological Diseases and Blindness Special Fellow), B.A., University of Virginia, 1954; M.D., 1958.

Melvin Freeman, B.A., University of Washington, 1957; M.D., 1960. (On leave of absence)

William Gilbert, A.B., Cornell University, 1957; M.D., Albert Einstein College of Medicine, 1961.

Heskel Haddad (National Institute of Neurological Diseases and Blindness Special Fellow), M.D., Hadassah Medical School, 1953.

Thomas Hansen, B.A., University of Chicago, 1956; M.D., Harvard University, 1960. (On leave of absence)

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

Theodore Lieberman, B.A., Princeton University, 1954; M.D., Yale University, 1958.

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

Allen Parelman, A.B., Washington University, 1955; M.D., 1959.

Sidney Seltzer, B.S., Wayne State University, 1957; M.D., 1961.

Donald Silberberg (National Institute of Neurological Diseases and Blindness Special Fellow), M.D., University of Michigan, 1958.

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

Morton Smith (National Institute of Neurological Diseases and Blindness Fellow), B.S., University of Maryland, 1956; M.D., 1960.

Richard Srebro, M.D., Washington University, 1959. (On leave of absence)

Richard Thorpe, A.B., Brown University, 1956; M.D., University of Pittsburgh, 1960. (On leave of absence)

Charles Windsor (National Institute of Neurological Diseases and Blindness Fellow), A.B., Carleton College, 1956; M.D., University of Rochester, 1960.

### Fellows

Gastin Bouquett, A.B., Indiana Central College, 1957; M.D., Indiana University, 1961.

Freddie Butler, B.S., Davidson College, 1957; M.D., Duke University, 1961.

Charles Cheek, M.D., University of Missouri, 1961.

Edward Cotlier (National Institute of Neurological Diseases and Blindness Fellow), B.S., Colegio Nacional, 1954; M.D., Universidad del Litoral, 1959.

Howard Lazerson, B.A., Wayne State University, 1957; M.D., 1961.

Richard Litwin, B.A., University of California at Los Angeles, 1957; M.D., University of California, 1961.

Shigemi Sugiki, A.B., Washington University, 1957; M.D., 1961.

### 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, 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, L. T. Post, Jr., P. T. Shahan, Stickler, and Resident Staff)



*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*

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)

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

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

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

*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.

*Research Associate Professors*

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

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.

Catherine A. Smith, A.B., Washington University, 1935; M.S., 1948; Ph.D., 1951.

*Associate Professor (Clinical)*

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 Professors*

Robert Goldstein (Audiology), B.S., Pennsylvania State University, 1948; Ph.D., Washington University, 1952.

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.

Morris Davidson, B.S., Indiana University, 1936; M.D., 1938.

Guerdan Hardy, M.D., Washington University, 1929.

Daniel D. Klaff, B.S., University of Virginia, 1933; M.D., 1936.

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

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

*Assistant Professor Emeritus (Clinical)*

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

*Research Instructors*

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

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.

Charles C. Jacobs, A.B., Washington University, 1942; M.D., 1945.

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.

Wayne A. Viers, B.S., Phillips University, 1952; M.D., University of Oklahoma, 1956.

Joseph Warren West, M.D., Duke University, 1944.

*Assistants*

Floyd R. Barnhill, Jr., B.A., Arkansas State College, 1958; M.D., University of Tennessee, 1961.

Marvin C. Beil, A.B., University of South Dakota, 1954; M.D., University of California, 1958.

Aaron Berman, B.A., Ohio State University, 1956; M.D., 1960.

James R. Cate, B.A., Vanderbilt University, 1958; M.D., 1961.



Joe Ivy Gillespie, B.A., University of Mississippi, 1951; LL.B., 1951; M.D., Vanderbilt University, 1961.

Thomas R. Klein, A.B., University of Western Ontario, 1954; M.D., 1958.

John A. Kustermann, B.A., Marquette University, 1951; M.D., 1959.

Howard C. Lonsdale, A.B., Princeton University, 1955; M.D., University of Arkansas, 1960.

Richard W. Mallen, B.S., University of Alberta, 1955; M.D., 1959.

Daniel C. Newbill, Jr., B.S., Virginia Polytechnic Institute, 1952; M.D., Medical College of Virginia, 1959.

Thomas F. Reilly, A.B., University of California, 1957; M.D., 1960.

Jerry D. Rothstein, B.A., University of Virginia, 1957; M.D., 1961.

Clarence J. Sands (National Institute of Neurological Diseases and Blindness Trainee), 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.

Hans Dennis Sommer, B.S., Centenary College, 1956; M.D., Louisiana State University, 1960.

Leslie J. Szabo, A.B., University of Pecs (Hungary), 1949; M.D., 1955.

James M. Toomey, B.S., Holy Cross College, 1951; D.M.D., Harvard School of Dental Medicine, 1955; M.D., Boston University, 1958.

Leo T. Wagenbrenner, B.S., Ohio State University, 1954; M.D., 1958.

#### Fellows

Peter Alberti (Research), M.D., University of Durham Medical School at King's College, 1957.

Abraham Lapidot (Research), B.Sc., University of Witwatersrand, 1944; B.D.S., 1949; M.D., Hadassah Medical School, 1959.

#### 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 use of the 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, West, Cutler, Davidson, Cone, Lyman)

#### 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)



*Dr. Paul Lacy Professor of Pathology, and two members of his staff preparing tissue for examination with the electron microscope.*

## DEPARTMENT OF PATHOLOGY

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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. D. Johnson, V. Bleisch, G. Sierra; Lutheran Hospital, Dr. L. Yuan; Alton Memorial Hospital, Dr. P. Capurro; Jewish Hospital, Drs. J. Hasson, R. Ahlvin, D. Rosenstein; St. Luke's Hospital, Drs. R. Ogilvie, F.

Kraus; Homer G. Phillips Hospital, Drs. J. Blache, U. Sclafford, M. Menendez, T. Nishi; State Hospital, Dr. K. Palmer.

For the purposes of both teaching and research, the Department of Pathology is divided into specialties under the following directors:

Diseases of Bone and Joint .....	Drs. M. and R. Silberberg
Hematopoietic Pathology .....	Dr. Sorenson
Clinical Pathology .....	Dr. V. Loeb, Jr.
Dentistry .....	Dr. Rowe
Hepatic Pathology .....	Dr. Grisham
Infectious Diseases .....	Dr. M. G. Smith
Lipid Chemistry .....	Dr. Chalvardjian
Pathology of Muscle .....	Dr. W. Bauer
Dermatopathology .....	Dr. McGavran
Neuropathology .....	Dr. Luse
Pathological Microchemistry .....	Dr. J. Kissane
Pathology of the Endocrines .....	Dr. Lacy
Surgical Pathology .....	Dr. Ackerman
Renal Disease .....	Dr. Heptinstall
Diseases of Lymphoid Tissue .....	Dr. Dorfman
Hypertension .....	Dr. Pitcock

*Edward Mallinckrodt Professor  
and Head of Department*

Paul E. Lacy, B.A., Ohio State University, 1945; M.D., 1948; M.Sc., 1948; Ph.D., University of Minnesota, 1955.

*Professors*

Lauren V. Ackerman (Pathology and Surgical Pathology), A.B., Hamilton College, 1927; M.D., University of Rochester, 1932.

Margaret Gladys Smith, A.B., Mount Holyoke College, 1918; M.D., Johns Hopkins University, 1922.

*Visiting Professor*

Robert H. Heptinstall, L.R.C.P.; M.R.C.S. (England), 1943; M.B.B.S., 1944; M.D., 1948. July 1 to July 31, 1962)

*Associate Professors*

Sarah A. Luse, A.B., Rockford College, 1940; M.D., Western Reserve University, 1949. (See Department of Anatomy)

Martin Silberberg, M.D., University of Breslau, 1920.

Ruth Silberberg, M.D., University of Breslau, 1931.

*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.

Walter C. Bauer, B.S., Ohio State University, 1946; M.D., Washington University, 1954.

Julian Blache, M.D.

Peter Capurro, M.D., University of Genoa, 1951.

Joe W. Grisham (Life Insurance Medical Research Fund Postdoctoral Fellow), A.B., Vanderbilt University, 1953; M.D., 1957. (On leave of absence for service in the Armed Forces)

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.

John Kissane, A.B., University of Rochester, 1948; M.D., Washington University, 1952.

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

Malcolm McGavran, B.A., Bethany College, 1951; M.D., Washington University, 1954.

William R. Platt, B.S., University of Maryland, 1936; M.D., 1940.

George D. Sorenson, B.S., Pennsylvania State University, 1950; M.D., Jefferson Medical College, 1954.

### *Visiting Assistant Professor*

W. J. S. Still, M.D., Ch.B., University of Aberdeen, 1951. (July 1 to July 31, 1962)

### *Instructors*

Robert C. Ahlvin, B.S., Iowa State College, 1950; M.D., Washington University, 1954.

Virgil R. Bleisch, M.D., Washington University, 1948.

Ara M. Chalvardjian, M.D., American University of Beirut, 1958.

Robert F. Dorfman, M.B.B.Ch., University of Witwatersrand Medical School, 1948.

Ernest R. Frank, M.D., University of Erlangen, 1940.

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), 1948.

James A. Pitcock, B.S., Massachusetts Institute of Technology, 1951; M.D., Washington University, 1955.

Daniel L. Rosenstein, B.S., University of Oklahoma, 1950; M.D., Washington University, 1954.

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., Institute of Manzanillo (Cuba), 1945; M.D., Havana University, 1954.

Joseph R. Williamson, A.B., Phillips University, 1954; M.D., Washington University, 1958.

Louis S. K. Yuan, M.D., Aurora University (China), 1938.

### *Assistants*

Luis Alvarez, M.D., University of Santo Domingo, 1958.

M. Sidney Anderson (DGMS Trainee in Experimental Pathology), B.A., University of Texas, 1956; M.D., Washington University, 1960.

Waguih M. Abdel-Bari (DGMS Trainee in Experimental Pathology), M.D., Cairo University, 1957.

Quinton J. Bianchine (DGMS Trainee in Experimental Pathology), B.S., Siena College, 1953; M.D., Georgetown University, 1957.

William K. Cowan (DGMS Trainee in Experimental Pathology), M.B., University of Liverpool, 1950; M.R.C.P., Royal College of Physicians, 1960; M.D., University of Liverpool, 1961.

Richard Donabedian (DGMS Trainee in Experimental Pathology), A.B., Clark University, 1958; M.D., Washington University, 1962.

Leonard Jarett (DGMS Trainee in Experimental Pathology), B.A., Rice University, 1958; M.D., Washington University, 1962.

Joel B. Kirkpatrick (DGMS Trainee in Experimental Pathology), B.A., Rice University, 1958; M.D., Washington University, 1962.

Michael Kyriakos (DGMS Trainee in Experimental Pathology), B.S., City College of New York, 1958; M.D., Albert Einstein College of Medicine, 1962.

Manuel Menendez, M.D., Havana University, 1956.

Toshio Nishi, M.D., Manchuria Medical College, 1938.

Lawrence M. Roth (DGMS Trainee in Experimental Pathology), B.A., Vanderbilt University, 1956; M.D., Harvard University, 1960.

Tetsuo Shimamura (DGMS Trainee in Experimental Pathology), M.D., Yokohama Medical College, 1959.

Jerome L. Silverman (DGMS Trainee in Experimental Pathology), B.A., Pomona College, 1954; M.D., Washington University, 1958.

Carl H. Smith (DGMS Trainee in Experimental Pathology), B.A., Swarthmore College, 1955; M.D., Yale University, 1959.

Glenda R. Wacker (DGMS Trainee in Experimental Pathology), A.B., Washington University, 1957; M.D., 1961.

### *Research Assistants*

Bernabe B. Banson (DGMS Trainee), M.D., University of Santo Tomas, 1954.

Edward H. Finke, B.S., Washington University, 1962.

*Fellows and Trainees*

Robert E. Fechner (American Cancer Society Clinical Fellow), B.A., University of Utah, 1956; M.D., Washington University, 1960.

Charles Kuhn (American Cancer Society Clinical Fellow), A.B., Harvard University, 1955; M.D., Washington University, 1959.

Julio M. Martin (Research Fellow), M.D., University of LaPlata (Argentina), 1950.

Atsuo Mikata (DGMS Trainee in Experimental Pathology), M.D., Keio University, 1957. (To September 30, 1962)

Mary Elizabeth Richardson (Division of General Medical Sciences), B.A., University of California, 1949; M.S., 1952; M.D., Woman's Medical College of Pennsylvania, 1956.

Roosevelt L. Tillman (Research Fellow), B.A., Fisk University, 1956. (To September 1, 1962)

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. Lacy, Ackerman, M. Smith, Luse, R. and M. Silberberg, Kissane, Sorenson, Grisham, and Staff)

THIRD YEAR

30. *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)

31. *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 year.

(Drs. Lacy, Luse, Kissane, Sorenson, Grisham, Chalvardjian, and Staff)

FOURTH YEAR

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 fourth year.

(Drs. Lacy, Luse, Kissane, Sorenson, Grisham, Chalvardjian, and Staff)

41. *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 Staff)



## 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. Lacy, Ackerman, M. Smith, Luse, M. and R. Silberberg, Kissane, Sorenson, Grisham, McGavran, W. Bauer, Dorfman, Chalvardjian and Pitcock)

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.

53 (597). *Seminar in Microscopic Pathology*. The microscopic sections from each autopsy are presented by the prosector at a conference.

54. *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.

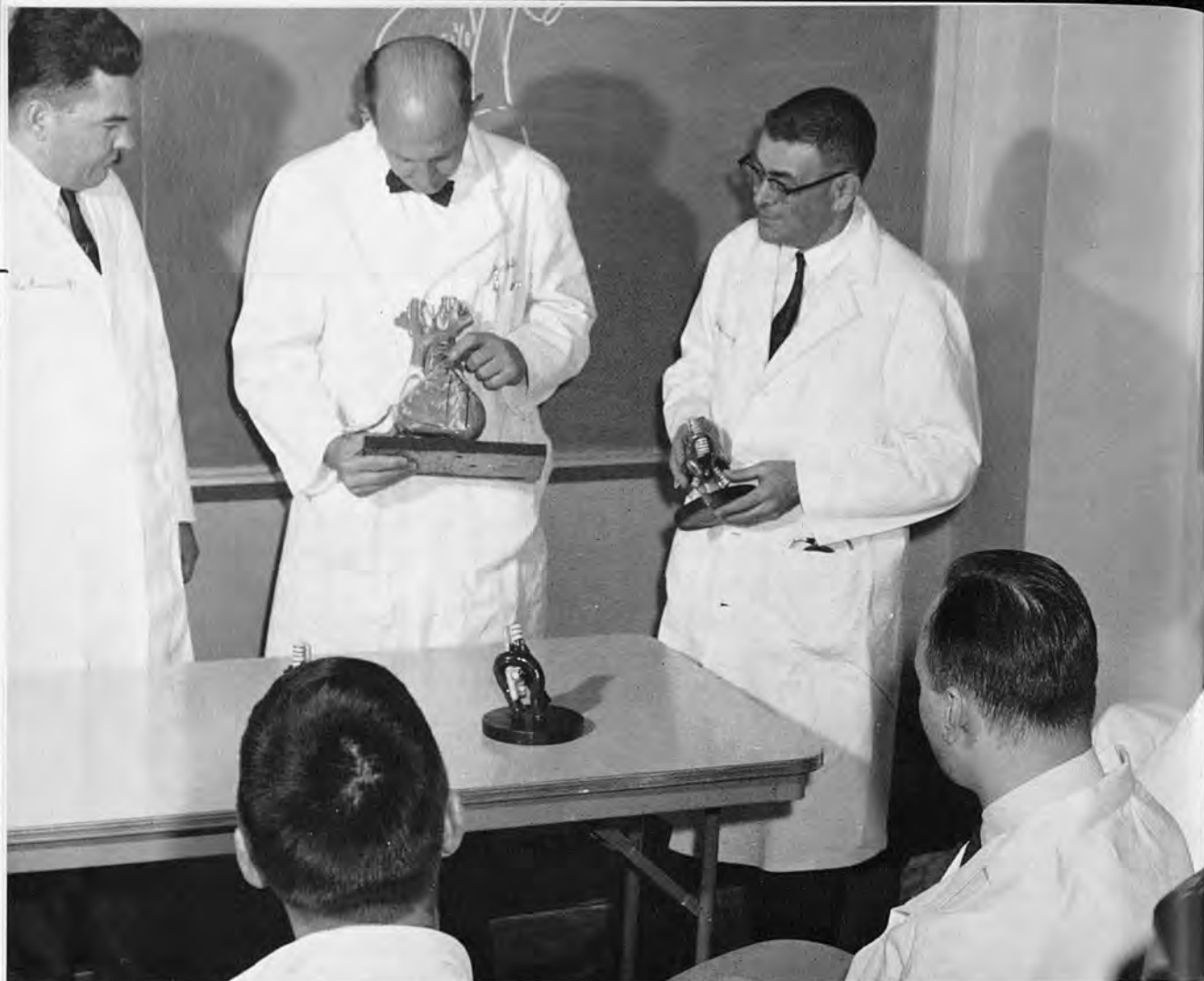
(Dr. Ackerman)

55 (598). *Autopsy Pathology*. Two students, full time for six weeks, all trimesters. The elective will consist of correlation of the clinical records of hospital patients with the pathologic findings at autopsy. Time will also be devoted to participation in the routine conferences of the department.

