IN HONOR OF THE SCHOOL OF MEDICINE
'If this Bicentennial History of the School of Medicine has anything to teach, it is that the true wealth of a university and its schools is men'

—Dr. George W. Corner, in his history of the School of Medicine, "Two Centuries of Medicine"

"The great possession of any university," said Sir William Osler, "is its great names." And the University of Pennsylvania School of Medicine has had, throughout 200 years, a succession of great names which has brought the school the distinction befitting the first medical school in this country. From that September day in 1765 when William Shippen, Jr., and John Morgan wrote in the Pennsylvania Gazette that "As the Necessity of cultivating Medical Knowledge in America is allowed by all, it is with Pleasure we inform the Public, that Courses of Lectures, on two of the most important Branches of that useful Science, viz. Anatomy, and Materia Medica, will be delivered this Winter in Philadelphia . . . ." to this bicentennial date, such names as Benjamin Rush, Philip Syng Physick, Caspar Wistar, Osler himself, William Pepper, J.R., Alfred Newton Richards, Charles Harrison Frazier, Joseph Leidy, D. Hayes Agnew, Louis A. Fuhring, and J. S. Ravdin have shown "the true wealth" of this school.

The two centuries of medicine at Pennsylvania have been filled with men's ideas, with growth, change, and service. Today the School of Medicine that began in a classroom at the College of Philadelphia and in a made-over coach house on the grounds of William Shippen, Sr., now fills, with its laboratories and clinics, the equivalent of two city blocks. It has a faculty of almost 600; a student body of over 500. Its plans for the future will enable it to continue as one of the truly great American medical schools. It is to the men who have made it so that this special issue is dedicated.

THE COVER: The Scotch thistle, official symbol of the Bicentennial, symbolizes the bond between Pennsylvania's School of Medicine and the University of Edinburgh, of which Morgan and Shippen and other early faculty were graduates.
Faculty who make a great institution

Among the distinguished educators who comprise Pennsylvania's medical faculty are the men portrayed on these pages.

Photographed for The Pennsylvania Gazette by ROBERT PHILLIPS
I. S. RAVIDIN

The 11-story surgical building named for him and dedicated in 1962 forms the backdrop for I. S. Ravdin, the University of Pennsylvania's retiring vice president for medical affairs who is one of the world's best known and most honored surgeons.

Since his graduation from Pennsylvania's School of Medicine in 1918, "Rav," as he is known to his friends, has held a myriad of prominent positions in the medical profession. He has achieved world acclaim as a surgeon, distinguished himself in the field of cancer research, and furthered the goals of local, national, and international medical groups. He has been awarded 11 honorary degrees and been named honorary fellow by four foreign medical colleges. He has been the recipient of over 32 honors and awards from military and civic organizations, and is a member of over 70 medical societies and committees, several of which he has served as an officer.

In June, 1956, Dr. Ravdin was called to the White House as civilian consultant and participated in the emergency operation for ileitis on President Eisenhower. Outstanding as a citizen as well as in his professional field, he was awarded the 1967 Philadelphia Award, the city's highest honor.

Forty-six years ago he began as an instructor of surgery; this year marks his retirement from the University administration. The I. S. Ravdin Institute stands as a reminder of his vast accomplishments.

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JONATHAN E. RHOADS
Outstanding surgeon, scientist, and educator in the world of medicine—Jonathan E. Rhoads ('40 GM), John Rhea Barton Professor of Surgery and chairman of that department (photographed here in a Ravidin Institute operating room), is also respected as a "scholar of quiet dignity and wisdom" active in civic and institutional affairs. From 1956-59 he was provost of Pennsylvania, in 1960 he was named a trustee of Bryn Mawr, and in 1963 he became president of the corporation and chairman of the board of managers of Haverford College. He was awarded the 1963 Humanitarian Award of the American Cancer Society and is a past president of the International Surgical Group, the Society of Clinical Surgery, and the College of Physicians. Some of his major contributions have been in biliary physiology, the processes of blood coagulation, burns, chemotherapy and antibiotics in surgery, regional ileitis, peritonitis, and thyroid and pancreatic function and disorders. In 1960 Dr. Rhoads accompanied President Harrwell and two others to Iran to study the feasibility of establishing an American-type university in Iran. Last year he was appointed to the National Sciences Council of the U.S. Public Health Service.
DONALD M. PILLSBURY

