January 1992

Part IV: College of Graduate Studies 1914-1964 (pages 897-918)

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Part IV

College of Graduate Studies

Bluemle Building (Architects' drawing) 1989
Philip B. Hawk, Ph.D., Professor of Physiological Chemistry (1912-22), initiated the first courses leading to masters and doctoral degrees at Jefferson.
Prior to 1912 the educational activities at Jefferson were devoted solely to medical and nursing students. Research was of a clinical nature with little of consequence in the basic sciences. In this year Philip B. Hawk, Ph.D. (Fig 1.) succeeded James W. Holland as Head of the Department of Physiological Chemistry. His previous experience at Illinois and the University of Pennsylvania had included courses leading to masters and doctoral degrees in physiological chemistry. Hawk proposed to the Jefferson Faculty that such courses be initiated. This was approved by the Faculty and the Board of Trustees under the provisions of the University Charter granted in 1838. Rules and regulations for the program were established as well as a five-member Committee of Postgraduate Education. The document stipulated the requirements for residency on the campus, tuition, and an examination by an appropriate committee before the degree could be conferred by the Board of Trustees. Fifteen degrees (eight M.S., four Ph.D. and three Sc.D.) were awarded during the next ten years.

In December, 1922, the administrators of the Medical College received an alert from alumni that the name of Jefferson Medical College and some of its faculty were being used by Dr. Hawk in advertisements for certain well known products as Postum and Fleishman's Yeast. Although the funds were used to support the research in his Department, the Faculty and Board of Trustees considered this practice to be unethical. On December 18, 1922, Dr. Hawk was dismissed and the graduate program ceased until revived in 1949.

### GRADUATE DEGREES PRIOR TO 1950

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<th>Year</th>
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<th>Name</th>
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<tr>
<td>1914</td>
<td>Ph.D.</td>
<td>Olaf Bergeim, B.S., South Dakota State College</td>
<td>1908; Univ. of Illinois 1912.</td>
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<tr>
<td></td>
<td>M.S.</td>
<td>James Tiffany Leary, Ph.B., Yale Univ.</td>
<td>1911.</td>
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<td>M.S.</td>
<td>Clarence Albert Smith, B.S.</td>
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<td>1915</td>
<td>Ph.D.</td>
<td>Chester Charles Fowler, B.S.</td>
<td>Univ. of Illinois, 1909; M.D. Univ. of Illinois, 1913.</td>
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<td>Ph.D.</td>
<td>John Oliver Halverson, B.A., Univ.</td>
<td>Minnesota, 1906; B.S., Univ. of Minnesota, 1907; M.A., Univ. of Missouri, 1913.</td>
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<td>M.S.</td>
<td>H. Rodell Fishback, A.B.</td>
<td>Univ. of Illinois, 1912.</td>
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1916

Ph.D. Clarence Albert Smith, B.S., Massachusetts Agricultural College, 1911; M.S. Jefferson Medical College, 1914


M.S. James Alexander Clarke, Jr., A.B., (Fig. 2) Haverford College 1911. (Obtained Jefferson M.D. also in 1916).

1917

D.Sc. in Medicine H. Rodell Fishback, A.B., University of Illinois, 1912; M.S., Jefferson Medical College, 1915; M.D., Jefferson Medical College, 1916.

1918


M.S. Harry L. Fowler, Babcock Institute of Pharmacy, 1912; B.A., Morningside College, 1916.

1919

D.Sc. Duncan L. Despard, M.D., (Fig. 3) Jefferson Medical College, 1901.

1923

M.S. in Chemistry Earl Altemus Shrader.