56. *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.

57. *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.

The Department offers facilities for fulfilling requirements for the degree of Ph.D. in Pathology.



*Assistant Professor Alexis F. Hartmann, Jr., Associate Professor M. Remsen Behrer, and Professor David Goldring demonstrate the normal and abnormal development of the heart and great vessels during a conference in the Department of Pediatrics.*

## THE EDWARD MALLINCKRODT DEPARTMENT OF PEDIATRICS

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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*

M. Remsen Behrer, A.B., Williams College, 1942; M.D., Long Island College of Medicine, 1945.

Donald Lionell Thurston, B.S., Vanderbilt University, 1934; M.D., 1937.

Jean Holowach Thurston, B.A., University of Alberta, 1937; M.D., 1941.

*Associate Professor Emeritus (Clinical)*

Adrien S. Bleyer, M.D., Missouri Medical College, 1899.

*Assistant Professors*

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.

J. Neal Middelkamp, B.S., University of Missouri, 1946; M.D., Washington University, 1948.

Teresa J. Vietti, B.S., Rice University, 1949; M.D., Baylor University, 1953.

Hulda J. Wohltmann, B.S., College of Charleston, 1944; M.D., Medical College of South Carolina, 1949. (See Department of Biological Chemistry) (On leave of absence from Department of Pediatrics to Oct. 31, 1962)

*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.

Paul H. Painter, M.D., St. Louis University, 1947. (See Department of Psychiatry and Neurology)

Alfred S. Schwartz, A.B., Amherst College, 1932; M.D., Johns Hopkins University, 1936.

*Assistant Professor Emeritus*

Ruth E. Martin (Dentology), D.D.S., Washington University, 1923.

*Assistant Professors Emeriti (Clinical)*

Park J. White, A.B., Harvard University, 1913; M.D., Columbia University, 1917. (Also Lecturer)

Paul J. Zentay, M.D., University of Kolozsvár (Hungary), 1914. (See Department of Psychiatry and Neurology)

*Instructors*

Natalie Aronson, A.B., Hunter College, 1942; M.D., New York University, 1947. (See Department of Microbiology)

John Gilster (Dentistry), D.D.S., Washington University, 1944.

Antonio Hernandez, Jr. (Missouri Heart Association Research Fellow), M.D., Manila Central University, 1954.

Patricia A. Parsons (Dentistry), B.S., San Diego State College, 1953; D.D.S., Washington University, 1957.

Miriam M. Pennoyer, B.S., Carnegie Institute of Technology, 1935; M.D., University of Rochester, 1939.

Mabel L. Purkerson (Children's Research Foundation Fellow), A.B., Erskine College, 1951; M.D., Medical College of South Carolina, 1956.

*Instructors (Clinical)*

Helen M. Aff, 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.

Martin Calodney, B.S., College of the City of New York, 1930; M.D., New York University, 1936.

Robert H. Friedman, M.D., Washington University, 1948.

Samuel Gollub, 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.

Roman E. Hammes, B.A., University of Iowa, 1950; M.D., 1954.

Norman Hankin, A.B., University of Wisconsin, 1940; M.D., 1943.

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.

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.

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)

Marian Kuttner, M.D., Johann Wolfgang Goethe University (Frankfurt am Main), 1931.

Sol Londe, B.S., Washington University, 1925; M.D., 1927.

Maurice J. Lonsway, Jr., A.B., Washington University, 1946; M.D., 1950.

Richard Margolis, B.S., College of William and Mary, 1947; M.D., Western Reserve University, 1951.

John C. Martz, A.B., University of Missouri, 1938; M.D., Washington University, 1942.

David McClure, M.D., University of Tennessee, 1940.

Helen Nash, A.B., Spelman College, 1942; M.D., Meharry Medical College, 1945.

Homer Nash, M.D., Meharry Medical College, 1951.

W. Neal Newton (Dentistry).

Frederick D. Peterson, A.B., Knox College, 1953; M.D., Washington University, 1957.

Eugenia M. Pierce, M.D., St. Louis University, 1958.

Herman W. Reas, B.S., St. Joseph's College, 1948; M.D., St. Louis University, 1952.

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)

Wayne Arthur Rupe, A.B., University of Missouri, 1916; M.D., Washington University, 1918.

George Sato, M.D., Washington University, 1947.

Robert C. Schaan, A.B., Washington University, 1949; M.D., 1953.

Bernard Schwartzman, A.B., Washington University, 1931; M.D., 1935.

Donald B. Strominger, B.A., Yale University, 1949; M.D., Washington University, 1953.

James K. Turner, A.B., Washington University, 1949; M.D., 1953.

Barbara Nancy Voegel, B.S., University of Illinois, 1950; M.D., Washington University, 1957.

Kathleen Winters, B.S., Winthrop College, 1946; M.D., Medical College of South Carolina, 1955.

Frank S. Wissmath, A.B., Washington University, 1939; M.D., 1943.

H. Benjamin Zwirn, M.D., University of Basel (Switzerland), 1954.

*Instructors Emeriti (Clinical)*

Maurice J. Lonsway, B.S., Valparaiso University, 1910; M.D., St. Louis University, 1914.

Edwin H. Rohlfing, M.D., Washington University, 1919.

*Assistants*

Hedaïatollah Ahmadiyeh, M.D., Shiraz University (Iran), 1959.

Agnes Miller Anthony, R.N., St. Joseph's Hospital School of Nursing, Lancaster, Pennsylvania, 1953.

Christos A. Antoniou, M.D., Athens University (Greece), 1958. (Also Herbert Mazur Fellow in Pediatrics)

Edward T. Barker, A.B., Princeton University, 1953; M.D., Washington University, 1957.

Mary Elizabeth Beckman, R.N., B.S.N., Washington University, 1948.

Joyce Driemier, R.N., St. Luke's Hospital School of Nursing, 1959.

Malcolm Garber, A.B., Vanderbilt University, 1951; M.D., University of Louisville, 1955.

Elliot F. Gellman, B.A., State University of Iowa, 1954; M.D., University of Missouri, 1961.

Phyllis L. Grant, B.A., Douglass College, 1956; M.D., University of Kansas, 1960.

James L. Harwell, A.B., Washington University, 1957; M.D., University of Missouri, 1961.

Francis M. Henderson, A.B., Ouachita Baptist College, 1955; M.D., University of Arkansas, 1960.

Carol Jean Hill, R.N., Barnes Hospital School of Nursing, 1959.

Herbert S. Kaufman, A.B., University of Kansas, 1957; M.D., Baylor University, 1961.

Kathleen Doris McClinton, R.N., DePaul Hospital School of Nursing, 1947.

Steven I. Plax, A.B., Washington University, 1957; M.D., University of Missouri, 1961.

Wandee Ratanaruka, M.D., Chulalongkorn Hospital Medical School (Thailand), 1960.

Robert E. Stewart, B.S., University of Tennessee, 1958; M.D., 1961.

Frances Tihen, R.N., Washington University School of Nursing, 1945.

Betty Jane Vallero, R.N., St. John's Hospital, 1948.

Betty Jean Whitener, R.N., St. Luke's Hospital School of Nursing, 1948.

Devora R. Wolfson, M.D., Washington University, 1962.

Harold S. Zarkowsky, A.B., Washington University, 1957; M.D., 1961.

*Assistants (Clinical)*

Frederick Sargent, A.B., Yale University, 1939; M.D., Cornell University, 1943.

Seymour M. Schlansky, M.D., Chicago Medical School, 1950.

*Research Assistants*

Charles Crawford, Jr., B.S., Washington University, 1956.

Mary Elizabeth Wesley, A.B., Washington University, 1942; M.A., University of Kansas, 1959.

*Fellow*

Daisilee H. Berry, B.S., University of Arkansas, 1949; M.D., Western Reserve University, 1952.

## SECOND YEAR

20. In the course in 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)



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 Thursday morning session 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)

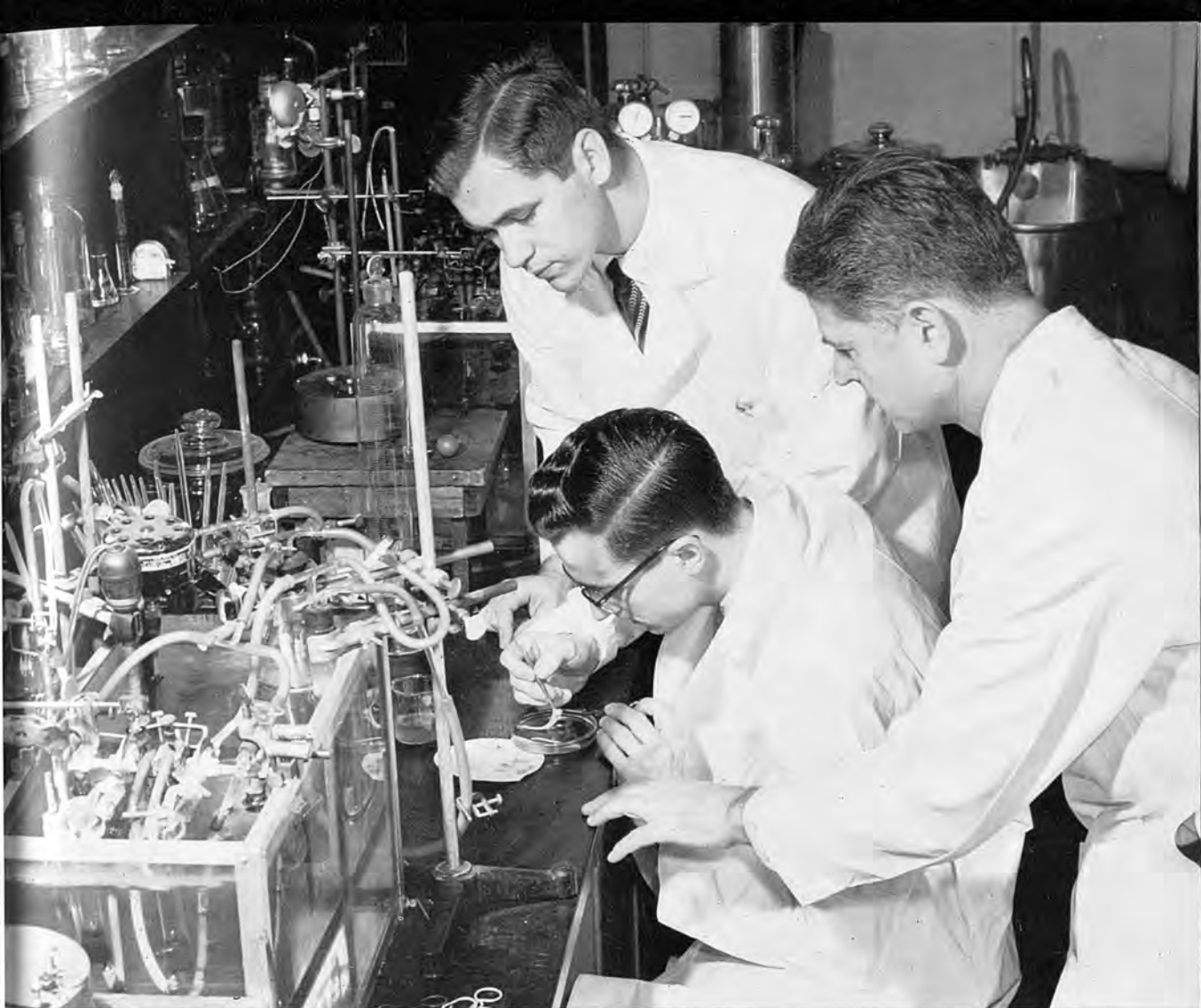
FOURTH YEAR

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

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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.

*Professors*

Francis Edmund Hunter, Jr., B.S., Mount Union College, 1938; Ph.D., University of Rochester, 1941.

Jack Strominger, A.B., Harvard University, 1946; M.D., Yale University, 1948. (See Department of Microbiology)

*Professor Emeritus*

Helen Tredway Graham, B.A., Bryn Mawr College, 1911; M.A., 1912; Ph.D., University of Chicago, 1915.

*Associate Professor*

Helen B. Burch, B.S., Texas State College for Women, 1926; M.S., Iowa State College, 1928; Ph.D., 1935.

*Assistant Professors*

Bruce Breckenridge (Markle Scholar), B.S., Iowa State College, 1948; Ph.D., University of Rochester, 1952; M.D., University of Rochester, 1956.

Robert M. Burton, B.S., University of Maryland, 1950; M.S., Georgetown University, 1952; Ph.D., The Johns Hopkins University, 1955.

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.

David B. McDougal, Jr. (U.S.P.H.S. Research Career Development Award), 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.

*Research Instructor*

Ellen E. Smith, B.S., University of Pittsburgh, 1939; M.S., 1942; Ph.D., 1948.

*Fellows*

Harry Froede (Predoctoral) (DGMS Trainee), B.S., University of Colorado, 1958; M.S., 1961.

P. David Gatfield (National Institute of Neurological Disease and Blindness Trainee), M.D., Queen's University, 1957. (Also Psychiatry)

Janusz Gebicki (DGMS Trainee), B.S., University of London, 1956; Ph.D., 1959.

Chaim I. Mayman, B.S., University of Manitoba, 1954; M.D., 1954.

Uldis Roze (Predoctoral) (DGMS Trainee), B.S., University of Chicago, 1959.

Regina Tinelli, B.S., University of Paris, 1941; D.Sc., 1954.

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. The course is given in the second semester of the first year. Three blocks of seven full-day experiments are performed, one block in each of the six-week periods of the second semester. 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.

Stanley Lang, Ph.B., University of Chicago, 1946; S.B., 1948; S.M., 1949; Ph.D., 1952.

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.

*Assistant Professors*

Bernard Shore, B.S., California Institute of Technology, 1949; Ph.D., University of California, 1955.

Virgie G. Shore, A.B., University of California, 1950; Ph.D., 1955.

*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)

Roger E. Thies, B.S., Bates College, 1955; A.M., Harvard University, 1957; Ph.D., Rockefeller Institute, 1961.

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.

Small groups of students meet with instructors in scheduled conferences throughout the course to discuss principles concerned with laboratory experiments, results of and conclusions drawn from experiments, and correlations of laboratory with lecture material.

Open to students who have completed or have begun the study of anatomy and biological chemistry.

10 (502). Lectures in second semester of first year. 104 hours. (Staff)

11 (503). Laboratory and conferences. Second semester of first year. Laboratory 140 hours, conferences 40 hours. (Staff)

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

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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*

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

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

B. V. Jager, A.B., Harvard University, 1934; M.D., 1938.

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

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

*Assistant Professors*

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

M. Frances Watson (Social and Environmental Studies), B.S., Northeast Missouri State Teachers College, 1932; M.S.W., Washington University, 1949.

*Instructors*

Rose A. Meyer (Social Work), B.A., Louisiana State University, 1947; M.S.W., Washington University, 1950.

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

James C. Peden, Jr., A.B., Haverford College, 1951; M.D., Washington University, 1955. (See Department of Medicine)

John D. Vavra, B.A., University of Colorado, 1950; M.D., Washington University, 1954. (See Department of Medicine)

*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. (Drs. King, Peden, 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. *Prevention and Control 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. Third trimester, 1 hour a week, 12 hours.