Donald M. Pillsbury ('29 G.M.), just retired as chairman of dermatology, is known throughout the medical profession for his pioneer work in developing the specialty of dermatology on a foundation of research in the basic medical sciences as they relate to diseases of the skin. The past president of the American Dermatological Association, of the American Academy of Dermatology and Syphilology, and of the Society for Investigative Dermatology was the senior consultant in dermatology and venereology to the U.S. Army in the European Theater during World War II. He was appointed chairman and professor of dermatology in 1945, became a member of the National Advisory Health Council in 1955, was named president of the XII International Congress of Dermatology in 1958 and the recipient of a coveted invitation to deliver the Procter White Oration to St. John's Hospital Dermatological Society of London in 1960. Last spring he became a trustee of the Smith Kline & French Foundation and he is now a consultant for the U.S. Surgeon General's Office. In 1963 the three-story Pillsbury wing of the University Hospital's Dühring Laboratories was dedicated in his honor.

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In 1959 George B. Koelle, Ph.D. from Pennsylvania and M.D. from Johns Hopkins University, assumed the position of professor and chairman of Pennsylvania's department of pharmacology in the School of Medicine and the Graduate School of Medicine. From 1950 to 1952 he had served as assistant professor of pharmacology at Columbia University, but he returned to Philadelphia as a professor in the Graduate School of Medicine, of which he was dean from 1957 until he accepted the chair of pharmacology in the School of Medicine. Widely known for research on a variety of problems, Dr. Koelle (above, in a pharmacology laboratory) has also served on the editorial boards of three leading pharmacologic journals. His interest in the special field of body tissue chemicals and drugs for their control began while he was with the Chemical Warfare Service of the U.S. Army in World War II. In 1964 he was named president-elect of the American Society of Pharmacology and Experimental Biology and appointed to the Elmer Holmes Bobst Professorship in Pharmacology. This year he was the recipient of an honorary doctor of science degree from the Philadelphia College of Pharmacology and Science of which he is a graduate and currently a trustee.
Dale R. Coman

His field is pathology, his specialty is the pathology of cancer. And he was photographed (above) in the pathology museum of the University's School of Medicine with his constant companion, his setter Huckleberry. Dale Coman, who has been chairman of the department of pathology since 1954, is a native of Connecticut who graduated from the University of Michigan and received his medical degree from McGill University. After interning at McGill, he served as a pathology resident at Pennsylvania. Following a year at Massachusetts State Cancer Hospital, he returned to Pennsylvania in 1937. He was promoted in 1947 to associate professor, and in 1949 to full professor.

Dr. Coman has devoted most of his research to the pathology of cancer and has contributed important papers on such subjects as the susceptibility of various body organs to tumor transplantation, the conditions governing the release of tumor emboli from the primary tumor, and the ability of human and animal cells to move spontaneously.

Dr. Coman served in one of the most sensitive positions of all during the University's famous Educational Survey in the 1950's: he was chairman of the committee which surveyed the Medical School.

Continued
HENRY L. BOCKUS

The founder and first chairman of the World Organization of Gastroenterology, Henry L. Bockus (photographed in his office) is also a former chairman of the departments of medicine and gastroenterology at the Graduate School of Medicine and former chief of these departments at the Graduate Hospital. His medical career following graduation from Jefferson Medical College in 1917 evinces an international scope. In 1951 he was presented the 29th Annual Strittmatter Award of the Philadelphia County Medical Society for outstanding contributions to graduate medical education, and in 1958 he was elected president of the International Society of Gastroenterology. In 1960 he became chairman of the board of directors of MEDICO (Medical International Cooperation), a service of CARE which he has also served as vice president. That same year a five-story building, the Henry L. Bockus General Research Laboratory, was dedicated in his honor at the Graduate Hospital and in 1962 he was the recipient of the Julius Friedenwald Medal of the American Gastroenterology Association.
BRITTON CHANCE