Fig. 2 James Alexander Clarke, Jr., M.S. (1916), M.D. (1916), early Chief of Jefferson Allergy Clinic (1921).
Fig. 3  Duncan I. Despard, D.Sc. (1919), M.D. (1901), taught in Jefferson’s Surgical Department.
At a January 31, 1949, meeting of the faculty, chaired by J. Earl Thomas, Chairman of the Department of Physiology from 1927 to 1955, a recommendation was approved in support of Jefferson offering graduate training leading to the degrees of master of science and doctor of philosophy for qualified students in the basic medical sciences. Thomas then appointed a faculty committee, composed of the chairmen of the basic science departments, to draw up the plans for the reinstatement of graduate education at Jefferson after the 20-year hiatus. In 1952, the first degree was awarded from the new graduate program in physiology. Among the faculty at the time were M.H.F. Friedman, Ph.D., who would later become the Department's Chairman, and Eugene Aserinsky, Ph.D., the discoverer of rapid eye movement.

The Department of Pharmacology was founded in 1932 and programs leading to master of science and doctor of philosophy degrees were added in 1949. The graduate programs soon became a substantial component of the Department. From 1949 until 1953, when the Department Chairman Charles M. Gruber retired, three Ph.D. and two M.S. degrees were granted. Three other graduate students had completed most of their requirements for the Ph.D. degree and one for the M.S. degree. It speaks well for the high standards of the original selection of these students that they all completed their degree requirements by 1956. Julius M. Coon, Ph.D., M.D., was named Chairman of the Department in 1953.

The research program in the Department of Microbiology was built upon Kenneth Goodner's activities in the international field of infectious diseases, most notably, cholera and plague. Dr. Goodner (Fig. 4), who was the Chairman of the Department from 1946 to 1967, played a key role in the development of graduate programs leading toward the Ph.D. degree in the department and in the Medical College. This early period of the graduate program was a time of trial and error. Training started with preceptorships and, later, courses were added. Lolita Parnell, Ph.D., was recruited in 1950 as Assistant Professor of Bacteriology and Immunology. She was the first woman to be a full-time Professor at Jefferson. Other appointments that year designed to enhance the graduate programs were: Bernard Kroft, Ph.D., Henry Stempen, Ph.D., and Robert J. Mandle, Ph.D. Dr. Mandle remained at Jefferson, advancing to the position of Professor in 1965, and retiring in 1986 as Emeritus Professor. Dr. William G. Sawitz, Associate Professor, published the book *Medical Parasitology* and served as the first Secretary of the Board for the Regulation of Graduate Studies until his death in 1957.

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Fig. 4  Kenneth Goodner, Ph.D., Professor of Bacteriology and Immunology (1946-67), played a key role in revival of the postgraduate programs in 1949.
The first two students to enter the Ph.D. program in bacteriology were Keith Jensen and Russell Miller, who joined the staff as assistants and went on to receive their degrees. During this time, a master’s degree was required for Ph.D. candidates.

George Allen Bennett, M.D., Sc.D., was Chairman of the Department of Anatomy and Director of the Daniel Baugh Institute of Anatomy from 1948 until his death in 1958. His major scientific contributions were the experimental analysis of the action of mammalian tongue musculature (with Dr. Andrew J. Ramsay), heterochromia in relation to autonomic innervation, and variational anatomy of the shoulder joint. Jefferson’s first electron microscope was obtained by Dr. Ramsay in 1952. In 1950, Franz X. Hausberger joined the Department. His research in experimental diabetes and related fat metabolic disorders resulted in his being honored as “The Father of Adipose Tissue Research” by the Handbook of Physiology in 1965. Other faculty members to join the Department at this time included James O. Brown, Ph.D., John E. Healy, M.D., Robert J. Merklin, Ph.D., Charles G. Rosa, Ph.D., and Sigfrid Zitzlsperger, D.M.

Abraham Cantarow, M.D., who was Chairman of the Department of Biochemistry from 1945 to 1966, had begun the task of “modernizing” the department. In 1949-1950 the Department announced that it would accept graduate students. He transformed the Department from its European format of teaching to a newer format in which the Department Head shared lectures with several staff members, who in turn might be carrying out independent research. Among the faculty members that he recruited were Bernard Schepartz, Ph.D., Milton Toporek, Ph.D., and Arthur Allen, Ph.D. Drs. Cantarow and Schepartz published the first edition of their textbook Biochemistry in 1954.