(Drs. Shank, Eller, Eisenstein, Recant, King, Chaplin, Reiss, Morrison)

## 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)

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#### THE IRENE WALTER JOHNSON INSTITUTE OF REHABILITATION

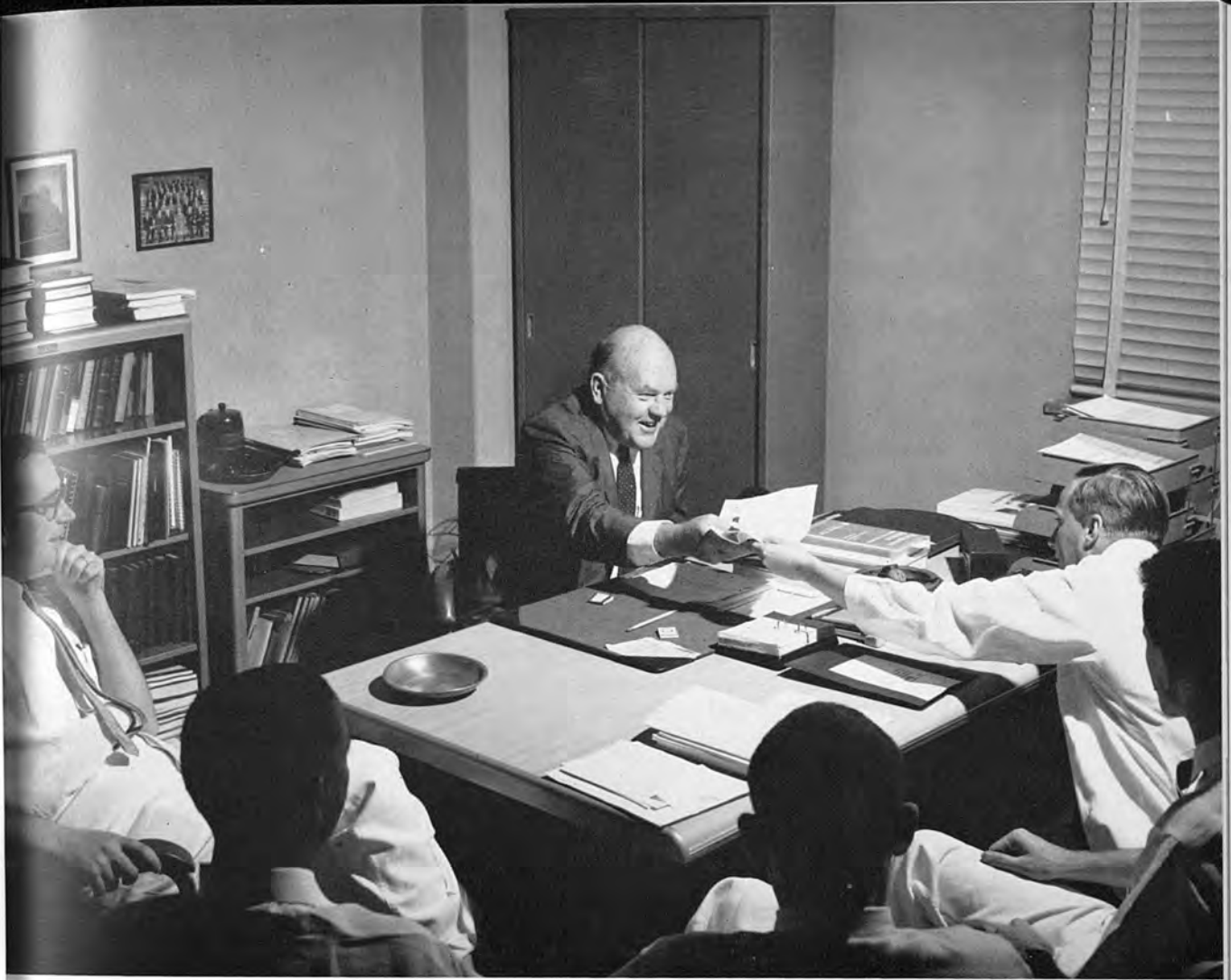
The teaching of rehabilitation is conducted for fourth-year medical students by the Department of Preventive Medicine in collaboration with various specialty services. The Irene Walter Johnson Institute of Rehabilitation is a modern, two-story facility that is air-conditioned and well equipped for the care of disabled patients. Students of medicine, house officers, and students of paramedical services have an opportunity to affiliate with the Institute.

##### *Director*

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

##### *Assistant Director*

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



*Dr. Edwin Francis Gildea, Wallace Renard Professor of Psychiatry, moderates a teaching conference in the third year clinical clerkship.*

## DEPARTMENT OF PSYCHIATRY AND NEUROLOGY

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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), B.S., 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)

John A. Stern (Medical Psychology), A.B., Hunter College, 1949; M.S., University of Illinois, 1951; Ph.D., 1953.

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.

*Research Professor*

Maximilian Fink, B.A., New York University, 1942; M.D., 1945.

*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.

Patricia L. O'Neal (Psychiatry), A.B., Washington University, 1944; M.D., 1948.

Kathleen Smith (Psychiatry), B.S., University of Arkansas, 1944; M.D., Washington University, 1949.

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. (Also holds title of Lecturer)

*Research Associate Professors*

David J. Pittman (Sociology), A.B., University of North Carolina, 1949; M.A., 1950; Ph.D., University of Chicago, 1956.

Jane Loevinger Weissman (Medical Psychology), B.A., University of Minnesota, 1937; M.S., 1938; Ph.D., University of California, 1944.

*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.

*Assistant Professors*

Thomas C. Brugger (Child Psychiatry), B.S., University of Wisconsin, 1950; M.D., 1953.

Loretta Cass (Medical Psychology), B.A., Colorado College, 1934; M.A., 1942; Ph.D., Ohio State University, 1950.

Andrew J. Gay (Neurology), B.S., University of Alabama, 1950; M.A., 1954; M.D., Medical College of Alabama, 1955. (See Department of Ophthalmology)

Quentin Rae Grant (Child Psychiatry), M.B., Aberdeen University, 1951; D.P.M., University of London, 1958.

Malcolm D. Gynther (Medical Psychology), A.B., Stanford University, 1950; M.A., 1951; Ph.D., Duke University, 1956.

Lucile Healy (Psychiatric Social Work), A.B., College of St. Catherine, 1922; M.A., University of Minnesota, 1927; M.S.W., Washington University, 1949.

Luciano L'Abate (Medical Psychology), A.B., Tabor College, 1950; M.A., University of Wichita, 1953; Ph.D., Duke University, 1956.

Marie Mowrer (Psychiatry), A.B., Southern Illinois University, 1947; B.S., University of Illinois, 1949; M.D., 1951.

George E. Murphy (Psychiatry), B.S., Oregon State College, 1949; M.D., Washington University, 1952.

Muriel W. Pumphrey (Social Work), A.B., Oberlin College, 1931; D.S.W., New York School of Social Work, Columbia University, 1956.

Iver F. Small (Psychiatry), B.A., University of Saskatchewan, 1951; M.D., University of Manitoba, 1954; M.S., University of Michigan, 1960.

Joyce F. Small (Psychiatry), B.A., University of Saskatchewan, 1951; M.D., University of Manitoba, 1956; M.S., University of Michigan, 1959.

Albert F. Wessen (Sociology), B.A., Yale University, 1948; M.A., 1949; Ph.D., 1951. (Also 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.

Blake W. Moore (Psychiatry and Neurology), B.S., University of Akron, 1948; Ph.D., Northwestern University, 1952.

Lee N. Robins (Sociology), A.B., Radcliffe College, 1942; M.A., 1943; Ph.D., 1951.

James H. Satterfield (National Institute of Mental Health Career Investigator), B.S., University of Kentucky, 1947; M.A., University of Mississippi, 1950; M.D., Washington University, 1955.

Hans Schmidt (Medical Psychology), B.A., University of Chicago, 1947; B.S., Northwestern University, 1949; M.A., North Carolina University, 1951; Ph.D., University of Illinois, 1954.

*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.

Paul Dewald (Psychiatry), A.B., Swarthmore College, 1942; M.D., University of Rochester, 1945.

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.

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.

Roy M. Mendelsohn (Child Psychiatry), B.S., University of Illinois, 1950; M.D., 1952.

Paul H. Painter (Child Psychiatry), M.D., St. Louis University, 1947. (See Department of Pediatrics)

Herbert E. Rosenbaum (Neurology), B.S., University of Oregon, 1947; M.D., 1949.

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*

Louetta Berger (Psychiatric Social Work), B.S., University of Wichita, 1941; M.S.W., Washington University, 1946.

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.

Daniel V. Caputo (Medical Psychology), A.B., Brooklyn College, 1954; Ph.D., University of Illinois, 1961.

Gabrielle Casebier (Speech Correction), B.S., University of Illinois, 1942; M.A., 1942; Ph.D., University of Wisconsin, 1959.

Lawrence A. Cohen (Neurology), B.S., Western Reserve University, 1948; M.D., 1954; M.A., Northwestern University, 1951.

William E. Edmonston, Jr. (Medical Psychology), B.A., Johns Hopkins University, 1952; M.A., University of Alabama, 1956; Ph.D., University of Kentucky, 1960.

Naomi I. Rae Grant (Child Psychiatry), D.P.M., University of London, 1957.

Lucy M. Harrahill (Psychiatric Social Work), M.S.W., Fordham University, 1945.

Franz E. Hornung (Psychiatry), M.D., University of Heidelberg, 1945.

Mae Ruth Lundell (Psychiatric Social Work), B.A., Illinois College, 1955; M.S.W., Washington University, 1955.

Thomas K. Mangelsdorf (Psychiatry), B.S., University of Notre Dame, 1952; M.D., St. Louis University, 1956.

Beulah Morris (Psychiatric Social Work), B.A., Southwestern College, 1944; M.S.W., Washington University, 1952.

Dolores Ortger (Medical Psychology), B.S., St. Louis University, 1956; M.S., 1958.

Frances G. Place (Psychiatric Social Work), A.B., Washington University, 1924; M.S.W., 1948.

Laura Root (Psychiatric Social Work), M.A., University of Rochester, 1951; M.S.W., Washington University, 1960.

Marylyn Voerg (Medical Psychology), B.A., University of Florida, 1950.

Willy Joseph Weinstein (Neurology), A.B., Columbia University, 1951; M.D., Washington University, 1956. (Also National Institute of Neurological Diseases and Blindness Fellow in Neurology)

Joseph L. White (Medical Psychology), A.B., San Francisco State College, 1954; M.S., 1958; Ph.D., Michigan State University, 1961.

# *Research Instructors*

Norman L. Corah (Medical Psychology), B.A., University of Buffalo, 1955; Ph.D., 1960.

Adele B. Croninger (Psychiatry), A.B., Washington University, 1943; M.A., 1948.

John C. Glidewell (Medical Psychology), A.B., University of Chicago, 1949; Ph.D., 1953.

Hilde E. Hirsch (Psychiatry), M.S., Hebrew University (Israel), 1955; Ph.D., University of California, 1948.

Lucy J. King (Psychiatry), A.B., Washington University, 1954; M.D., 1958. (Also National Institute of Mental Health Research Trainee in Psychiatry)

Mark A. Stewart (National Institute of Mental Health Career Investigator), B.A., M.A., Cambridge University, 1953; M.R.C.S., L.R.C.P., Cambridge and St. Thomas' Hospital, 1956. (Also Pharmacology)

*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.

George A. Benson, Jr. (Psychiatry), B.S., University of Cincinnati, 1950; M.D., 1954.

John F. Bergmann (Psychiatry), A.B., Washington University, 1950; M.D., 1954. (Also National Institute of Mental Health Trainee in Psychiatry)

Robert D. Brookes (Neurology), A.B., De Pauw University, 1934; M.D., Washington University, 1938.

William Cone (Psychiatry), B.A., Yale University, 1949; M.D., 1954.

Edmund V. Cowdry, Jr. (Psychiatry), A.B., Princeton University, 1942; M.D., Washington University, 1945.

Mary E. 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.

Alvin R. Frank (Psychiatry), B.S., Purdue University, 1949; M.D., University of Illinois, 1953.

Janet Golden (Psychiatric Social Work), A.B., Washington University, 1924.

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 Hofstadter (Psychiatry), M.D., University of Vienna, 1926.

Lilli Hofstadter (Psychiatry), M.D., University of Vienna, 1949.

Joseph B. Kendis (Clinical Medicine), M.D., Washington University, 1933.

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 M. 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.

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.

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)

Frank O. Shobe (Psychiatry), A.B., Washington University, 1938; M.D., 1942.

Nathan M. Simon (Psychiatry), M.S., Yale University, 1950; M.D., Washington University, 1955.

Stuart Weiss (Neurology), A.B., Washington University, 1950; M.D., 1954.

*Instructors Emeriti (Clinical)*

Barbara S. Kendall (Medical Psychology), A.B., Radcliffe College, 1913; Ed.M., Harvard University, 1928.

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., Meharry Medical College, 1958. (Also National Institute of Mental Health Trainee in Psychiatry)

Mary Ann Bourne (Medical Psychology), B.A., Newcomb College, 1959. (To Sept. 14, 1962)

Lincoln B. Calvin (Psychiatry), B.Ed., Illinois State Normal University, 1942; M.D., Meharry Medical College, 1951. (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)

Augustin A. Chermes (Psychiatry), B.S., Universidad de Valencia (Spain), 1955.

Robert Chesanow (National Institute of Neurological Diseases and Blindness Fellow in Neurology), B.S., Union College, 1955; M.D., Albany Medical College, 1960.

Paula J. Clayton (Psychiatry), B.S., University of Michigan, 1956; M.D., Washington University, 1960. (Also National Institute of Mental Health Trainee in Psychiatry)

K. C. Das (Psychiatry), B.Sc., University of Calcutta, 1951; M.B.B.S., 1956.

Alejandro M. Datuin (National Institute of Neurological Diseases and Blindness Fellow in Neurology), M.D., University of Santo Tomas, 1956.

Thomas H. Davis, A.B., University of Kansas, 1956; M.D., 1960.

Nurretin Deniz (Psychiatry), B.S., University of Istanbul, 1937; M.D., 1942. (Also National Institute of Mental Health Trainee in Psychiatry)

Joan Dixon (Medical Psychology), B.A., University of Nevada, 1953; M.A., University of Southern California, 1956. (To August 31, 1962)

Fenton G. Drake (Psychiatry), M.D., St. Louis University, 1952. (Also National Institute of Mental Health Trainee in Psychiatry)

James H. Frisbie (Psychiatry), A.B., Emory University, 1957; M.D., 1961. (Also National Institute of Mental Health Trainee in Psychiatry)

Wilbur H. Gearhart (Psychiatry), B.S., Butler University, 1949; M.D., Hahnemann Medical College, 1950. (Also National Institute of Mental Health Trainee in Psychiatry)

Eva Weltin Gellens (Psychiatry), M.D., University of Vienna, 1954.

Daniel S. Hellman (Psychiatry), B.S., University of Notre Dame, 1954; M.D., St. Louis University, 1959. (Also National Institute of Mental Health Trainee in Psychiatry)

Marijan Herjanic (Psychiatry), M.D., Zagreb University (Yugoslavia), 1956.

Victor Huerta-Mercado (Psychiatry), M.D., National Major University of San Marcos, 1961.

Ruth Lucas (Medical Psychology), A.B., Washington University, 1929. (To Sept. 14, 1962)

Gustavo Martinez-Okrassa (Psychiatry), M.D., San Carlos University of Guatemala, 1958.

Jay Meyer (Psychiatry), A.B., Washington University, 1956; M.D., St. Louis University, 1960. (Also National Institute of Mental Health Trainee in Psychiatry)

Barbara L. Moss (Psychiatry), B.A., Northwestern University, 1943; B.S., Western Michigan College, 1946; M.D., University of Michigan, 1950. (Also National Institute of Mental Health Trainee in Psychiatry)

Lew B. Myers (National Institute of Neurological Diseases and Blindness Fellow in Neurology), B.S., Oregon State College, 1955; M.D., University of Oregon, 1960.

Ferris N. Pitts, Jr. (Psychiatry), A.B., Washington University, 1952; M.D., 1955. (Also National Institute of Mental Health Trainee in Psychiatry to July 31, 1962)

Abdur Rasheed (Psychiatry), M.B.B.S., King Edward Medical College (Lahore), 1947; D.T.M.H., London University of Hygiene and Tropical Medicine, 1956.

Charles M. Renne (Medical Psychology), B.S., St. Louis University, 1959; M.S., 1960. (To September 30, 1962)

Harry M. Ricketts, Jr. (Psychiatry), M.D., Tulane University, 1947. (Also National Institute of Mental Health Trainee in Psychiatry)



Samuel R. Rondberg (Medical Psychology), A.B., Washington University, 1959. (To September 14, 1962)

Mary L. Schaef (Psychiatry), R.N., University of Cincinnati, 1938; M.S., 1940; M.D., 1945.

Earl R. Schultz (Neurology), A.B., Southeast Missouri State College, 1952; B.S. in Medicine, University of Missouri, 1953; M.D., Washington University, 1955. (National Institute of Neurological Diseases and Blindness Fellow)

Donald R. Seidal (Psychiatry), M.D., St. Louis University, 1956.

Alberto Soto (Psychiatry), M.D., Salamanca University, 1959.