Britton Chance, chairman of biophysics and physical biochemistry and Johnson Professor of Biophysics, and director of the Eldridge Reeves Johnson Foundation for Medical Physics since 1949, actually began his association with the Foundation as a Fellow in 1939. A graduate of the University ('35 Ch, '36 G, '40 Gr), Dr. Chance has been a member of its faculty almost continuously since 1940. For a year he was acting director of the Foundation; in 1941 he became an investigator for the Office of Scientific Research and Development; from 1941 to 1945 he was a research associate, group leader, and associate division head at the Radiation Laboratory, Massachusetts Institute of Technology. He was a Guggenheim Fellow at the Nobel Institute, Stockholm, at the Molteno Institute, Cambridge, and in 1948 a scientific consultant to the attaché for research of the U.S. Navy in London. In 1950 he was awarded the Presidential Certificate of Merit and in 1952 the Paul Lewis award of the American Chemical Society in recognition of his studies and accomplishments in the field of enzymes (he discovered eight of the nine known active enzyme-substrate compounds). He was a consultant for the National Science Foundation from 1951 to 1956 and served (in 1959-60) as one of five scientists on the President's Scientific Advisory Committee. In whatever spare time he has found, he has excelled in yet another field: Britton Chance is a world (1962) and Olympic (1952) yachting champion in the 5.5 meter class.
Robert D. Dripps ('36 M), the man who took over the chairmanship of the embryonic department of anesthesiology in 1949 and built it into one of the stronger university anesthesia units in the country, is also active in international health groups. He recently served as chairman of the Scientific Group for the Evaluation of New Drugs, an international committee appointed by the World Health Organization and which studied ways to protect "citizens all over the world from the adverse effects of drugs." Dr. Dripps (above, in the Hospital's amphitheatre), is civilian consultant in his specialty to the U.S. Naval and VA Hospitals in Philadelphia. He was chairman of the Regional Survey Committee of the American Board of Anesthesiology in 1949, became its director in 1956, and chairman of examinations in 1961. He is currently senior civilian consultant in anesthesiology to the Surgeon General of the U.S. Army (for whom he went to Korea in 1958 to explore the problems of anesthesia and resuscitation there); a member of the National Advisory Research Resources Committee, U.S. Public Health Service; and a member of the University Council (a faculty-administration group which advises the president) since 1963. Highly respected by medical students for his interest and ability to teach, Dr. Dripps was the recipient of a 1962 Lindback Award for Distinguished Teaching.
Kenneth E. Appel, emeritus chairman and professor of psychiatry at the School of Medicine and emeritus chief of clinical psychiatry and professor of psychiatry at the Graduate School of Medicine, is seated here next to a bust of Sigmund Freud. Dr. Appel, a Franklin and Marshall graduate, received his master's, doctoral, and medical degrees from Harvard. He organized and developed the Functional Diseases Service at the University Hospital, served as president of the American Psychiatric Association (1954) and president of the American Board of Psychiatry and Neurology. He was chief of service and consultants at the Institute for Mental Hygiene (which is affiliated with Pennsylvania Hospital), and president of the Marriage Council of Philadelphia. Dr. Appel was president (1956-1959) of the Joint Commission on Mental Illness, Inc., a commission formed to carry out the Mental Health Study Act of 1955, and in 1956 he was elected president of the National Academy of Religion and Mental Health, a group which conducted "research and education in the relationships between religion and health." In 1963 he was honored for his work in "furthering cooperation among religion, medicine, and the behavioral sciences." Dr. Appel also served as a member of the Philadelphia Commission on the Mentally Retarded, is a past president and executive of the Institute of the Pennsylvania Hospital, and chairman of the section on Nervous and Mental Diseases of the American Medical Association. In 1960 the Laboratory for Research in Psychiatry on the second floor of the Piersol Building of the Hospital was dedicated in his honor.
JOSEPH STOKES, JR.

Joseph Stokes, Jr. ('20 M), former physician-in-chief of The Children's Hospital of Philadelphia and emeritus professor of pediatrics at the University's School of Medicine, relinquished the Williams Bennett Professorship of Pediatrics when he retired from his post as chairman of the pediatric department in 1963. His full career in pediatrics has received national commendation. In 1946 President Truman presented him the Medal of Freedom for work in which he discovered the value of gamma globulin for prevention of epidemic hepatitis and serum hepatitis. In 1952 he was awarded the Gordon Wilson Medal by the American Clinical and Climatological Association. His main scientific efforts have been directed toward the study and control of infectious diseases. Dr. Stokes is recognized as a "pioneer in attempts to induce immunity to poliomyelitis and measles." With his associates in 1935, he carried out the first field studies of human vaccination against epidemic influenza. He is credited with transforming Children's Hospital into a world center of pediatric teaching and research. In 1962 he was the recipient of the nation's highest pediatric award, The John Howland Medal and Award, given by the American Pediatric Society (of which he was president in 1958).