Microbiology Alumni

Anthony V. Marturano, M.S., D.O., M.D., (1954), went on to a D.O. degree in 1957 and the M.D. degree in 1962. He has specialized in orthopedics, trauma, industrial medicine and hand surgery. He has served as a medical consultant to the State of California Department of Justice, the Los Angeles City Attorney’s Office and the County of Los Angeles. He became a Fellow of the American Academy of Neurological and Orthopedic Surgeons, and the American Board of Medical-Legal Analysts in Medicine and Surgery.

Pharmacology Alumni

Julian L. Ambrus, M.D., Ph.D., (1954), had earned his medical degree at the University of Zurich, Switzerland, in 1949. He was named Principal Research Scientist, and then Director of Cancer Research for the New York State Department of Health. He has also held the position of Professor and Chairman of the Department of Experimental Pathology at the Roswell Park Division of SUNY/Buffalo. Dr. Ambrus has co-authored nearly 500 publications in biochemistry, physiology and pharmacology of cancer, and the blood coagulation cascade. He has been a member of over 50 professional organizations and has served on numerous medical and scientific advisory groups including the Food and Drug Administration, the National Heart Institute and the World Health Organization. He has served as editor-in-chief of both the Journal of Medicine and Reviews in Hematology and as a member of the editorial boards of Folia Angiologica and Haemostais. In recognition of his scientific accomplishments, he received the College of Graduate Studies 1990 Distinguished Alumnus Award (Fig. 5).

Melvyn Gluckman, Ph.D., (1953, Fig. 6), joined the Parke Davis-Warner Lambert Laboratories in Ann Arbor, Michigan, where he organized a prominent research laboratory and group of investigators. He was elevated to the position of Vice President for Research from which he retired in 1990. During his career he distinguished himself with research in the fields of neuropharmacology and neurophysiology.

Fredric Rieders, Ph.D., (1952, Fig. 7), remained at Jefferson as an Assistant Professor of Pharmacology until 1956 when he was promoted to Associate Professor. He was named Professor of Pharmacology and Toxicology in 1969. He served as Chief Toxicologist in the Office of the Medical Examiner and Director of the Poison Information Center for the City of Philadelphia from 1956.
until 1970 when he established National Medical Services, Incorporated, and assumed the positions of President and Laboratory Director. He became a Diplomate in Toxicological Chemistry and in Forensic Toxicology and was certified as a Laboratory Director by the U.S. Public Health Service. A Fellow of the American Academy of Forensic Sciences, he has served as the Chairman of its Toxicology Section and as a representative to the National Library of Medicine's Committee on Toxicology Terminology. Among his numerous professional associations was charter membership in the International Association of Forensic Toxicologists. A long-time supporter of Jefferson, Dr. Rieders was elected to the College of Graduate Studies Alumni Association Board of Directors in 1982 and served as its President from 1986 to 1988.

### ALUMNI

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Fig. 5. Julian L. Ambrus, M.D., Ph.D. (Pharmacology, 1954) receives the 1990 Distinguished Alumnus Award from Richard Steelman, Ph.D. (Pharmacology, 1977) President of College of Graduate Studies Alumni Association (right).
Fig. 6. Melvyn Gluckman, Ph.D., Vice President for Research, Parke Davis-Warner Lambert Laboratories.

Fig. 7. Fredric Rieders, Ph.D., President of College of Graduate Studies Alumni Association Board of Directors.
Andrew J. Ramsay (Fig. 8) was named Chairman of the Department of Anatomy and Director of the Daniel Baugh Institute of Anatomy in 1958. He would hold this position until 1972. Upon assuming the chair, his objectives were to strengthen the teaching programs, to foster research of a diversified nature to reflect the skills and interests of the faculty, and to maintain Jefferson's traditional excellence in anatomy. Paul C. Schroy (Fig. 9), the first Ph.D. graduate of the Department (1954), also a J.M.e. graduate (1957), joined the faculty and studied the anatomy of the liver. Albert W. Sedar, Ph.D., joined the Department in 1955 and his research centered on cytophysiology of cell types aimed at correlating fine cell structure with functional activity.