Wendell K. Stewart (Psychiatry), B.A., Washington University, 1955; M.D., Baylor University, 1959. (Also National Institute of Mental Health Trainee in Psychiatry)

Jun-bi Tu (Psychiatry), M.D., National Taiwan University, 1956.

Houshang Vafi (Psychiatry), M.D., Teheran Medical College, 1961.

Philip I. Woerner (Psychiatry), A.B., Princeton University, 1957; M.D., Washington University, 1961. (Also National Institute of Mental Health Trainee in Psychiatry)

John C. Wohlrabe (Psychiatry), B.A., University of Minnesota, 1948; M.B., 1952; M.D., 1953. (Also National Institute of Mental Health Trainee in Psychiatry)

Edwin D. Wolfgram (Psychiatry), B.A., State University of Iowa, 1954; M.D., 1959. (Also National Institute of Mental Health Trainee in Psychiatry)

Robert A. Woodruff, Jr. (Psychiatry), A.B., Harvard University, 1956; M.D., 1960. (Also National Institute of Mental Health Trainee in Psychiatry)

#### *Research Assistants*

Ralph L. Biddy (Psychiatry), A.B., University of Detroit, 1954; M.D., St. Louis University, 1958. (Also National Institute of Mental Health Research Trainee in Psychiatry)

Calvin W. Burnett (Child Psychiatry), B.S., St. Louis University, 1959.

Susan S. Emmons (Psychiatry), B.A., Earlham College, 1957; M.S., Cornell University, 1959.

Melba Fishman (Medical Psychology), B.A., Washington University, 1959.

Mary Grohmann (Medical Psychology), M.S., St. Louis University, 1959.

Karen L. U. Gross (Medical Psychology), B.A., Wells College, 1958; M.A., University of California, 1961.

Julian C. Hall (Psychiatric Social Work), B.S., University of Louisville, 1949; M.S., 1951.

Robert S. Hicks (Psychiatry), A.B., Hendrix College, 1951; M.D., University of Arkansas, 1958. (Also National Institute of Mental Health Research Trainee in Psychiatry)

Ada Marie Kaplan (Child Psychiatry), A.B., Washington University, 1935.

Betty Levitsky (Medical Psychology), A.B., Washington University, 1953.

Deborah S. Onken (Medical Psychology), A.B., Washington University, 1956; M.A., 1961.

Myron Harvey Pollack (Medical Psychology), B.S., Washington University, 1961.

Muriel W. Sterne (Sociology), B.A., Hunter College, 1954; M.A., Washington University, 1959.

Doris Lee Storms (Child Psychiatry), A.B., Washington University, 1960.

#### *Assistants (Clinical)*

Anthony Ferro (Psychiatry), M.D., Havana University, 1949.

Joseph Shuman (Psychiatry), B.S., Middlesex University, 1943; M.D., University of Lausanne, 1952.

#### *Consultants*

Mary Spellman (Psychiatric Nursing), R.N., Research Hospital, 1947; B.S., Washington University, 1954; M.S., 1960.

Dorothy M. Stauffer (Social Work), A.B., Eureka College, 1934; M.S.W., Washington University, 1949.

#### *Lecturer*

Robert Lefton (Medical Psychology), A.B., Washington University, 1953; M.A., 1955.

#### *Fellows*

P. David Gatfield (Research in Psychiatry), M.D., C.M., Queen's University, 1957. (Also Pharmacology)

George Klinkerfuss (U.S.P.H.S. Special Fellow in Neurology), A.B., Washington University, 1952; M.D., 1956.

John D. Loeffler (Neurology), B.S., University of Wisconsin, 1954; M.D., 1958. (National Institute of Neurological Diseases and Blindness Fellow) (To October 1, 1962)

Truman E. Mast (U.S.P.H.S. Postdoctoral Fellow in Neurology), B.A., Goshen College, 1957; M.D., Western Reserve University, 1961.

James S. Nelson (Psychiatry), M.D., St. Louis University, 1957. (National Institute of Neurological Diseases and Blindness Special Research Fellow in Neurochemistry)

William Surphlis (Psychiatry), M.D., C.M., Queen's University (Canada), 1958.

#### FIRST YEAR

##### 10. *Psychiatry and Neurology.*

*Determinants of Behavior.* Through lectures, discussion, and patient presentations, a framework for understanding human behavior (both in illness and in health) is presented. Four hours are given to the discussion of childhood behavior and development, which discussion is augmented by observing four children at different age levels. Such subjects as ethology, depression, anxiety, learning, hostility, and sexuality are presented to the class. These determinants are illustrated by the interviewing of adult patients from the hospital. The last 5 hours of the program are devoted to social factors in disease and personality development. 18 hours. (Dr. Winokur and Associates)

*Integrative Neurology* (Given as part of Anatomy 11). A series of four clinics is held in the second semester 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. Murphy, Guze, Painter, Eli Robins, Winokur, Dewald)

##### 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 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. Landau 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. (Dr. Guze and Staff)

(b) *Psychiatric Aspects of Clinical Medicine.* (See Medicine—Dr. Guze)

(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 St. Louis State Hospital, 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.

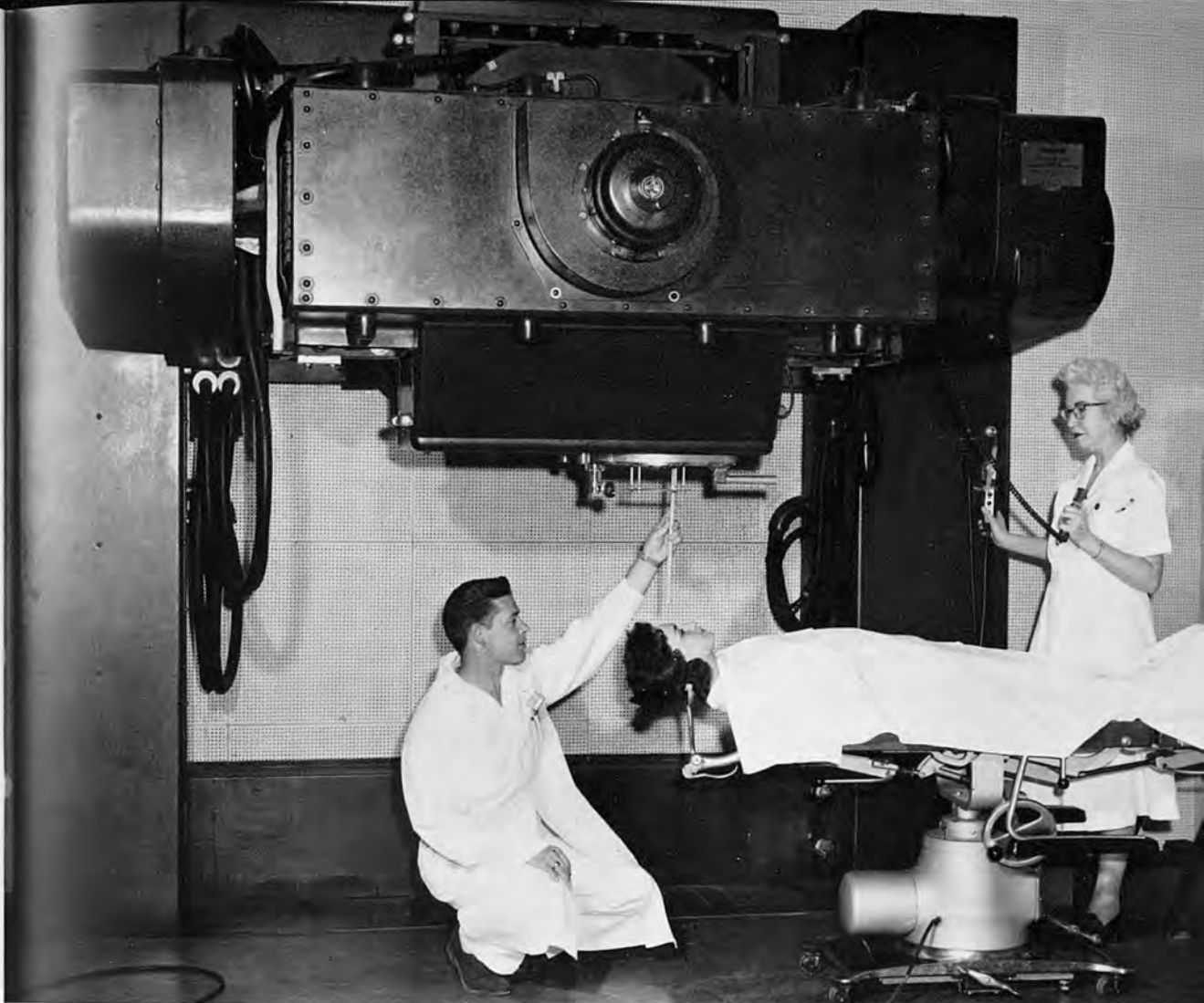
(Drs. Cruvant, Fingert, Kaplan, Sommer)

55. *Barnes Hospital Clerkship*. Neurology outpatient clinics, ward rounds, Neurology-Neurosurgery-Neuropathology Conferences, EEG. Full time for three or six weeks.

(Dr. 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.

(Dr. Landau)



*Technicians prepare a patient for betatron treatment in the radiotherapy division of the Department of Radiology.*

## DEPARTMENT OF RADIOLOGY

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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)

*Professors*

Alexander R. Margulis, M.D., Harvard University, 1950.

Michel M. Ter-Pogossian (Radiophysics), B.A., University of Paris, 1942; M.S., Washington University, 1948; Ph.D., 1950.

*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; Sc.M., Washington University, 1921; Ph.D., 1924; Sc.D. (hon.), Western College, 1956; Sc.D. (hon.), Mount Holyoke College, 1960. (See Department of Anatomy)

*Associate Professor*

William E. Powers, B.S., University of Illinois, 1949; M.D., 1951.

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. (On leave of absence)

Fred J. Hodges III, B.A., University of Wisconsin, 1944; M.D., 1946.

William H. McAlister, B.S., Wayne State University, 1950; M.D., 1954.

*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*

Marvin J. Friedenberg, B.A., Yale University, 1951; M.D., Tufts University, 1955.

Tom W. Staple, B.S., University of Illinois, 1953; M.D., 1955. (Effective Oct. 1, 1962)

John C. Stears, B.A., University of Toronto, 1950; M.D., 1954.

*Instructor (Clinical)*

Mark D. Eagleton, Jr., A.B., Amherst College, 1947; M.D., Washington University, 1950.

*Assistants*

William N. Cohen, M.D., University of Maryland, 1959.

Alan H. Edelman, A.B., Washington University, 1957; M.D., University of Missouri, 1961.

Howard L. Hudson, B.S., Pennsylvania State University, 1953; M.D., University of Pittsburgh, 1957.

William B. Hutchinson, B.S., Arkansas A. and M. College, 1952; M.D., Washington University, 1956.

James P. Kase, A.B., Princeton University, 1957; M.D., Washington University, 1961.

John P. Locksmith, M.D., Marquette University, 1959.

Delmar H. Mahrt, B.S., University of Nebraska, 1957; M.D., 1960.

Anastacio C. Ng, M.D., University of Santo Tomas (Philippines), 1958.

Lily Ann Palmer, B.S., University of Denver, 1957; M.D., Washington University, 1960.

Carlos A. Perez, B.S., University of Antioquia (Colombia, S.A.), 1952; M.D., 1960.

Donald F. Rayl, B.A., Sioux Falls College, 1939; M.A., University of South Dakota, 1941; M.D., Johns Hopkins University, 1943.

Robert Bruce Salmon, B.S., Auburn University, 1958; M.D., Washington University, 1961.

Tom W. Staple, B.S., University of Illinois, 1953; M.D., 1955. (To September 30, 1962)

Thomas Bruce Vest, M.D., University of Pennsylvania, 1952. (To September 30, 1962)

Irwin D. Zim, A.B., Colgate University, 1955; M.D., Cornell University, 1959.

*Fellow*

Toyozo Terasima (Postdoctoral), M.S., Chiba University (Japan), 1947; M.D., 1950.

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, Friedenberg, Hodges, Margulis, McAlister, Powers, Stears, Ter-Pogossian, Tolmach)

ELECTIVE COURSES

50. *Clerkships in Diagnostic or Therapeutic Radiology.* Electives may be chosen in any section of the Department. Students will serve as externs working under the supervision of the residents and senior staff in that section. Limited to one student per section. Six weeks, full time.

- a. Roentgenology of the Chest.....Dr. Wilson
- b. Cardiovascular Roentgenology.....Dr. Friedenberg
- c. Gastrointestinal Roentgenology.....Dr. Margulis
- d. Pediatric Roentgenology.....Dr. McAlister
- e. Therapeutic Radiology.....Dr. Powers

51. *Rotating Diagnostic Roentgenologic Clerkships.* Students will serve as externs on chest, gastrointestinal, orthopedic, neurological, and pediatric services. Two students. Six weeks, full time.

52. *Special Elective Courses.* 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.

53. *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 head of these sections.



*A professor performs an operation in Barnes Hospital assisted by members of the resident staff and fourth-year students.*

## THE MARY CULVER DEPARTMENT OF SURGERY

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(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 Neurosurgical 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 and Chief of the  
Division of Anesthesiology*

Robert B. Dodd, M.D., University of Nebraska, 1945.

*Professors*

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.

*Research Professor*

Albert Roos (Anesthesiology), M.D., University of Groningen (Holland), 1940. (See Department of Physiology)

*Professors (Clinical)*

James Barrett Brown, M.D., Washington University, 1923.

Peter Heinbecker, B.A., McGill University, 1918; M.D., 1921.

*Professors Emeriti (Clinical)*

Glover H. Copher, A.B., University of Missouri, 1916; M.D., Washington University, 1918.

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. Bernard, M.D., Washington University, 1947.

Harvey R. Butcher, A.B., Central College, 1941; M.D., Harvard University, 1944. (Also Markle Fellow)

Sidney Goldring (Neurological Surgery), M.D., Washington University, 1947.

Morton Donald Pareira, A.B., Washington University, 1933; M.D., 1937.



John R. Shields (Anesthesiology), Ch.B., M.B., University of Birmingham (England), 1941.

Arthur H. Stein, Jr. (Orthopedic Surgery), A.B., Amherst College, 1946; M.D., Washington University, 1948.

James M. Stokes, M.D., Washington University, 1948.

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.

Franklin Edward Walton, B.S., Shurtleff College, 1923; M.D., Washington University, 1927; Sc.D. (hon.), Shurtleff College, 1952.

#### *Associate Professor Emeritus (Clinical)*

J. G. Probst, M.D., Loyola University, 1917.

#### *Assistant Professors*

William R. Cole, A.B., University of Missouri, 1948; M.D., Washington University, 1952; D.Sc., University of Cincinnati, 1959.

William S. Coxe (Neurological Surgery), B.S., Hampton-Sydney College, 1945; M.D., Johns Hopkins Medical School, 1948.

Donald J. Dickler (Anesthesiology), B.A., New York University, 1942; M.D., New York University College of Medicine, 1945.

Felix G. Freund (Anesthesiology), M.D., Universidad Nacional de Buenos Aires, 1948.

Howard S. Liang (Anesthesiology), M.D., National Sun Yat-sen University, College of Medicine (China), 1940.

Harry C. Morgan (Orthopedic Surgery), A.B., University of Missouri, 1949; B.S., 1951; M.D., Harvard University, 1953.

William T. Newton, B.S., Yale University, 1945; M.D., 1950.

Charles L. Roper (Thoracic Surgery), A.B., Colorado College, 1949; M.D., University of Colorado, 1953.

Kenneth D. Serkes, B.S., Yale University, 1950; M.D., Washington University, 1951.

Andrew D. Spencer, A.B., Indiana University, 1951; M.D., 1954.

Warren G. Stamp (Orthopedic Surgery), B.S., Westmar College, 1949; M.D., State University of Iowa, 1952.

Jessie L. Ternberg (D.G.M.S. Trainee), A.B., Grinnell College, 1946; Ph.D., University of Texas, 1950; M.D., Washington University, 1953.

#### *Assistant Professors (Clinical)*

Morris Abrams (G.U. Surgery), B.S., University of Illinois, 1934; 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.

C. Alan McAfee, B.S., Washington State College, 1938; M.D., Washington University, 1942.

Robert Killian Royce (G.U. Surgery), B.S., University of Mississippi, 1939; M.D., Washington University, 1942.

Leo Aaron Sachar, A.B., Washington University, 1936; M.D., 1940.

Carl A. Wattenberg (G.U. Surgery), A.B., University of Kansas, 1934; M.D., 1937.