EUGENE P. PENDERGRASS

For more than two decades, Eugene P. Pendergrass ('18 M) served as chairman of the University's department of radiology. During that time he has held a variety of titles and offices, and received many honors. He became internationally known as an X-ray specialist, and best known for his interest in silicosis, a disabling lung condition associated with hazardous occupations such as coal mining. He served as professor of radiology in both the School of Medicine and the Graduate School of Medicine and as director of the University Hospital's radiological department. He is a past president of the American Cancer Society, the Radiological Society of North America (the largest radiological society), and a former president and chairman of the board of chancellors of the American College of Radiologists. In 1952 Dr. Pendergrass received the Medal of the American Cancer Society "for important contributions to the control of cancer." In 1955 he was presented the Gold Medal of the American College of Radiologists, the organization's highest award, and in 1965 (as emeritus professor of radiology) he was named the first Matthew J. Wilson Professor of Research Radiology at Pennsylvania. He has been serving as director of the Bicentennial Observance of the School of Medicine since 1962.

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Louis B. Flexner

In 1951 Louis B. Flexner, nephew of Dr. Abraham Flexner (author of an epoch-making report on medical education in 1910) and Dr. Simon Flexner (Pennsylvania professor of pathology, 1899-1903), became professor and chairman of the University's anatomy department. Formerly with the Carnegie Institution of Washington, D.C., he is noted for his work in chemical embryology and fetal physiology. In 1958 he was appointed to the Research Advisory Board of the United Cerebral Palsy Association (in 1956 the organization gave him an award for his "work in development of the central nervous system"); in 1954 the National Foundation for Infantile Paralysis presented him a grant to study the reaction of nerve cells to strains of poliomyelitis virus; and in 1954 he was elected to membership in the National Academy of Sciences. Dr. Flexner (photographed above in an anatomy laboratory) was one of the organizers of the University's Institute of Neurological Sciences (1953) and he has served as its director since its inception.

John R. Brobeck

John R. Brobeck joined the medical faculty of the University in 1951. Coming from Yale University where he was associate professor of physiology, he was named professor of physiology at Pennsylvania. Dr. Brobeck was a Ward Fellow at Northwestern University (1936-1939) and a Goodrich Scholar at Yale (1940-1943). Following his graduation from Yale's medical school (1943), he became an instructor in physiology and was appointed to his associate professorship in 1948. After one year at Pennsylvania, Dr. Brobeck was named in 1952 to the post of chairman of the department of physiology here. In 1962-1963 he spent his sabbatical leave as visiting professor of physiology at the National Defense Medical Center, Taipei, Taiwan, a trip made possible by the China Medical Board of New York. Dr. Brobeck (photographed at right in a physiology laboratory) is noted for his contributions to the knowledge of neurophysiology, endocrinology, and metabolism.
Medical Education Today: 'Alive, Vital, Changing'

By SAMUEL GURIN

If change, growth, evolution, and irritability are evidence of viability, then medicine today is alive, vital, and very healthy indeed. The "Queen of the Professions" has in past centuries undergone many periods of stagnation, and generally it took great upheavals to stir it out of its lethargic state. Social, economic, and scientific revolutions have always made their impact on the healing arts, and this is as it should be, for medicine serves man's needs, his wants, and his fears.

Most of the present century can be characterized by the word "change." Two major world wars have produced dramatic political, economic, and social upheavals. A technical and scientific revolution of immense proportions has occurred; fantastic advances in transportation and communications have altered our world in a fashion undreamed of 50 years ago.

If it is occasionally necessary to take a backward look, it is equally important to attempt a forward look. What kinds of physicians will be needed a decade from now? In what social and economic environment will they be expected to practice? How will the current revolution in scientific knowledge alter the practice of medicine? What will a better educated and more knowledgeable public demand of its physicians?

No medical school can function intelligently or effectively unless it faces up to these problems. No medical curriculum is satisfactory unless it adequately prepares its medical graduates for the intellectual, social, and economic environment in which they will find themselves. To complicate matters still more, university-affiliated medical schools have other responsibilities, such as graduate study for Ph.D. candidates as well as for post-M.D. and post-Ph.D. fellows; and programs for intern, residents, for continuing medical education, for nurses, and frequently for technicians.