In the Department of Microbiology, research focus was expanded when Dr. Goodner's involvement with the plague in Madagascar expanded to a life-long interest in cholera and he was subsequently named to the Cholera Committee of the National Institutes of Health. In 1958 the South-East Asia Cholera Research Laboratory was established in Dacca, Pakistan, providing a regional facility for Committee activities which Dr. Goodner visited throughout his lifetime. Harry L. Smith, Jr., Ph.D., (1955), appointed as Instructor in 1957, became involved in the

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Fig. 8. Andrew J. Ramsay, Ph.D., Chairman of Anatomy (1958-72), fostered research of a diversified nature.

Fig. 9. Paul C. Schroy, Ph.D. (1954), M.D. (1957), first Ph.D. graduate in anatomy, conducted significant research on anatomy of the liver.
investigations with Dr. Goodner on the bacteriology and the epidemiology of cholera. Drs. Frank F. Katz and Rolf Freter were also appointed to the faculty as Assistant Professors. Dr. Katz had experience in teaching parasitology and took over the responsibilities left behind by Dr. Sawitz. Having gone through several changes in name and orientation since its inception in 1909, the designation of the Department was officially changed to Microbiology in 1959. That same year, members of the Department were invited to Bangkok by Pyn Muangman, a 1926 graduate of Jefferson Medical College, to study the cholera epidemic in that country.

When Dr. Coon (Fig. 10) came to Jefferson to head the Department of Pharmacology his research activities in the preceding 12 years had been exclusively in toxicology. Though he continued his own interests and research efforts in this area, no major increase in the emphasis of toxicology in the research and teaching programs of the Department immediately resulted. Through the succeeding years, however, toxicological issues became a substantial part of the research and graduate training activities. During Dr. Coon’s tenure as Chairman, approximately half of the faculty and graduate student research activities involved toxicological issues, which were well supported by research and training grants from the National Institutes of Health and other governmental agencies.

After serving as Acting Chairman since 1955 when Dr. Thomas retired, Dr. Friedman (Fig. 11) was named Chairman of the Department of Physiology in 1957. On assuming the chair, Dr. Friedman abolished Saturday classes and mandatory attendance for medical students. His first academic appointments were Drs. Louis Kazal

Fig. 10. Julius M. Coon, Ph.D., M.D., Chairman of Pharmacology (1953-76), introduced toxicology as a branch of Pharmacology.

Fig. 11. M.F.H. Friedman, Ph.D., Chairman of Physiology (1955-74), ushered in cellular physiology and biophysics.
as Assistant Professor and Domenic A. DeBias as instructor. Dr. Kazal also served as the associate director of the Cardeza Foundation from 1960 to 1978. Dr. DeBias, a 1956 graduate, was the first graduate student of the department to assume a staff position at Jefferson. In response to the increasing importance of cellular physiology and biophysics, June N. Barker, Ph.D., was appointed instructor in 1958.

Biochemistry Alumni

Seymour W. Milstein, Ph.D., M.D., (1955), went on to Research Assistant Professor at Hahnemann University, then to Chief of Biochemistry in the U.S. Army Surgical Research Unit at Brooke Army Medical Center, Texas. He earned his M.D. degree at Hahnemann in 1962 and taught Family Medicine and Biochemistry there. He became a Diplomate in Family Medicine and in Quality Assurance and Utilization Review.

Microbiology Alumni

Harry Smith, Ph.D., (1957), was appointed as an instructor in microbiology upon graduation, earning a place among the first and most durable of the Jefferson faculty appointments from the Graduate School. He advanced to full Professor in 1973. During the 1960s the World Health Organization and the National Institutes of Health sent him to study cholera epidemics throughout southeast Asia and during the 1970s he ran an active research program in the area of cholera and diarrheal diseases. Since 1981, Dr. Smith’s interests were in computerized aids in teaching, especially in relation to diagnosis of infectious diseases. He developed a computer-assisted teaching program which generated fictional patients from disease models. Housed in the Department of Microbiology, the program has been used extensively by medical students. In recognition of his teaching accomplishments, he was honored by the Jefferson Medical College Class of 1988 with the presentation of his portrait to the University (Fig. 12). Active in numerous University and College committees, he was also instrumental in starting the College of Graduate Studies Alumni Association and was its first president.