#### *Instructors*

Thomas C. Apostle (Anesthesiology), A.B., Washington University, 1954; M.D., 1958. (On leave of absence for service in the Armed Forces)

Walter C. Bauer (Surgical Pathology), B.S., Ohio State University, 1946; M.D., Washington University, 1954. (See Department of Pathology) (On leave of absence for service in the Armed Forces)

William T. Bowles (G.U. Surgery), M.D., Stanford University, 1955.

Robert C. Donaldson, A.B., University of Missouri, 1941; M.D., Washington University, 1944.

Francis Gerard Duffy (Anesthesiology), M.B., National University of Ireland, 1951.

Marcy Allen Goldstein, M.D., Washington University, 1951.

Bela I. Hatfalvi (Anesthesiology), M.D., M. Kir. Tisza Istvan Tudomanyegyetem (Hungary), 1938.

Thomas Hornbein (Anesthesiology), B.A., University of Colorado, 1952; M.D., Washington University, 1956. (On leave of absence for service in the Armed Forces)

G. Lynn Krause, Jr. (Division of General Medical Sciences Trainee), B.A., Amherst College, 1950; M.D., University of Pennsylvania, 1954.

John S. Spratt, Jr., M.D., Southwestern Medical School of the University of Texas, 1952. (American Cancer Society Advanced Clinical Fellow in Surgery) (On leave of absence)

Irvin C. Susman (Anesthesiology), M.D., University of Illinois, 1949.

#### *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), B.A., 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), B.A., Montana State University, 1930; M.D., Washington University, 1934.

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.

Frank O. Richards, A.B., Talladega College, 1944; M.D., Howard University, 1947.

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 C. Sisson, A.B., Harvard University, 1943; M.D., Yale University, 1946.

Herbert Sunshine (G.U. Surgery), A.B., Washington University, 1950; M.D., 1954.

Willard B. Walker, M.D., Washington University, 1946.

George L. Watkins, Jr., A.B., Westminster College, 1938; M.D., Washington University, 1942.

James M. Whittico, M.D., Meharry Medical College, 1940.

#### *Assistants*

Harry B. Abramowitz, B.A., Johns Hopkins University, 1958; M.D., Albert Einstein College of Medicine, 1962.

Charles B. Anderson, B.A., Johns Hopkins University, 1958; M.D., Yale University, 1962.

John P. Arnot (Orthopedic Surgery), B.A., Rice Institute, 1954; M.D., Yale University, 1958.

John F. Balfour, A.B., University of Missouri, 1957; M.D., Washington University, 1961.

Robert S. Bourke, A.B., Harvard University, 1956; M.D., Tufts University, 1960. (On leave of absence with U.S.P.H.S.)

Edith Joan Bradley (Anesthesiology), M.B., London University, 1958; B.S., 1958.

Michael W. Brown, A.B., Washington University, 1958; M.D., 1962.

Alan Burbank, B.A., Swarthmore College, 1955; M.D., State University of New York, 1959.

William Burke, B.A., Dartmouth College, 1956; M.D., State University of New York, 1960.

Peter G. Carnesale, B.S., University of Wisconsin, 1957; M.S., 1960; M.D., Cornell University, 1962.

Jose Castillo, M.D., Escuela Nacional de Medicina, 1953.

Galen Cook, A.B., Washington University, 1951; M.D., 1955.

Loy E. Cramer (Orthopedic Surgery), M.D., University of Oregon, 1956.

Paul H. DeBruine (Anesthesiology), B.S., Elmhurst College, 1955; M.D., Washington University, 1959.

Burl M. Dillard, M.D., University of Texas, Southwestern Medical School, 1958.

John S. Dillon, B.S., Georgetown University, 1952; M.D., 1956.

William L. Donegan, B.A., Yale University, 1955; M.D., 1959.

Ira M. Dushoff, A.B., University of Pennsylvania, 1952; M.D., 1956.

Harry L. Ellis (G.U. Surgery), B.S., Southwest Missouri State College; M.D., Baylor College of Medicine, 1958.

Tanuous 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. (On leave of absence with the Armed Forces)

Raymond W. Ferrier, M.D., University of Suriname, 1958.

George N. Forker (G.U. Surgery), B.A., Yale University, 1956; M.D., Columbia College of Physicians and Surgeons, 1960.

Hugh M. Foster, Jr., A.B., Denison University, 1954; M.D., Vanderbilt University, 1958.

Ernest W. Franklin, A.B., Princeton University, 1958; M.D., Harvard University, 1962.

James M. Giffin, B.A., Amherst College, 1957; M.D., Yale University, 1961.

William Goettman, B.A., Wittenberg College, 1954; M.D., Washington University, 1958. (On leave of absence for service in the Armed Forces.)

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.

John Griz (Orthopedic Surgery), B.S., Wayne State University, 1955; M.D., 1959.

- Roderick C. Haff, B.A., Yale University, 1958; M.D., 1962.
- Ben Calvin Harmon (Orthopedic Surgery), B.A., Texas Christian University, 1956; M.D., Washington University, 1960.
- A. Basil Harris (Neurological Surgery), A.B., Birmingham-Southern College, 1950; M.D., Medical College of Alabama, 1954.
- Hugh F. Harris, Jr., B.S., University of Mississippi, 1955; M.D., Harvard University, 1958. (On leave of absence for service in the Armed Forces)
- Alfred B. Hathcock (Orthopedic Surgery), M.D., Washington University, 1956.
- Mark P. Helbrun, A.B., Brown University, 1958; M.D., University of Buffalo, 1962.
- Ronald C. Hertel (Orthopedic Surgery), A.B., Washington University, 1952; M.D., 1956.
- William B. Hofmann (Anesthesiology), B.A., Miami University, 1954; M.D., University of Cincinnati, 1958.
- Robert B. Holloway (Anesthesiology), B.S., LeMoyne College, 1952; M.D., Meharry Medical College, 1956.
- Lanny L. Johnson (Orthopedic Surgery), 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. (On leave of absence with USPHS.)
- Wolff M. Kirsch (Neurological Surgery), A.B., Washington University, 1951; M.D., 1955.
- Mark C. Kiselow, B.S., University of Wisconsin, 1958; M.D., 1962.
- John L. Kiser, B.S., Southern Methodist University, 1958; M.D., Washington University, 1962.
- Saul Klein (Genitourinary Surgery), B.S., Syracuse University; M.D., State University of New York.
- Nicholas T. Kouchoukos, M.D., Washington University, 1961.
- L. Henry Lackner, A.B., Stanford University, 1957; M.D., Washington University, 1961.
- Jerome F. Levy, A.B., Washington University, 1954; M.D., 1958.
- Zoltan J. Lucas, M.D., Johns Hopkins University, 1957.
- Henry R. McCarroll, A.B., Princeton University, 1958; M.D., Columbia College of Physicians and Surgeons, 1962.
- Ronald K. McGregor (Anesthesiology), A.B., Murray State College, 1954; M.D., Washington University, 1958.
- Roland B. Mernitz, B.S., Elmhurst College, 1954; M.D., Washington University, 1958.
- Roger H. Michael (Orthopedic Surgery), B.A., Oberlin College, 1953; M.D., Western Reserve University, 1957.
- James C. Morris III, B.S., Davidson College, 1958; M.D., Duke University, 1962.
- Sam E. Myrick, Jr., B.S., Davidson College, 1953; M.D., Duke University, 1957.
- Harold G. Norman, Jr., B.S., University of Alabama, 1957; M.D., Medical College of Alabama, 1961.
- Howard L. Nudelman, B.A., Ohio State University, 1956; M.D., 1960.
- Margaret M. F. Oakley (Anesthesiology), B.S., University of Illinois, 1955; M.D., St. Louis University, 1959.
- Richard Parsons (G.U. Surgery), B.S., Missouri Valley College, 1954; M.D., Washington University, 1958.
- Jerry M. Petty, B.S., University of North Carolina, 1956; M.D., 1960. (On leave of absence for service with the Armed Forces)
- Franklin Pfeifferberger, B.A., Yale University, 1951; M.D., Cornell University, 1955.
- Gordon W. Philpott, B.S., Yale University, 1957; M.D., Washington University, 1961.
- Hiram C. Polk, Jr., B.S., Millsaps College, 1956; M.D., Harvard University, 1960.
- Richard Quintiliani, A.B., Harvard University, 1957; M.D., Boston University, 1961.
- Albert Rhoton (Neurosurgery), B.S., Ohio State University, 1955; M.D., Washington University, 1959.
- Bernard A. Rineberg, A.B., Duke University, 1956; M.D., 1960. (On leave of absence for service with the Armed Forces)
- Raymond A. Ritter, Jr., A.B., Washington University, 1958; M.D., 1962.

Martin G. Rosenthal (G.U. Surgery), B.S., University of Michigan, 1953; M.D., State University of New York, 1957.

Ronald E. Rosenthal, M.D., Washington University, 1961.

William F. Sasser, Jr., A.B., Vanderbilt University, 1956; M.D., Emory University, 1960. (On leave of absence for service with the Armed Forces)

John V. Satterfield III, B.S., University of Arkansas, 1954; M.D., 1958.

Mary Shannon, R.N.

L. Thornton Shields, A.B., Harvard University, 1957; M.D., Johns Hopkins University, 1961.

Marvin D. Silver, B.A., Wayne State University, 1957; M.D., 1961.

Bobby Gene Smith (Genitourinary Surgery), B.S., M.D., University of Oklahoma.

Kenneth Smith (Neurological Surgery), M.D., Washington University, 1957.

Roger R. Smith, A.B., Washington University, 1958; M.D., 1962.

Lawrence S. Steinberg, A.B., Washington University, 1956; M.D., 1960. (On leave of absence for service with the Armed Forces)

Howard S. Sturim, M.D., University of Rochester, 1957.

Winfred L. Sugg, M.D., University of North Carolina, 1957.

George L. Tucker, A.B., Columbia University, 1952; M.D., Harvard University, 1956.

Joe Roy Utley, B.A., Oklahoma City University, 1957; M.D., Washington University, 1960. (On leave of absence for service in the Armed Forces)

Robert S. Waldbaum, B.A., Columbia University, 1958; M.D., Columbia College of Physicians and Surgeons, 1962.

Andrew W. Walker, B.A., Westminster College, 1955; M.D., Vanderbilt University, 1960.

George C. Wee, M.D., University of Louisville, 1931.

Ronald M. Weintraub, B.A., Harvard University, 1957; M.D., 1961.

Newton B. White (Orthopedic Surgery), M.D., University of Cincinnati, 1957.

Dolores P. Wolff (Anesthesiology), A.B., Washington University, 1954; M.D., 1959.

Sanford Wolfson, A.B., Williams College, 1954; M.D., Harvard University, 1958.

### *Assistants (Clinical)*

Arthur I. Auer, B.S., Massachusetts Institute of Technology, 1952; M.D., Washington University, 1956.

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.

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.

W. Edward Lansche (Orthopedic Surgery), A.B., Washington University, 1948; M.D., 1952.

Stanley L. London, M.D., Washington University, 1949.

Robert Herluf Lund, M.D., Washington University, 1949.



Rhondal S. Mason (Orthopedic Surgery), A.B., Lincoln University, 1948; M.D., McHarry Medical College, 1953.

Lester J. Nathan, B.A., University of Omaha, 1949; M.D., University of Nebraska, 1952.

George A. Oliver, A.B., Washington University, 1948; M.D., 1952.

Meredith J. Payne, A.B., Washington University, 1947; M.D., 1950.

Keith E. Pipes, A.B., Fresno State College, 1950; M.D., Washington University, 1954.

George B. Rader, M.D., Washington University, 1951.

Robert Rainey, B.S., Yale University, 1944; M.D., Washington University, 1947.

William Shieber, M.D., Washington University, 1953.

#### Fellows

Lyndon U. Anthony (Neurological Surgery), M.D., University of North Carolina, 1957.

William J. Hostnik (Plastic Surgery), A.B., Johns Hopkins University, 1950; M.D., 1954.

Charles Janda (Plastic Surgery), B.S., Loyola University, 1952; D.D.S., 1953; M.D., 1958.

Peter K. Kollias (Plastic Surgery), M.D., Athens University (Greece), 1953.

William G. Krech (Plastic Surgery), A.B., Columbia University, 1944; M.D., New York University, 1946.

Robert E. Kuhlman (N.I.A.M.D. Trainee in Orthopedic Surgery), M.D., Washington University, 1956.

Jack W. Love (Thoracic Surgery), M.D., Yale University, 1958.

James F. Peterson (Plastic Surgery), B.S., University of Kansas, 1954; M.D., 1957.

Stewart E. Pursel (Thoracic Surgery), A.B., Princeton University, 1952; M.D., Yale University, 1956.

Don J. Russell (Plastic Surgery), M.D., University of Tennessee, 1954.

Albert H. Shaheen (Plastic Surgery), D.D.S., University of Buffalo, 1953; M.D., 1958.

Nathan M. Sheiner (Thoracic Surgery), B.S., McGill University, 1953; M.D., 1957.

Paul E. Stohr (Neurological Surgery), M.D., Washington University, 1959.

#### 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 therapeutical 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.

#### 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. Cordonnier and House Staff. Grand rounds, two hours weekly, Dr. Cordonnier and Staff. Pyelogram

Conference, five hours weekly, Drs. Cordonnier and Zink. Didactic study of special urologic subjects, two hours weekly, Dr. Cordonnier. Surgical Pathology Conference, one hour every other week. Dr. Cordonnier.

*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 services 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

\* Students present their own cases.

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)

#### ELECTIVE COURSES

50. *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.

51 (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)

52. *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.

53. *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.

54. *Urology Clerkship in Barnes Hospital.* One student, mornings for six weeks.

55. *Physical Medicine.* Four students. Mornings for six weeks.

## SURGERY

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56. *Advanced Clerkship.* 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.

57. *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.

58. *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)

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## 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.

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## TEACHING AND RESEARCH DIVISIONS

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### 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*

Teofil Kheim, M.D., University of Budapest, 1934.

Katsumi Murata, M.D., University of Tokyo, 1954; Ph.D., 1961.

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### 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 the late 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.

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### DIVISION OF TUMOR SERVICES

#### *Cancer Co-ordinator and Director of Division of Tumor Services*

Harvey R. Butcher, 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 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, postgraduate 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.

## TEACHING AND RESEARCH DIVISIONS

### EXECUTIVE COMMITTEE

Edward Reinhard.....	Internal Medicine
A. Norman Arneson.....	Obstetrics and Gynecology
Theodore Sanders.....	Ophthalmology
Joseph H. Ogura.....	Otolaryngology
Lauren V. Ackerman.....	Pathology
Teresa Vietti.....	Pediatrics
William Powers.....	Radiology
Harvey Butcher, Chairman.....	Surgery

### WILLIAM GREENLEAF ELIOT DIVISION OF CHILD PSYCHIATRY

#### *Director and Blanche F. Ittleson Professor*

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.

#### *Director of the Child Guidance and Child Evaluation Clinics and Assistant Professor of Child Psychiatry*

Thomas C. Brugger, B.S., University of Wisconsin, 1950; M.D., 1953.

#### *Research Associate Professor*

Jane Loevinger Weissman (Medical Psychology), B.A., University of Minnesota, 1937; M.S., 1938; Ph.D., University of California, 1944.

#### *Lecturer*

Robert E. Lefton (Medical Psychology), A.B., Washington University, 1953; Ph.D., 1958.

#### *Assistant Professors*

Loretta Cass (Medical Psychology), B.A., Colorado College, 1934; M.A., 1942; Ph.D., Ohio State University, 1950.

Quentin Rae Grant (Child Psychiatry), M.B., Aberdeen University, 1951; D.P.M., University of London, 1958.

#### *Assistant Professors (Clinical)*

Roy M. Mendelsohn (Child Psychiatry), B.S., University of Illinois, 1950; M.D., 1952.

Paul H. Painter (Child Psychiatry, Pediatrics), M.D., St. Louis University, 1947.

#### *Instructors*

Louetta Berger (Psychiatric Social Work), B.S., University of Wichita, 1941; M.S.W., Washington University, 1946.

Gabrielle Casebier (Speech Correction), B.S., University of Illinois, 1942; M.A., 1942.

Naomi I. Rae Grant (Child Psychiatry), D.P.M., University of London, 1957.

Lucy M. Harrahill (Psychiatric Social Work), M.S.W., Fordham University, 1945.

Mae Ruth Lundell (Psychiatric Social Work), B.A., Illinois College, 1955; M.S.W., Washington University, 1955.

Beulah Morris (Psychiatric Social Work), B.S., Southwest College, 1946; M.S.W., Washington University, 1952.

Dolores Ortgiier (Medical Psychology), B.S., St. Louis University, 1956; M.S., 1958.

Frances G. Place (Psychiatric Social Work), A.B., Washington University, 1924; M.S.W., 1948.