Nostalgia for the good old days' in the medical schools is understandable, says Pennsylvania's Dean Gurin (above), but the realities of changes taking place now must be faced.
To return specifically to medical students, one might well ask the question—what kinds of careers are available to them? An incomplete list would include family practice, the specialties, academic teaching positions, research careers, as well as industrial and governmental posts. What I am trying to say is that medical schools today are evolving into bio-medical universities; to put it more precisely, they have become bio-medical branches of the university, or of the particular college with which they are affiliated. Whether this is shocking or not to the older practitioner, these developments are happening and I believe they are inexorable.

By no means the least of our many responsibilities in schools of medicine is the acquisition of new biological and medical knowledge. Some would say this is our primary responsibility; others cry out for a halt to the flood of research and beg for a breathing spell. The latter point of view is, in my opinion, naïve and is simply a reflection of the fact that some individuals are irritated and frustrated to a point where they wish to turn the clock back. Nostalgia for the good old days is understandable, but the realities must be faced. As biomedical knowledge increases, more and more dangerous weapons are put into our hands. How to use these wisely will challenge all of us in the years to come.

The different points of view expressed by the practitioners of medicine and medical educators need to be resolved. Although neither side is blameless, much of the difficulty stems from misunderstanding and, in particular, the semantics employed. Medical schools are characterized by much of the profession as (1) ivory towers or research institutes, (2) institutions no longer interested in the practice of medicine, or (3) if the schools are interested in medical practice, as concerned only with turning out specialists and academicians. Many of the profession believe that science and the art of medicine are like oil and water; they cannot mix. This just isn't so; and incidentally, this is exactly what detergents are designed to do. There is simply no doubt that keen, intelligent observation of patients has, in the past, resulted in some of the most spectacular advances in medical knowledge.

Dr. George Perera has said it much better than I: "Science is the tool, not only of medical inquiry, but also of medical service. Inevitably, tomorrow's physicians will have to be familiar with a larger body of basic science, more complicated and precise instruments and methods, and have a greater and deeper insight into inheritance, personality, and environment. Science is knowledge, and the acquisition of knowledge requires selection, appraisal, critique, and judgment. Only with knowledge can one provide maximum help at the bedside." I should like to emphasize the phrase: science is knowledge.

'Every keen physician is an investigator'

Now let us turn to the word "research." To many, this connotes laboratory experimentation. It brings up visions of the cold, inhuman, objective observer who sits patiently in his laboratory peering through a microscope or observing the deflections of a galvanometer or twirling the knobs of a complex computer. Nothing could be farther from the truth. Are careful, keen, and intelligent observations at the bedside to be put into another category? This can be investigation of the highest order; are not investigation and research one and the same? Whether he agrees or not, every keen, observing, and thoughtful physician is an investigator. I call him a scientist; and the more imaginative he is, the more creative he will be. As Dr. Charles Child has put it: "Art is nothing more nor less than the purposeful application of knowledge; skill in performance through practice; man's contrivance in adopting natural things to his use. Art in medicine, however, seems to me to have acquired emotional overtones: humanism, compassion, artistry, priesthood, and in the past of course, magic. Science is nothing more nor less than knowledge obtained by observation, by inference, and by verification." Dr. Dana Atchley has put it another way: "As to the icy intellectual, I have said more than once—that no warm sympathetic person is frozen by research experience, nor is a cold tactless person thawed by general practice." Let us agree once and for all that medicine will benefit from investigation whether it be in the laboratory, at the bedside, in the out-patient department or in the local, state, or federal department of public health.

As to the charge that medical schools are not interested in training practitioners of medicine, this is also untrue. The only way to teach clinical medicine of high quality is to demonstrate superb patient care. I have implied rather strongly, that the science of medicine and its application, namely the art of medicine, are both vitally important, and the one does not exclude the other. When the biologist takes man apart to scrutinize the separate pieces, he learns much, but he does not thereby achieve a complete understanding of man as a living being. Far from it! Man is much more than the sum of its parts—and it seems very clear to me that the physician of tomorrow must apply all the knowledge he can acquire, and all that science can teach him to the vastly larger problems of man as a total entity and to his relationships with his environment.