Pharmacology Alumni

Clara M. Ambrus, M.D., Ph.D., (1955), had earned her M.D. degree at the University of Zurich, Switzerland, in 1949. She was named Senior Cancer Research Scientist at the Roswell Park Memorial Institute and Associate Research Professor at the State University of New York/Buffalo Graduate School in 1955. She later accepted the additional positions of Assistant Research Professor of Pediatrics in 1959 and, in 1983, Research Professor of Gynecology/Obstetrics at the SUNY/Buffalo Medical School. She served as a member of the International Fellowship Review Committee at the Fogarty Center of the NIH from 1972 to 1975 and as a consultant to the Microcirculatory and Thrombosis Tasks Groups of the NIH from 1972. An expert in the areas of fibrinolysis-blood clotting, thrombosis, neonatal and adult respiratory distress syndrome, and insolubilized enzymes and antidotes, Dr. Ambrus has had over 200 publications.

Joseph Borzelleca, Ph.D., (1956), spent a few years at the Medical College of Pennsylvania as an instructor in pharmacology and then moved to Richmond where he has been a professor in the department of pharmacology and toxicology since 1967, also heading the division of toxicology. His research has included drug movement across bladder, gastrointestinal and salivary membranes, drug metabolism, and toxicological...
studies using *in vivo* and *in vitro* systems. In the early 1960s he worked with the U.S. Navy to develop a method to stop unprovoked shark attacks. He served as chairman of the National Academy of Sciences Committee on Safe Drinking Water and Committee on Toxicology and has served as a member of the Food Protection Committee. He was the recipient of the U.S. Army’s Chemical Research, Development and Engineering Center’s Distinguished Service Award. His scientific achievements were recognized by the College of Graduate Studies with its Distinguished Alumnus Award in 1987 (Fig. 13).

**Philip Rosenberg, Ph.D.,** (1957), served for one year as an instructor in Jefferson’s Department of Pharmacology and then became research assistant in the College of Physicians and Surgeons at Columbia University, where he advanced to Research Associate and Assistant Professor in 1963. In 1968 he became Chairman and Professor, Section of Pharmacology and Toxicology at the University of Connecticut, School of Pharmacy. Dr. Rosenberg has been recognized by the U.S. Public Health Service with its Career Development Award and he received the Redi Award for outstanding contributions to the field of toxicology at the World Congress on Animal, Plant and Microbial Toxins. In 1987 he received a Jacob Javits Neuroscience Investigators Award of more than $1.3 million for the period 1987 to 1994 from the National Institutes of Health. He served as president of the International Society of Toxicology and as editor of the journal *Toxicon*. His accomplishments earned him the College of Graduate Studies Distinguished Alumnus Award in 1989.

**Sydney Spector, Ph.D.,** (1957), served for five years, as a pharmacologist in the Laboratory of Chemical Pharmacology at the NIH National Heart Institute. He was then named Head of the Section on Pharmacology in the Experimental Therapeutics Branch there, a position he held until 1968.

Fig. 13. Joseph Borzelleca, Ph.D. (Pharmacology, 1956), receives 1987 Distinguished Alumnus Award from Fredric Rieders, Ph.D. (Pharmacology, 1952), President of CGS Alumni Association Board of Directors (right).
1968. He then accepted the position of Full Member and Section Chief in the Department of Physiological Chemistry at the Roche Institute of Molecular Biology in Nutley, New Jersey, where he was promoted to Department Head in 1977. In 1985 he was named Laboratory Head in the Institute’s Department of Neurosciences. He served as a visiting professor in the Department of Pharmacology at Stanford University in 1969 and has served since 1968 as an adjunct professor of pharmacology at New York Medical College. Since 1971 he has been adjunct professor of pharmacology and anesthesiology at Columbia University. In 1970 he also was named a member of the Preclinical Psychopharmacology Research Review Committee of the National Institute of Mental Health. He has served on the editorial boards of a number of publications, including European Journal of Pharmacology, Immunopharmacology, and Circulation Research. Through his research he has published 79 abstracts, nearly 200 papers and has obtained 13 patents. He was president of the Catecholamine Club in 1972 and president of the American Society of Pharmacology and Experimental Therapeutics in 1979. Dr. Spector was the recipient of the Paul K. Smith Award from George Washington University School of Medicine and was the 1989 Sterling Lecturer at the University of Michigan, Ann Arbor. In recognition of his accomplishments, in 1983, he was also the first-ever recipient of the College of Graduate Studies Distinguished Alumnus Award (Fig. 14).