Marylyn Voerg (Medical Psychology), B.A., University of Florida, 1950.

*Research Instructor*

Norman L. Corah (Medical Psychology), B.A., University of Buffalo, 1955; Ph.D., 1960.

*Instructor (Clinical)*

Edith C. Robinson (Child Psychiatry, Pediatrics), A.B., Randolph-Macon College, 1927; M.S., University of South Carolina, 1928; M.D., Johns Hopkins University, 1932.

*Assistants*

Joseph D. Callahan (Child Psychiatry), M.D., St. Louis University, 1957.

William Ferzacca (Education in Child Psychiatry), B.A., Michigan State University, 1950; M.A., 1957.

John B. Lewis (Medical Psychology), B.S., Northwestern University, 1949; M.S.W., Washington University, 1952.

Edward J. Manley (Medical Psychology), B.B.A., St. John's University, 1936; A.M., St. Louis University, 1955.

Charles D. Ottensmeyer (Child Psychiatry), A.B., Washington University, 1950; M.D., 1954. (Also National Institute of Mental Health Trainee in Child Psychiatry)

Jack A. Raines (Child Psychiatry), M.D., University of Tennessee, 1950. (Also National Institute of Mental Health Trainee in Child Psychiatry)

*Research Assistants*

Calvin W. Burnett (Child Psychiatry), B.S., St. Louis University, 1959.

Barbara B. Fineberg (Child Psychiatry).

Marie Kaplan (Child Psychiatry), B.A., Washington University, 1935.

Betty Levitsky (Medical Psychology), A.B., Washington University, 1953.

Myron Harvey Pollack (Medical Psychology), B.S., Washington University, 1961.

Doris Storms (Child Psychiatry), A.B., Washington University, 1960.

The Division of Child Psychiatry offers a varied teaching program for residents in psychiatry and Fellows in Child Psychiatry through its Child Psychiatry Clinics and school for emotionally disturbed children at 369 North Taylor Avenue, the Steinberg Inpatient Department of Child Psychiatry at the Jewish Hospital, the Special Study Unit for psychosomatic disorders at the Children's Hospital, and the St. Louis County Child Guidance Clinic. Trainees are assigned to these various units where they participate in complete diagnostic evaluations and see patients in psychotherapy under the supervision of the unit director and the Professor of Child Psychiatry. Seminars in individual and group psychotherapy, psychology, social work, and research are held weekly at the Division building on Taylor Avenue, and opportunity is provided for observation through a one-way screen of psychological testing and group and individual psychotherapy. Fellows are encouraged to participate in small research projects.

## DIVISION OF AUXILIARY MEDICAL SERVICES

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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.

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### 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 Professors*

Donald J. Horsh, B.S., University of Nebraska, 1941; M.H.A., Washington University, 1951; LL.B., St. Louis University, 1953.

David Littauer, A.B., Cornell University, 1927; M.D., New York University, 1933.

#### *Instructor*

John M. Boyer (Personnel Administration), B.A., University of Illinois, 1936; M.A., 1938.

#### *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).

William H. Bedell (Personnel Health Facilities), A.B., Princeton University; M.A., New York University.

Louis Belinson (Mental Diseases), M.D., Rush Medical College, 1935.

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 (Hospital 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 (Veterans Hospital Administration), A.B., Vanderbilt University, 1929; M.D., 1932.

James Claywell (Maintenance Engineering), B.S.M.E., Washington University, 1959.

Richmond C. Coburn (Hospital Trusteeships), A.B., University of Missouri, 1924; LL.B., 1925.

Howard Colon, B.A., University of Alabama, 1947.

Doris Cook (Hospital Dietetics), B.S., University of Illinois, 1934.

Adalbert Dierks (Women'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.

Robert Frank, B.S., St. Louis University, 1950; M.H.A., 1962.

Thomas Frey, B.A., DePaul University, 1948.

David Gee, B.S., DePaul University, 1949; M.H.A., Washington University, 1951.

Joseph T. Greco, B.S., Birmingham-Southern College, 1939; M.H.A., Washington University, 1953.

Frank S. Groner, A.B., Baylor University, 1934; LL.D., Baptist College, 1946.

Jack A. L. Hahn, B.A., Evansville College, 1943; M.H.A., Northwestern University, 1948.

Henry Hardwicke (Public Health and Allied Fields), 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.

Joseph Holland (Hospital Press Relationship)

Cornelia S. Knowles, R.N., Washington University, 1925.

Julius Krasner (Hospital Laundries).

Mary Lewis (Social Work), B.A., University of Iowa, 1933; M.S.W., Washington University, 1946.

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.

Elizabeth McIntosh (Nursing), A.B., Scarritt College, 1930; B.S., University of Pennsylvania, 1942; M.S., Western Reserve University, 1947.

Florence Mueller (Hospital Pharmacy), B.S., Fonthonne College; Ph.G., St. Louis College of Pharmacy, 1931.

Keyton Nixon, B.S., Drury College, 1952; M.H.A., Northwestern University, 1954.

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., DePaul University, 1939; M.D., Washington University, 1947.

Hugh Vickerstaff, B.S., University of Iowa, 1940; M.H.A., Washington University, 1951.

John Warner, B.S., St. Louis University, 1948; M.H.A., 1954.

Neil Wortley, B.S., Southwest Missouri State College, 1950; M.H.A., Washington University, 1952.

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,



## DIVISION OF AUXILIARY MEDICAL SERVICES

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).....	\$1,000.00
Tuition (academic year, effective September, 1963).....	1,200.00
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.

*Instructor*

Garth D. Tubbs, B.S., Wisconsin State College, 1953.

*Instructor Emeritus*

Ada Wells Ford (also holds title of Lecturer)

*Assistants*

Marie Miller, B.A., Bryn Mawr College, 1938.

Marion A. Stumpf, B.S., Mount Mary College, 1950.

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 English, biology, physical science, psychology, and sociology.

*Candidates for B.S. degree*

Tuition (three semesters).....	Per semester	\$520.00
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).....	\$1,040.00
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 Departments of Anatomy and Preventive Medicine)

*Instructors*

Ruth Lee, B.S., University of Missouri, 1934; M.S., St. Louis University, 1956.

Shirley Sahrman, B.S., Washington University, 1958.

*Lecturers*

Elvera Guebert, R.N., B.S., Washington University, 1951.

Robert Hickok, B.S., Washington University, 1953.

Sharon R. Mahon, B.S., Washington University, 1956.

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.

## DIVISION OF AUXILIARY MEDICAL SERVICES

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	\$520.00
Tuition (final semester).....		100.00
Student Health Fee.....	Per semester	30.00
Late Registration Fee.....		5.00

### DEPARTMENT OF SOCIAL WORK

#### *Lecturer and Director*

Mary M. Lewis, A.B., University of Iowa, 1933; M.S.W., Washington University, 1946.

### 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 monthly stipend of \$50.00. A certificate is given at the end of the second year.

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 .....	\$100.00
Student Health Fee.....	Per year 60.00
Late Registration Fee.....	5.00

### SCHOOL OF DIETETICS

Doris Cook, B.S.....	Director
Helen Starch, B.S.....	Educational Director

A twelve-month course for the training of dietitians leading to a certificate, and eligibility for membership in The American Dietetic Association.

The course includes theoretical and practical training in food service and personnel administration, food service cost and control, diet therapy, teaching nutrition, outpatient instruction, and affiliation with the St. Louis Children's Hospital.

A bachelor's degree from an accredited college or university is required for admis-

sion. Certain courses in chemistry, biology, social science, education, food, 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. Maintenance is provided. A monthly stipend of \$35.00 is paid.

#### BARNES HOSPITAL SCHOOL OF MEDICAL TECHNOLOGY

Virgil Loeb, Jr., M.D. .... Director of Laboratories and of the School of  
Medical Technology, Barnes Hospital

A twelve-month course for the training of dietitians leading to a certificate, and tificate 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. The tuition is \$100.00 for the entire course.

Applicants must present at least three years of college work (the successful completion of at least 90 semester hours), including required courses in *Chemistry*, 4 semesters: One full year of general college chemistry, which may include qualitative analysis, is required. The remaining courses may be in qualitative, quantitative, organic, or physical chemistry, or biochemistry. *Biologic Sciences*, 4 semesters: One full year lecture and laboratory course in general biology and/or zoology is required. The remaining biology courses may be in bacteriology, comparative anatomy, physiology, parasitology, histology, histologic technique, or genetics. *Mathematics*, 3 semester hours of college mathematics.

#### 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-month course for 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 \$200.00. Full maintenance is provided. A stipend of \$50.00 per month is paid after six months, \$150.00 per month after twelve months.

## WASHINGTON UNIVERSITY

### MEDICAL ALUMNI ASSOCIATION

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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 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 1961-62, the following alumni served as officers of the Washington University Medical Alumni Association:

President: Ernest Rouse, '43

President-Elect: Llewellyn Sale, Jr., '40

Vice-President: John E. Miksicek, '37

Secretary-Treasurer: Richard V. Bradley, '52

*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. Cecil M. Charles; Dr. Ernest Rouse, President; Dr. Llewellyn Sale, Jr. President-Elect; Dr. Richard V. Bradley, Secretary-Treasurer.*





## PRIZES AWARDED

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*Gill Prize in Anatomy*  
John Franklin Bigger, Jr., A.B.

*Chouké Prize in Anatomy*  
John Franklin Bigger, Jr., A.B.

*Biochemistry Prize*  
Ronald Gene Evens

*Borden Undergraduate Research Award*  
William George Juergens, Jr.

*Alpha Omega Alpha Book Prize*  
Philip Warren Majerus

*Prize of the Medical Fund Society in Medicine*  
Richard Alan Cooper, B.S.

*Prize of the Medical Fund Society in Surgery*  
William Bradford DeLong

*McCordock Book Prizes*  
George Burt Eagleton  
Stanford Irwin Lamberg

*Roche Award*  
David Lee Nelson

*Medical Alumni Fund Scholarship*  
Pedro Cuatrecasas, A.B.

*Missouri State Medical Association Annual Award*  
Joseph Judson McNamara

*Bronfenbrenner Memorial Award*  
Charles Richard Lewis, A.B.

*Sidney I. Schwab Book Prize in Psychiatry*  
Gerald Allan Wolff, A.B.

*Sidney I. Schwab Book Prize in Neurology*  
Alan Lee Pearlman, A.B.

*George F. Gill Prize in Pediatrics*  
Nicholas Thomas Kouchoukos

*James Henry Yahlem Prize in Dermatology*  
Raymond Bruce Isely, A.B.

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*Student Thesis Award in Psychiatry  
(Smith, Kline and French Foundation)*

William Bradford DeLong  
Philip Warren Majerus

*C. V. Mosby Company Book Awards*

Oliver Michael Colvin, A.B.	Gordon Wilson Philpott, B.S.
Azmi Hanna Khazin, A.B.	David Martin Reisler, A.B.
David Merle Wilson, B.A.	

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SCHOLARSHIPS, 1961-62

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*Jackson Johnson Regional Scholarships*

Margaret Strom Ansari	Charles Duwain Leonard, B.A.
Harvey Edward Cantor	Christine Mackert, B.S.
Neil Allan Crane, B.S.E.	Paul Robert Manske, B.A.
David Danoff, A.B.	Charles Howard Merideth, Jr., A.B.
James Curtis Ellsasser	Laurence Walter Muench, B.S.
Marshall Gollub, A.B.	Richard Stanton Myers, B.A.
John Mark Grollmus	Stanley Jay Nudelman, A.B.
Barton Collins Grooms, B.S.	Barbara Lee Shaw, B.A.
Wylie Casto Hembree III, B.A.	Taylor Archie Prewitt, A.B.
Noel McKinley Johnson, A.B.	Peter Larry Schwartz
John Loren Kiser, B.S.	Hugh Hanna Tilson
Stuart Arthur Kornfeld, A.B.	

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HONORS, 1961

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*Magna Cum Laude*

Philip Warren Majerus	Joseph Judson McNamara
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*Cum Laude*

Oliver Michael Colvin, A.B.	Nicholas Thomas Kouchoukos
Richard Alan Cooper, B.S.	Alan Lee Pearlman, A.B.
William Bradford DeLong	Gordon Wilson Philpott, B.S.
George Edgar Dueker, A.B.	David Martin Reisler, A.B.
William George Juergens, Jr.	Gerald Allan Wolff, A.B.

*Special Honors*

Azmi Hanna Khazin, A.B., Special Honors in the Fields of Internal Medicine  
and Psychiatry and Neurology

David Merle Wilson, B.A., Special Honors in the Field of Pathology



*Left: The David P. Wohl, Jr., Memorial—Washington University Clinics building, five floors of which are used for Clinics and five floors for research.*

*Right: The David P. Wohl, Jr., Memorial Hospital, which houses the administrative offices and laboratories for the Departments of Internal Medicine and Surgery, and provides three floors for the care of patients.*

## REGISTER OF STUDENTS

### FOURTH YEAR CLASS (1961-62)

### *Internship (1962-63)*

- Anderson, Douglas Richard, A.B., Univ. of Miami, '58—University Hospitals, Cleveland, Ohio  
 Anderson, Rolf Lyman, B.S., San Diego State Coll., '58—University of Wisconsin Hospital, Madison, Wisconsin  
 Baer, Stanley, A.B., Western Reserve Univ., '58—University of Michigan Hospital, Ann Arbor, Michigan  
 Bauman, Gerald Charles, A.B., Gonzaga Univ., '58—St. Luke's Hospital, St. Louis, Missouri  
 Baumann, Billy Ben, A.B., Harvard Univ., '58—St. Luke's Hospital, St. Louis, Missouri  
 Beguelin, Jerry Louis, A.B., Washington Univ., '58—Jewish Hospital, St. Louis, Missouri  
 Bisno, Alan Lester, A.B., Princeton Univ., '58—Vanderbilt University Hospital, Nashville, Tennessee  
 Blaustein, Mordecai Phineas, A.B., Cornell Univ., '57—Boston City Hospital, Boston, Massachusetts  
 Brown, Michael Wade, A.B., Washington Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Cantor, Harvey Edward, A.B., Washington Univ., '61—Massachusetts General Hospital, Boston, Massachusetts  
 Carhart, Isaac Whitfield, Jr., B.A., Rice Univ., '58—Cincinnati General Hospital, Cincinnati, Ohio  
 Conder, John Phillip, B.S., Univ. of Oregon, '60—Barnes Hospital, St. Louis, Missouri  
 Cuatrecasas, Pedro, A.B., Washington Univ., '58—Johns Hopkins Hospital, Baltimore, Maryland  
 Dace, Melvin Carroll, A.B., Washington Univ., '58—University of Florida Teaching Hospital, Gainesville, Florida  
 Danoff, David, A.B., Johns Hopkins Univ., '58—Johns Hopkins Hospital, Baltimore, Maryland  
 Dietert, Scott Edward, B.A., Rice Univ., '58—University of Minnesota Hospital, Minneapolis, Minnesota  
 Donabedian, Richard K., B.A., Clark Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Dunn, Bruce Laurence, A.B., Washington Univ., '58—Stanford University Hospital, Palo Alto, California  
 Eckstein, William Louis, A.B., Washington Univ., '58—University Hospitals, Cleveland, Ohio  
 Edelman, Robert, A.B., Washington Univ., '58—Johns Hopkins Hospital, Baltimore, Maryland  
 Edminster, Ralph Ray, B.A., DePauw Univ., '58—Butterworth Hospital, Grand Rapids, Michigan  
 Fenlon, John Wichman, A.B., Washington Univ., '58—Georgetown University Hospital, Washington, D. C.  
 Fisher, Henry Kenneth, A.B., Carleton Coll., '55—Barnes Hospital, St. Louis, Missouri  
 Flaten, Paul Amos, B.S., Univ. of North Dakota, '58—Jackson Memorial Hospital, Miami, Florida  
 Fredman, Steven Mark, A.B., Washington Univ., '58—Jewish Hospital, St. Louis, Missouri  
 Gilerest, Harry Roger, B.A., Kent State Univ., '58—St. Louis County Hospital, Clayton, Missouri  
 Goggin, James R., B.A., Southern Illinois Univ., '54—St. Louis City Hospital, St. Louis, Missouri  
 Gondring, William Henry III, A.B., Univ. of Missouri, '58—University of Oklahoma Hospital, Oklahoma City, Oklahoma  
 Gross, Monroe Alfred, A.B., Harvard Univ., '57—Barnes Hospital, St. Louis, Missouri  
 Grossman, Richard A.—University of California at Los Angeles Hospital, Los Angeles, California  
 Gulinson, Jordan Eugene, A.B., Washington Univ., '59—University of Chicago Clinics, Chicago, Illinois  
 Gustafson, Jon Erik, B.A., Yale Univ., '58—Jewish Hospital, St. Louis, Missouri  
 Holz, William Harold, B.S., Univ. of North Dakota, '58—Jackson Memorial Hospital, Miami, Florida  
 Horwitz, Bruce Alex—Strong Memorial Hospital, Rochester, New York  
 Jacobsen, Richard Harvey, A.B., Fresno State Coll., '58—Cincinnati General Hospital, Cincinnati, Ohio  
 Jarett, Leonard, A.B., Rice Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Kagle, Leroy Ellwood, Jr., B.S., Univ. of Maryland, '58—Cincinnati General Hospital, Cincinnati, Ohio  
 Kaminsky, Neil Irving, B.A., Yale Univ., '58—Vanderbilt University Hospital, Nashville, Tennessee