**Physiology Alumni**

**Domenic A. DeBias, Ph.D.,** (1956), was a postdoctoral fellow in the Division of Endocrine Cancer Research at Jefferson Medical College for one year and then was named an instructor in the Department of Physiology. He advanced to the rank of Professor in 1969. In 1975 he was named Professor and Chairman of the Department of Physiology/Pharmacology at the Philadelphia College of Osteopathic Medicine. He was also Assistant Dean of Basic Sciences there in 1979. He served as a consultant for the National Board of Osteopathic Medical Examiners, the National Research Council and the National Library of Medicine’s Toxicology Information Program. Through his research, largely in the areas of endocrine physiology, cardiopulmonary physiology and environmental physiology, he has published 58 papers and 46 abstracts of his work.

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Fig. 14. Sydney Spector, Ph.D. (Pharmacology, 1957), received the first CGS Distinguished Alumnus Award in 1983.

First five presidents of CGS Alumni Association: (left to right) Ronald Jensh, Harry Smith, Georganne Buescher, Frederic Rieders, and Gerald McGarrity.
To vitalize the course in neuroanatomy, and to initiate basic neuroanatomic research, Dr. Norman Moskowitz was called from Columbia University College of Physicians and Surgeons to Jefferson’s Department of Anatomy in 1962. The first significant award for neuroanatomical research in the Department was granted to Dr. Moskowitz in 1963 from the National Institutes of Health, under which he made major contributions to the knowledge of the primate auditory pathways, using the monkey as his normal and experimentally altered research model.

In the Department of Microbiology, the subject of virology was receiving increasing attention at this time. In 1960, Paul B. Johnson, Ph.D., was recruited to the faculty. He was the co-discoverer of the Simian Foamy Agent and he continued his studies at Jefferson with an NIH grant. In 1963, Eileen Randall, Ph.D., received appointment as Assistant Professor of Pathology as well as Microbiology. At this time the Department became involved in the training of foreign students under an NIH teaching grant. Members of the Department also traveled to the Philippines in 1961 and Bangladesh in 1962 to study the cholera epidemics there.

During his tenure as Chairman of the Department of Pharmacology, Dr. Coon recruited a number of faculty members who served the Department well for many years. Those who served on a full-time basis were Drs. R. Snyder, M. S. Silver, J. J. Kocsis (Fig. 15), T. A. Hare (Fig. 16), R. W. Manthei (Fig. 17), and W. H. Vogel (Fig. 18). Also serving the Department for many years was Anthony J. Triolo, Ph.D., a 1964 graduate.

To further enhance the Department of Physiology’s work in biophysics, Daniel L. Gilbert, Ph.D. was appointed assistant professor in 1960. Donald B. Doemling, Ph.D. was named instructor in 1961 to further enhance the Department’s strong gastrointestinal base. The era of organ system specialization was begun when Dr. Friedman appointed Sheldon F. Gottlieb as Assistant Professor. The second graduate student from the department to be appointed to a faculty position was Leonard M. Rosenfeld (Fig. 19), Ph.D., who in 1964 was named instructor.

Anatomy Alumni

Padmanabhan Siddharth, M.D., Ph.D., (1963), received his M.D. from Madras Medical College of the University of Madras, India, in 1958. He became a Clinical Professor of Surgery at the State University of New York at Stonybrook and Chief of Surgery at the Veterans Administration Medical Center in Northport, New York.

Microbiology Alumni

Eileen L. Randall, Ph.D., (1960), had begun her teaching career at Jefferson as a graduate assistant, and when she left 23 years later, she held the position of associate professor in the Departments of Microbiology and Pathology. From 1955 to 1973 she was also a clinical microbiologist.
at Thomas Jefferson University Hospital. She played an instrumental role in the establishment of the master's degree program in clinical microbiology at Jefferson. In 1973 she became Director of the Division of Microbiology in the Department of Pathology and Laboratory Medicine at Evanston Hospital in Illinois and Associate Professor of Clinical Pathology at Northwestern University Medical School. Her research interests were in parasitology, nosocomial infections and hospital epidemiology, mycology, bacteremia, perinatal infections, automation in microbiology, streptococci and diarrhea. She was a Diplomate of the American Board of Medical Microbiology and a Fellow in the American Academy of Microbiology. She received the Outstanding Contributor to Clinical Microbiology Award from the South Central Association for Clinical Microbiology. In October 1990 the Illinois Society for Microbiology honored her with the Pasteur Award in recognition of her outstanding contribution to the science of microbiology. She was also the recipient of the 1984 College of Graduate Studies Award.

Fig. 17. Roland W. Manthei, Ph.D., Professor of Pharmacology at Jefferson.

Fig. 16. Theodore A. Hare, Ph.D., Professor of Pharmacology at Jefferson.

Fig. 18. Wolfgang H. Vogel, Ph.D., Professor of Pharmacology at Jefferson.
Distinguished Alumnus Award (Fig. 20). Dr. Randall died in December of 1990.

Pharmacology Alumni

Harvey J. Sugarman, M.S., (1963), M.D., went on to Jefferson Medical College to earn his M.D. degree in 1966. He became the David Hume Professor of Surgery and Vice-Chairman of the Department of Surgery at the Medical College of Virginia with research interests in the area of sepsis syndrome and gastrointestinal surgery (Fig. 21).

Anthony J. Triolo, Ph.D., (1964), upon graduation was named an instructor in pharmacology at Jefferson where he advanced to full Professor in 1978 (Fig. 22). Since 1987 he also served as Adjunct Professor of Pharmaceutics at the Philadelphia College of Pharmacy and Science. Throughout his career at Jefferson, he has served on numerous University and Department of Pharmacology committees and has served as the graduate student research thesis advisor to 12 students. Through his research, largely in the area of environmental toxicology, he has published 22 papers and 22 abstracts of his work.

Physiology Alumni

Martin F. Tansy, Ph.D., (1964), served as an instructor in physiology at Temple University School of Dentistry from 1962 and was promoted to Assistant Professor in 1964. In 1967 he was appointed Associate Professor and Chairman of the Department of Physiology and Biophysics, and in 1972 promoted to Professor, at the dental school. In 1979 he was named Coordinator of the Basic Science Departments and in 1986 Professor of Physiology and Dean of the Temple University Dental School. He has served as a reviewer for a number of publications, including Science, American Journal of Physiology and Teratology. He has also served the American Dental Association as a consultant in the basic sciences for numerous dental school accreditation site visits. Dr. Tansy has co-authored eight book chapters,
over 90 scientific papers and over 100 abstracts of his work which focused on the areas of gastrointestinal function and inhalation toxicology.

**Henry H. Sherk, M.S., M.D., (1961)**, was a 1956 graduate of Jefferson Medical College who earned his M.S. in Orthopaedics after residency. He became Professor of Surgery and Chief of the Division of Orthopaedics and Rehabilitation at the Medical College of Pennsylvania.