Kanefield, Donald Gene, A.B., Washington Univ., '58—Jewish Hospital, St. Louis, Missouri  
 Kantor, Harvey Sherwin—Barnes Hospital, St. Louis, Missouri  
 Kaplan, Edward Lawrence, A.B., Univ. of Rochester, '58—University Hospital, Seattle, Washington  
 Kestle, Donald Gene, B.S., Washington State Univ., '58—University Hospital, Seattle, Washington  
 Kilpe, Vilis Ervins, B.A., DePauw Univ., '58—Cincinnati General Hospital, Cincinnati, Ohio  
 Kimball, Harry Raymond, A.B., Stanford Univ., '58—King County Hospital, Seattle, Washington  
 Kirkpatrick, Joel Brian, B.A., Rice Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Kiser, John Loren, B.S., Southern Methodist Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Kornfeld, Stuart Arthur, A.B., Dartmouth Coll., '58—Barnes Hospital, St. Louis, Missouri  
 Long, Wendell McLean, A.B., Princeton Univ., '58—University of Minnesota Hospital, Minneapolis, Minnesota  
 Lyss, Stanley Baenard, A.B., Harvard Univ., '58—University of California at Los Angeles Hospital, Los Angeles, California  
 Mackert, Christine Louise, B.S., Univ. of Idaho, '60—University of Oregon Hospital, Portland, Oregon  
 Medoff, Gerald, A.B., Columbia Univ., '58—New England Center Hospital, Boston, Massachusetts  
 Muench, Laurence Walter, B.S., Trinity Coll. (Conn.), '59—Cleveland Metropolitan Hospital, Cleveland, Ohio  
 Murdock, Gerald Earl, Jr., B.S., Univ. of Wyoming, '58—Jewish Hospital, St. Louis, Missouri  
 Orme, Burton M., B.S., Univ. of Idaho, '60—Emory University Hospital, Atlanta, Georgia  
 Pakula, Stephen Bruce, A.B., Harvard Univ., '58—Strong Memorial Hospital, Rochester, New York  
 Provines, Richard Lee—University Hospital, Seattle, Washington  
 Rembert, Francis Marion, B.S., Univ. of the South, '58—St. Louis City Hospital, St. Louis, Missouri  
 Reynolds, Mary Ann, B.A., Pomona Coll., '56—St. Luke's Hospital, St. Louis, Missouri  
 Rich, John Douglas, A.B., Southwest Missouri State Coll., '58—Martin Army Hospital, Fort Benning, Georgia  
 Ritter, Raymond August, Jr., A.B., Washington Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Rittmann, John Edgar, B.A., Valparaiso Univ., '58—Cleveland Metropolitan Hospital, Cleveland, Ohio  
 Rubin, Donald Martin, A.B., Washington Univ., '58—Jewish Hospital, St. Louis, Missouri  
 Salmon, Sydney Elias, A.B., Univ. of Arizona, '58—Strong Memorial Hospital, Rochester, New York  
 Schaaf, Bernard John, Jr., A.B., Washington and Lee Univ., '57—Syracuse Medical Center Hospital, Syracuse, New York  
 Schlaff, Sheldon, A.B., Columbia Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Schmidt, Baruch Samson, A.B., Harvard Univ., '58—Baltimore City Hospital, Baltimore, Maryland  
 Sessions, Donald Gordon, A.B., Princeton Univ., '58—Vanderbilt University Hospital, Nashville, Tennessee  
 Shaw, Barbara Lee, B.A., Pomona Coll., '55—King County Hospital, Seattle, Washington  
 Singer, Jack Donald—Montefiore Hospital, New York, New York  
 Singleton, Charles McEntee, A.B., Princeton Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Smith, Jay Wesley, A.B., Columbia Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Smith, Kent, B.A., University of Texas, '59—Baylor University Hospital, Dallas, Texas  
 Smith, Roger Raymond, A.B., Washington Univ., '58—Barnes Hospital, St. Louis, Missouri  
 Snider, Ned Leroy—St. Luke's Hospital, St. Louis, Missouri  
 Spivack, Samuel David, A.B., Washington Univ., '59—Duke University Hospital, Durham, North Carolina  
 Stevens, Timothy Watson, B.A., Rice Univ., '58—Vanderbilt University Hospital, Nashville, Tennessee  
 Stewart, Edward Turlington, B.S., Davidson Coll., '58—Strong Memorial Hospital, Rochester, New York



Stone, John Henry III, B.A., Millsaps Coll., '58—Strong Memorial Hospital, Rochester, New York  
 Sweatt, James Leonard III, A.B., Middlebury Coll. (Vermont), '58—Cleveland Metropolitan Hospital, Cleveland, Ohio  
 Vasconez, Luis Oswaldo, B.S., Univ. of Miami, '58—Strong Memorial Hospital, Rochester, New York  
 Vashaw, Walter Carl, Jr.—Jewish Hospital, St. Louis, Missouri  
 Wehner, Nancy Sharon, B.S., Univ. of Michigan, '58—Jackson Memorial Hospital, Miami, Florida  
 Williams, David Arnold, B.S., Univ. of New Mexico, '58—Bernalillo County Indian Hospital, Albuquerque, New Mexico  
 Wolfson, Devora Ruth—St. Louis Children's Hospital, St. Louis, Missouri  
 Wool, Gerald, A.B., Princeton Univ., '58—Jewish Hospital, St. Louis, Missouri

### THIRD-YEAR CLASS (1961-62)

Au, Stanford Kwock Wah, A.B., Washington Univ., '59—Kauai, Hawaii  
 Bailey, Rita Ann, B.S., Florida State Univ., '58—Miami, Florida  
 Baldwin, Richard Duane—Hemet, California  
 Barnett, Ronald Wain—Phoenix, Arizona  
 Barrett, Judith Nevyas, A.B., Univ. of Pennsylvania, College for Women, '59—Philadelphia, Pennsylvania  
 Birge, Stanley Julius, A.B., Amherst Coll., '59—Clayton, Missouri  
 Boelling, Gary Mack, A.B., B.Sc., Kansas State Coll., '59—Belleville, Kansas  
 Brislawn, Lynn Louise, B.S., State Coll. of Washington, '59—Pullman, Washington  
 Christy, John Paul, A.B., Washington Univ., '59—Gary, Indiana  
 Cohen, Sheftel Japhe—Brooklyn, New York  
 Collis, Dennis Kenneth, A.B., Grinnell Coll., '59—Boone, Iowa  
 Conklin, John William, B.S., Loyola Univ., '59—Metairie, Louisiana  
 Dick, Barrett Weldon—Dayton, Ohio  
 Eagleton, George Burt, B.S., Univ. of Nebraska, '59—Tekamah, Nebraska  
 Feingold, Mark Henry, A.B., Harvard Univ., '59—Madison, Wisconsin  
 Fowler, Robert John, A.B., Carleton Coll., '59—Iowa City, Iowa  
 Garber, Harold Edward, B.S., Furman Univ., '59—Greenville, South Carolina  
 Gilman, Ruth, A.B., Swarthmore Coll., '59—Pompton Lakes, New Jersey  
 Glickman, Morton Gerald, A.B., Cornell Univ., '59—Shaker Heights, Ohio  
 Goldman, Alan Lawrence, A.B., Harvard Univ., '59—St. Louis, Missouri  
 Gollub, Marshall, A.B., Washington Univ., '59—Phoenix, Arizona  
 Hisey, Bradner Lyle, B.A., Syracuse Univ.—Vista, California  
 Humphreys, Donald Wayne—Fairfield, Idaho  
 Hunt, Robert Skerlock, A.B., Westminster Coll., '59—Cape Girardeau, Missouri  
 Huntley, Hugh Charles, A.B., State Univ. of Iowa, '58—Aveca, Iowa  
 Hutton, Robert Duffield—Kansas City, Missouri  
 Insoft, Joseph, A.B., Harvard Univ., '59—Dorchester, Massachusetts  
 Ise, Frank Harold, B.S., Univ. of Kansas, '58—Wichita, Kansas  
 Joffe, William Steven, A.B., Washington Univ., '59—Kansas City, Missouri  
 Johnson, Noel McKinley, A.B., Univ. of Kansas, '58—Kansas City, Missouri  
 Judge, David Michael, B.A., St. John's Univ., '59; B.S. in Med., Univ. of South Dakota, '61—Milbank, South Dakota  
 Kaufman, Robert Lionel, A.B., Washington Univ., '59—St. Louis, Missouri  
 Krause, John Lawrence, B.S., Univ. of Notre Dame, '58—Detroit, Michigan  
 Kyes, Melvin Eugene—Salisbury, Missouri  
 Lamber, Stanford Irwin—St. Louis, Missouri  
 Leighton, William Perry, A.B., Oklahoma State Univ., '59—Oklahoma City, Oklahoma

Leonard, Charles Duwain, B.S., Southern Methodist Univ., '59—Denver, Colorado  
 Lewis, Ernest Loran, A.B., Fresno State Coll., '58—Fresno, California  
 Loewenstein, Joseph Edward, A.B., Univ. of Texas, '59—Port Arthur, Texas  
 Londe, Stephen Paul, A.B., Washington Univ., '59—St. Louis, Missouri  
 Lynch, Malcolm Alexander, D.D.S., Univ. of Tennessee, College of Dentistry, '55; A.B., Univ. of Chattanooga, '59—Chattanooga, Tennessee  
 Markman, David Allen, A.B., State Univ. of Iowa, '59—Des Moines, Iowa  
 Meltzer, Gerald Edward, A.B., Carleton Coll., '59—St. Louis, Missouri  
 Middleton, Jerry Norton, A.B., Westminster Coll., '59—St. Louis, Missouri  
 Miller, Robert Talhott, A.B., Harvard Univ., '59—Bronx, New York  
 Mitchell, John Dakers, A.B., Yale Univ., '59—Milwaukee, Wisconsin  
 Murdock, James Lawrence—Webster Groves, Missouri  
 Nelson, David Lee—Detroit, Michigan  
 Newmark, Leonard Nathan, A.B., Washington Univ., '56—St. Louis, Missouri  
 Nudelman, Stanley Jay, A.B., Miami Univ., '59—Cleveland, Ohio  
 O'Donoghue, Donald Patrick—Oklahoma City, Oklahoma  
 Packman, Paul Michael, A.B., Washington Univ., '59—St. Louis, Missouri  
 Payne, Richard Lee—Ironton, Ohio  
 Petersen, Walter Roy, B.S., Univ. of Idaho, '59—Wendell, Idaho  
 Phillips, William Joe, A.B., Oklahoma State Univ., '59—Medford, Oklahoma  
 Pittman, Glen Dean—Casper, Wyoming  
 Porter, Richard Irving, B.S. in Med., Univ. of South Dakota, '61—Mt. Vernon, South Dakota  
 Prewitt, Taylor Archie III, A.B., Univ. of Arkansas, '59—McGehee, Arkansas  
 Price, Larry Clyde, B.S., Northeastern State Coll., '59—Muskogee, Oklahoma  
 Richardson, Thomas Fred—East Alton, Illinois  
 Richmond, Robert Southwick, A.B., Harvard Univ., '59—San Antonio, Texas  
 Rosenbaum, Louis Jerome, A.B., Univ. of Michigan, '59—St. Louis, Missouri  
 Rosenbaum, Robert F.—Milwaukee, Wisconsin  
 Rosenstock, Norman, A.B., Washington Univ., '59—New York, New York  
 Schaye, Gordon Fels, A.B., Princeton Univ., '59—Brooklyn, New York  
 Schoentag, Robert Alan, A.B., Univ. of Missouri, '59—St. Joseph, Missouri  
 Schwarz, Gerald Robert, B.S., Univ. of Oregon, '59—Oswego, Oregon  
 Schweers, Carl Amos, A.B., Harvard Univ., '59—San Antonio, Texas  
 Shaywitz, Bennett Arthur—St. Louis, Missouri  
 Sowa, Elizabeth Clark, B.S., Michigan State Coll., '55—Rockford, Michigan  
 Sowa, Ronald Walter, A.B., Washington Univ., '59—Decatur, Illinois  
 Sterioff, Sylvester, Jr., A.B., Harvard Univ., '59—St. Louis, Missouri  
 Stryker, Mark Spencer, A.B., '55; B.S., '58, Univ. of Washington—Seattle, Washington  
 Sweet, Richard David—Milwaukee, Wisconsin  
 Swenson, Robert Melville, A.B., Northwestern Univ., '59—Chicago, Illinois  
 Unger, Larry Martin, A.B., Western Reserve Univ., '59—Cleveland Heights, Ohio  
 Valentini, Eugene John, B.E., Yale Univ., '59—Pittsburgh, Pennsylvania  
 Waldman, Robert Hart, A.B., The Rice Institute, '59—Dallas, Texas  
 Walker, William Allan, A.B., DePauw Univ., '59—Chicago, Illinois  
 Wishnow, Rodney Marvin—Flushing, New York  
 Wray, Robert Christie, Jr.—Fayetteville, Arkansas

#### SECOND-YEAR CLASS (1961-62)

Adler, Robert Eugene, B.S., Washington State Univ., '60—Dorchester, Massachusetts  
 Allen, David Henry, A.B., Univ. of Kansas, '60—Webster Groves, Missouri

Baldwin, Wayne Edouard—Bakersfield, California  
 Bauer, Carolyn Landeck, B.A., Wellesley College, '59—Asheville, North Carolina  
 Berg, Edward Frank, A.B., Washington Univ., '60—Clayton, Missouri  
 Beron, Edward Albert—Los Angeles, California  
 Bigger, John Franklin, Jr., A.B., Duke Univ., '60—Anniston, Alabama  
 Bloom, Ronald Samuel, A.B., Washington Univ., '60—St. Louis, Missouri  
 Bookin, Alan Stanley, A.B., Harvard Univ., '60—Ottumwa, Iowa  
 Bosshard, Anne Morant, A.B., Clark Univ., '60—Brookline, Massachusetts  
 Burrill, Karen Cecilia, A.B., Antioch Coll., '60—Shell Beach, California  
 Carder, George Arthur, A.B., William Jewell Coll., '60—Liberty, Missouri  
 Carter, Louis Philip—Denver, Colorado  
 Cheatum, Don Elwood, A.B., Southern Methodist Univ., '60—Dallas, Texas  
 Cheuk, Shu-Sum—Hong Kong  
 Cohen, Jerome David, A.B., Johns Hopkins Univ., '60—Baltimore, Maryland  
 Crane, John Bruce—Peoria, Illinois  
 Davis, Annette Luthy, B.A., Univ. of Kansas, '56—Kansas City, Missouri  
 Eiler, Donald Martin, A.B., DePauw Univ., '60—Walkerton, Indiana  
 Eisenberg, Evan, A.B., Cornell Univ., '60—Cleveland Heights, Ohio  
 Elliott, Max LaPrelle, B.A., Washington and Lee Univ., '60—Spartanburg, South Carolina  
 Ellsasser, James Curtis—Mishawaka, Indiana  
 Elsey, Edward Crawford, Jr., A.B., Duke Univ., '60—Cincinnati, Ohio  
 Evens, Ronald Gene—Herculaneum, Missouri  
 Ey, John Leigh—Mt. Pulaski, Illinois  
 Fathman, Anthony Errett—Berkeley, Missouri  
 Fishbein, Allan Paul—San Francisco, California  
 Fletcher, J. Raymond—Dallas, Texas  
 Friedman, William Hersh, A.B., Washington Univ., '60—St. Louis, Missouri  
 Fulton, Nona Dale, B.A., Rice Univ., '60—Canadian, Texas  
 Fulton, Robert Lee, B.A., Rice Univ., '60—Scott Air Force Base, Illinois  
 Goldenberg, David Barron, A.B., Washington Univ., '60—St. Louis, Missouri  
 Goldstein, Benjamin M., A.B., Washington Univ., '60—St. Louis, Missouri  
 Grollmus, John Mark—Sheboygan, Wisconsin  
 Hardy, David Almstedt, A.B., Brown Univ., '60—St. Louis, Missouri  
 Harper, George Richard, A.B., Northwest Nazarene Coll., '60—Kansas City, Missouri  
 Hembree, Wylie Casto III, B.A., Vanderbilt Univ., '60—Nashville, Tennessee  
 Higgins, Judith Faye—St. Louis, Missouri  
 Howard, Robert Eugene, A.B., Washington Univ., '59—Grove, Oklahoma  
 Hussey, David Holbert, B.S., Beloit College, '59—Savanna, Illinois  
 Kamada, Roy Osamu, A.B., Washington Univ., '60—Honolulu, Hawaii  
 Katz, Stanley F., B.A., Reed College, '60—Portland, Oregon  
 Kelly, Dennis Lee, A.B., Fresno State Coll., '60—Fresno, California  
 Kusama, Haruo, A.B., Washington Univ., '60—St. Louis, Missouri  
 Larson, Eunice Jean, B.S., Washington State Univ., '60—Honolulu, Hawaii  
 Lerner, Richard Elliot—Milwaukee, Wisconsin  
 Manske, Paul Robert, B.A., Valparaiso Univ., '60—Ft. Wayne, Indiana  
 McCown, Allan Hardy—Moscow, Idaho  
 McIlwain, David Lee, B.A., Vanderbilt Univ., '60—Jackson, Mississippi  
 McLaughlin, Kathleen Welland, B.S., St. Louis Univ., '60—St. Louis, Missouri  
 Monical, Thomas Verle, A.B., Washington Univ., '60—Alton, Illinois  
 Morrison, Philip Stephen—Newman Lake, Washington

Munzenrider, John Ellery, B.S., Belmont-Abbey College, '59—Warner Robins, Georgia  
 Palmer, Robert Lester, B.S., Univ. of Idaho, '60—Enterprise, Oregon  
 Parrish, Earl Harrison—Oklahoma City, Oklahoma  
 Petersen, Thomas DeTienne, A.B., Stanford Univ., '60—Glendale, California  
 Platt, Martin Harold, A.B., Washington Univ., '60—University City, Missouri  
 Powell, George Keck, A.B., Colorado College, '60—San Antonio, Texas  
 Pugh, Daniel Duncan, B.A., Carleton College, '60—Rochester, Minnesota  
 Queen, Thomas Allen, A.B., Oberlin College, '60—Norfolk, Virginia  
 Ragsdale, Edward Floyd, A.B., Univ. of Arkansas, '60—Russellville, Arkansas  
 Rawson, Perry George, A.B., Calvin College, '60—Addison, Michigan  
 Reinhardt, George Frederick, A.B., Washington Univ., '60—Nashville, Illinois  
 Robeson, James Arnold, A.B., King College, '60—Mobile, Alabama  
 Scheibe, Robert Graham, A.B., Washington Univ., '60—Glendale, Missouri  
 Schwartz, Paul Stanley, A.B., Antioch College, '60—Clayton, Missouri  
 Shaeffer, Charlie Willard, Jr., B.S., Florida State Univ., '60, Tallahassee, Florida  
 Singer, Herbert Charles, A.B., Ohio Wesleyan Univ., '60—Washington, D. C.  
 Singleton, Ernest Mitchell, A.B., Rice Univ., '59—Baytown, Texas  
 Taxman, Robert Milo, A.B., Washington Univ., '60—Centralia, Illinois  
 Teitelbaum, Steven Lazarus, A.B., Columbia Univ., '60—Brooklyn, New York  
 Tilson, Hugh Hanna—Vancouver, Washington  
 Vogler, Roger Ernest—Ontario, California  
 Wallace, C. B., Jr., B.A., Southern Methodist Univ., '60—Dallas, Texas  
 Wallas, Charles Henry, A.B., Amherst College, '60—St. Louis, Missouri  
 Watanabe, Carl Kohsuke, A.B., Univ. of California, '54—Berkeley, California  
 Werner, Sanford Benson, A.B., Rutgers Univ., '60—Newark, New Jersey  
 Wheeler, Walton Mark III, A.B., Princeton Univ., '60—Indianapolis, Indiana  
 White, Bruce Irwin—Kansas City, Missouri  
 Wise, Morris Flarsheim, B.A., Amherst College, '60—Cincinnati, Ohio  
 Wyle, Frederick Arthur—Roslyn, New York

#### FIRST-YEAR CLASS (1961-62)

Ansari, Margaret Strom—Sidney, Montana  
 Atkins, Frances Eliska, A.B., Vassar Coll., '61—Norman, Oklahoma  
 Avruch, Joseph, B.S., Brooklyn Coll., '61—Brooklyn, New York  
 Barber, John Clay—Normal, Illinois  
 Bridson, William Ernest, A.B., Univ. of Kansas, '61—Wichita, Kansas  
 Brooks, Michael Joseph, A.B., Columbia Univ., '61—Beechhurst, New York  
 Brunner, John Harry, A.B., William Jewell Coll., '61—N. Kansas City, Missouri  
 Cantwell, Dennis Patrick, B.S., Univ. of Notre Dame, '61—St. Louis, Missouri  
 Childress, Charles Curtis, B.S., Coll. of Great Falls, '61—Webb City, Missouri  
 Cole, Harry Orson, B.S., Drury Coll., '61—Downers Grove, Illinois  
 Crane, Neil Allan, B.S.E., Princeton Univ., '61—St. Louis, Missouri  
 Dickinson, Walter Esmond, B.A., Rice Univ., '61—Lovington, New Mexico  
 Dieruf, William James, B.A., Northwestern Univ., '61—Dayton, Ohio  
 DiRaimondo, Joseph Charles, B.S., Beloit Coll., '61—Rockford, Illinois  
 Dunner, David Louis—Silver Springs, Maryland  
 Duro, Andrew Felice—Bayside, Long Island, New York  
 Dyer, William Mills, Jr., B.S., Massachusetts Institute of Technology, '61—Johnson City, Tennessee  
 Emerson, James David—Morgantown, West Virginia  
 Feldman, Aaron Edward—Sheboygan, Wisconsin

Floerchinger, James Shubert, B.S., Colorado Coll., '61—St. Louis, Missouri  
 Forsyth, John Willard, B.S., Univ. of Illinois, '60—Olney, Illinois  
 Freebairn, Darwin LeGrande, Jr., B.S.E., California Institute of Technology, '47—Glendale, California  
 Friedman, Lawrence Ellis, B.A., Vanderbilt Univ., '61—Birmingham, Alabama  
 Friend, George Bernard, B.A., Lawrence Coll., '61—South Bend, Indiana  
 Gates, Mark Henry, A.B., Univ. of Cincinnati, '61—Cincinnati, Ohio  
 Gipson, Charles Curtis, B.A., Vanderbilt Univ., '61—Gadsden, Alabama  
 Grooms, Barton Collins, B.S., Southern Methodist Univ., '61—Amarillo, Texas  
 Gross, Brian Hugh—San Francisco, California  
 Grossman, Joshua Bernard, A.B., Johns Hopkins Univ., '61—Baltimore, Maryland  
 Hammond, Donald Wade II, A.B., DePauw Univ., '61—Bluffton, Indiana  
 Harrison, Hall Edward, A.B., Amherst Coll., '61—St. Louis, Missouri  
 Hendin, Alan Stanford, A.B., Harvard Univ., '61—St. Louis, Missouri  
 Hirst, Russell Nelson, Jr., B.S., Univ. of Utah, '61—Ogden, Utah  
 Hobbs, Donald Nichols, A.B., Amherst Coll., '61—St. Louis, Missouri  
 Hoffsten, Phillip Ernest, B.S.E., Washington Univ., '61—Morris Plains, New Jersey  
 Howe, Warren Billings—East Setauket, New York  
 Hoyt, Harvey Jay, B.S., Queens Coll., '61—Queens, New York  
 Hubbard, Donald Dale, B.A., Montana State Univ., '61—Missoula, Montana  
 Johnson, Ernest Wiley, Jr., B.A., The Univ. of the South, '61—Dallas, Texas  
 Jones, Jeannie Lillian, B.S., Montana State Coll., '61—Great Falls, Montana  
 Jones, William Augustin—St. Louis, Missouri  
 Kanagawa, Harold, B.A., Westminster Coll., '61—Jefferson City, Missouri  
 Kardinal, Carl Gustav—Downey, California  
 Kirschbaum, Barry Beryl, B.A., Columbia Univ., '61—Brighton, Massachusetts  
 Koplik, Lewis Henry, A.B., Brandeis Univ., '61—Hamden, Connecticut  
 Krause, Albert Henry, Jr.—Muskogee, Oklahoma  
 Louie, James Sam—Greenville, North Carolina  
 Lynch, Lawrence Jaynes, Jr., A.B., Drury Coll., '61—St. Louis, Missouri  
 Manis, Thomas, A.B., Columbia Univ., '61—Flushing, New York  
 Marks, James Edwin, A.B., Knox Coll., '61—Knoxville, Illinois  
 Melson, Glen Leland II, B.A., Ottawa Univ., '61—Lincoln, Nebraska  
 Merideth, Charles Howard, Jr., A.B., DePauw Univ., '60—Quincy, Illinois  
 Mish, John Joseph, Jr., A.B., Western Reserve Univ., '61—Lakewood, Ohio  
 Morris, Stephen Neal, A.B., Washington Univ., '61—Columbus, Ohio  
 Morrison, James Roy—Portland, Oregon  
 Musgrave, James Emerson, B.A., Westminster Coll., '61—Affton, Missouri  
 Myers, Richard Stanton, B.A., Vanderbilt Univ., '61—Dexter, Missouri  
 O'Dell, Alice Marie, B.A., Central Coll., '61—Lebanon, Missouri  
 Ott, Fletcher Thomas—Culver, Indiana  
 Ozols, Juris, B.S., Univ. of Washington, '57—Seattle, Washington  
 Periman, Phillip O'Keefe, B.A., Yale Univ., '61—Amarillo, Texas  
 Permutt, Marshall Alan, B.A., Johns Hopkins Univ., '61—Birmingham, Alabama  
 Plechner, Alfred Jay—Los Angeles, California  
 Renning, James Arthur, A.B., Fresno State Coll., '61—Fresno, California  
 Reynolds, James Alan, A.B., Taylor Univ., '61—South Bend, Indiana  
 Rogers, Harry Moore—Dallas, Texas  
 Rogers, Hunter Bryan, B.S., Georgetown Univ., '61—Memphis, Tennessee  
 Schonder, Adolph Albert, A.B., Washington Univ., '61—Belleville, Illinois



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Schultz, Clifford Steven—Oakland, California  
 Schwartz, Peter Larry—Chicago, Illinois  
 Shaw, John Colton, B.A., Drake Univ., '61—Des Moines, Iowa  
 Sher, Paul Phillip, B.S., Hobart Coll., '61—Brooklyn, New York  
 Sherrill, James Winn, Jr., A.B., Stanford Univ., '58—La Jolla, California  
 Snow, Jerry Allison, A.B., The Univ. of the South, '61—Albertville, Alabama  
 Swan, Davis McKean—Riverton, Wyoming  
 Telfer, Margaret Clare, A.B., Stanford Univ., '61—Kensington, Maryland  
 Telfer, Robert Baldwin, B.S., Massachusetts Institute of Technology, '61—Kensington, Maryland  
 Tyson, Robert Neville—Moscow, Idaho  
 Valdes, Neill, A.B., Greenville Coll., '61—Nashville, Illinois  
 Weisbart, Richard Harry—Los Angeles, California  
 Weistart, Frank David—Minonk, Illinois  
 Wong, Eugene Gee Chu—Honolulu, Hawaii  
 Woodruff, Sharon Lynn, B.S., Southern Methodist Univ., '61—Dallas, Texas

#### SUMMARY OF STUDENTS IN THE SCHOOL OF MEDICINE

Fourth-Year Class .....	85
Third-Year Class .....	81
Second-Year Class .....	81
First-Year Class .....	86
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Total	333



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Barnes Hospital*

## ACADEMIC DIVISIONS OF WASHINGTON UNIVERSITY

CARL TOLMAN, Ph.D., Chancellor of the University  
Chancellor of the University

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

*The Sever Institute of Technology*

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Four-year programs leading to the degree of Bachelor of Science in Engineering Science, and in Architectural, Chemical, Civil, Electrical, Geological, Industrial, Mechanical, Metallurgical Engineering, and Physics. Through the Sever Institute of Technology, graduate instruction leading to the degrees of Master of Science, Master of Engineering Administration, and Doctor of Science.

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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.

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### THE GRADUATE SCHOOL OF ARTS AND SCIENCES

Lewis E. Hahn, Ph.D., Dean

*Graduate Institute of Education*

Robert J. Schaefer, Ph.D., Director

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### UNIVERSITY COLLEGE

Earnest Brandenburg, Ph.D., Dean

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### THE SUMMER SCHOOL

Adolph Unruh, Ph.D., Dean

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.

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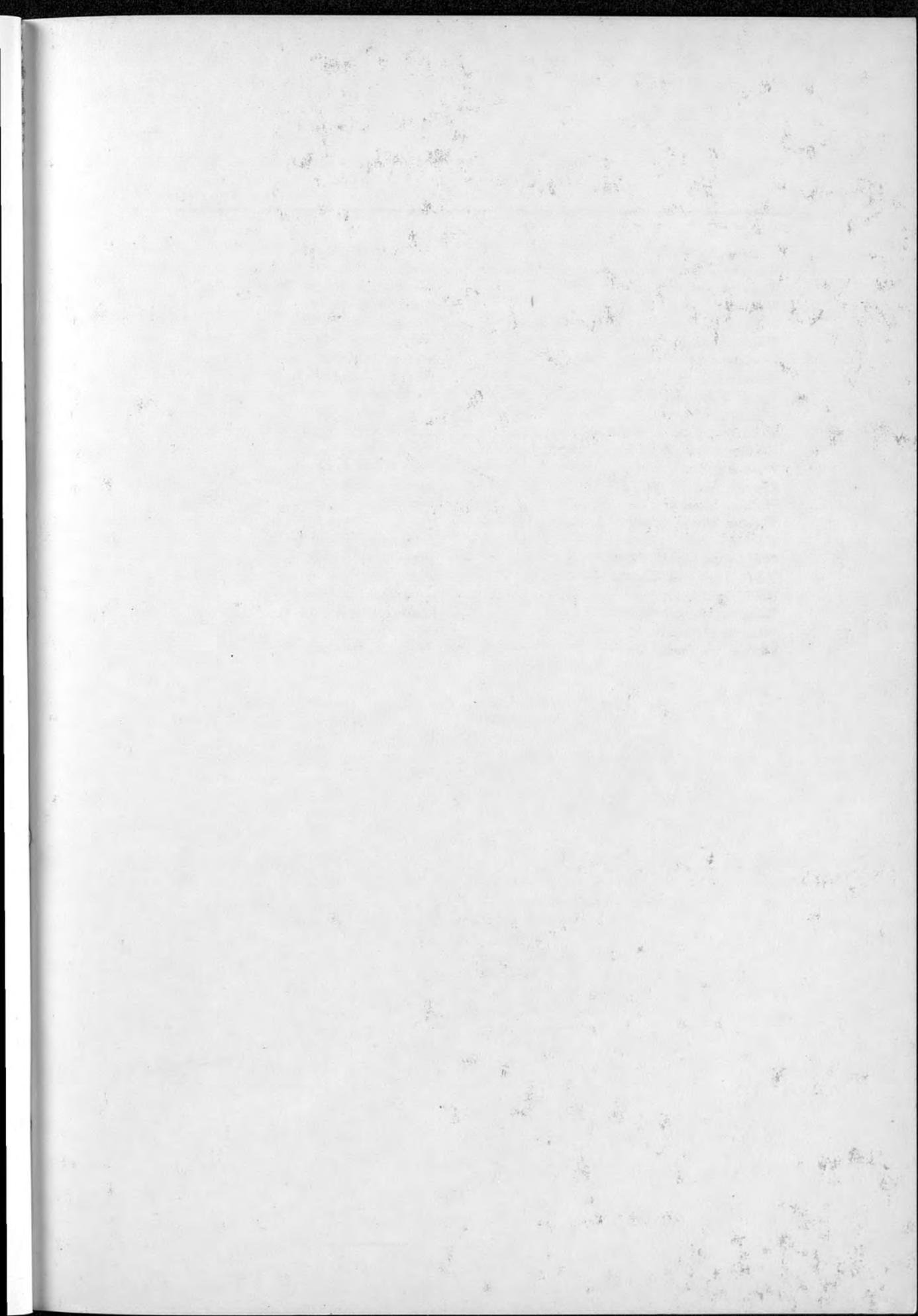
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