**Paul D. Zimskind, M.D., Ph.D., (1964)**, earned his M.D. degree at Jefferson in 1957. After an internship, residency in general surgery for one year and then residency for three years in urology, he was awarded an NIH postdoctoral fellowship and went on to earn his Ph.D. from the Department of Physiology. He was then appointed Assistant Professor and in charge of the Urology Research Laboratories at Jefferson. In 1967, at the death of Theodore R. Fetter, Dr. Zimskind was appointed the sixth Chairman of the Department of Urology (Fig. 23). His Urodynamics Laboratory had an international reputation for its productivity and excellence. He led studies on the dynamics of normal and abnormal urinary conduction using pressure recordings and fluoroscopic motion pictures of urinary tract activity. He evaluated the various laboratory, radiographic, and clinical features in patients with renovascular hypertension in an effort to establish firm criteria for differentiating potentially correctable versus noncorrectable cases. He also designed projects to discover means of enhancing the preservation of functional renal and ureteral tissues for future organ transplantation. By the time of his sudden death at age 44, he had written 43 scientific papers and made 77 presentations worldwide. Family, colleagues and friends presented his portrait to the College on April 15, 1983.

Leonard M. Rosenfeld, Ph.D., a graduate of...
the University of Pennsylvania, took post-bac-
calaureate training in Cellular Physiology at
Temple University and earned a Ph.D. in Phys-
iology from Jefferson Medical College in 1964 (Fig.
19). At Jefferson he has held faculty appoint-
ments in Physiology in the Medical College, Col-
lege of Graduate Studies and the College of Allied
Health Sciences. He has published articles per-
taining to gastrointestinal function, radiobiol-
ogy, nutrition, hemorrhagic shock, carbon mon-
oxide poisoning, myocardial infarction, history
of science, and medical education. Dr. Rosenfeld
has been Recording Secretary and in 1991 was
President-Elect of the Pennsylvania Academy of
Science. He has also served as an Associate Édi-
tor of the Academy’s Journal.

1960 Narasimhula, Shankunthala V., Ph.D.,
Biochemistry
Randall, Eileen L., Ph.D., Microbiology
Smith, Phyllis N., M.S., Physiology

1961 Chan, Asteria C., Ph.D., Pathology/
Pediatrics
Rosen, Lionel, M.S., Physiology
Sherk, Henry H., M.S.
Shirakawa, Alice, M.S., Microbiology

1962 Bender, A. Douglas, Ph.D., Physiology
Kostos, Vincent, M.S., Pharmacology
Levine, Stanley, Ph.D., Microbiology
Lipkin, Saul, M.S., Microbiology
Ma., Pearl, Ph.D., Microbiology
Nahhas, Laila A., M.S., Microbiology
Welch, Richard M., Ph.D., Pharmacology
Wurst, Richard P., M.S., Microbiology

1963 Ch’en, Philip C., M.S., Microbiology
Coppola, John A., Ph.D., Pharmacology
Dickerson, Kenneth H., M.S., Physiology
Ghosh, Gopi M., M.S., Anatomy
Holburn, Ruth R., Ph.D., Physiology

1964 Clark, Allen M., Ph.D., Pathology
Gabriel, Karl L., Ph.D., Pharmacology
Greenwald, Kenneth, Ph.D., Pathology
Horn, Robert S., Ph.D., Pharmacology
Hosko, Michael J., Ph.D., Pharmacology
Kilmore, Mearl A., Ph.D., Physiology
Lutton, Charles E., Ph.D., Pathology
Maylock, John H., M.S., Physiology
Rosenfeld, Leonard M., Ph.D., Physiology
Siegel, Edward T., Ph.D., Physiology
Silberstein, Charles E., M.S., Anatomy
Tansy, Martin F., Ph.D., Physiology
Triolo, Anthony J., Ph.D., Pharmacology
Zimskind, Paul, Ph.D., Physiology

Anthony J. Triolo (Ph.D., 1964), Professor of
Pharmacology, teaching Jefferson student nurses.
Fig. 21. Harvey J. Sugarman, M.S., M.D., Professor of Surgery at the Medical College of Virginia.

Fig. 22. Anthony J. Triolo, Ph.D., Professor of Pharmacology at Jefferson.
Fig. 23. Paul D. Zimskind, M.D., Ph.D., Chairman of Urology at Jefferson (1967-76).