That more and more graduates are currently turning to the specialties and that fewer are selecting careers in general practice appears to be the case.
MEDICAL EDUCATION

Continued

It is tempting to point out that medical schools exert no control over their graduates, once the M.D. degree has been awarded. It is tempting to point out that out 50 years ago, there were relatively few residencies available following the internship. In those days, there was essentially nowhere to turn. Today the bright young intern has the opportunity to improve his skills and to acquire certification in some specialized area. These are facts today and there is no point in belittling the loss of yesterday. Our present-day graduates are bright; they will continue to take advantage of the opportunities made available to them; nor will nostalgia for the past have much meaning for them.

If an occasional faculty member seizures at medical practice, this is a pity, and he belongs in a research institute and not in a medical school. Good judgment and a balanced point of view do not always accompany advancing age.

'The public wants family physicians'

The prestige of the certified specialist is high in the profession—and in our medical centers. Teaching hospitals are reluctant to grant bed privileges to general practitioners, and here I must admit that the medical schools and teaching hospitals have as yet not generally faced up to this problem. Whether the old-fashioned general practitioner disappears or not, there is simply no doubt that the American public want and deserve to have family physicians; they need someone to turn to for medical advice and counsel. It is simply good sense to recognize that the family physician must serve as the medical chief of staff for his patient: the man who "calls the plays," who makes the referrals and follows his patients until the correct diagnosis and proper course of treatment are determined. The alternative is not very attractive; are patients expected to make their own diagnosis and then go directly to the appropriate specialist? It is true that some internists do serve as family physicians, but it seems to me that our medical schools can somehow solve this crucial problem in more intelligent fashion than simply to let nature take its course. Special residencies in family practice, the creation of a modest section devoted to family medicine in our teaching hospitals, could help to make such careers more attractive. I know that considerable thought is being given to this serious problem—but I have as yet to see effective leadership taken in this area by academic medicine.

The scientific revolution we are witnessing has had, and will to an increasing extent have, a profound impact on medicine and medical practice. The techniques of electron microscopy, radio-isotopes, chromatography, tissue culture, virology, genetics, to name but a few, have given us insights into living processes that are bound to have the most profound impact. It is now difficult to find a research problem in the basic sciences which does not have obvious implications for clinical medicine. Medical science, the direct application of basic science to man, is now the immediate and direct responsibility not only of academic clinical departments, but of the entire medical profession. The implications for medical education are also obvious. The curriculum will have to shift from emphasis on the accumulation and memorization of an enormous number of facts to a better understanding of the mechanisms involved in the development and behavior of normal tissues and their disease states. To an increasing extent, research (or investigation, if you prefer that term) will have to play an important part in the preparation of the physician, whether he intends to enter academic medicine or practice as a generalist or a specialist.

If modern medicine has finally become a scientific discipline—that is to say, that its foundations are rooted in science—then its language to an increasing degree will be that of the basic bio-medical sciences. Critical evaluation of the scientific literature and increasing communication with bio-medical investigators will become the only effective protection against professional obsolescence. If the well-prepared physician of the future must be educated in the science of medicine, then medical education becomes primarily a preceptor laboratory or investigational experience where critical intellectual habits acquired in the first two years of medical school will become the tools for the thoughtful practice of medicine, and the life-long pursuit of a better understanding of human disease.

I have previously stated that this preparation is by itself insufficient—that the budding physician must deal with the whole man—his wants and fears, as well as his emotional, mental, social, and economic problems.

Hospitals: now the 'centers of patient care'

There is no doubt that the increasingly knowledgeable public wants better care, are prepared to pay for it, and will travel reasonable distances to obtain it. Fewer and fewer people are seen at home; more and more are examined in the office, at the clinic, and in the emergency ward and out-patient clinics of our hospitals. The hospital is increasingly becoming the center of patient care. In the past quarter of a century, the annual rate of hospital admissions per 1,000 population has more than doubled. The Coggeshall Report, "Planning for Medical Progress Through Education," prepared for the Association of American Medical Colleges, lays great emphasis on the increasing institutionalization of health care. "Greater reliance on institutions as centers of health care by physicians has also grown out of their increasing recognition of the need to have access to equipment and technicians that can be provided economically only on an institutional basis." It is evident that the team approach to total health care is a development that will grow with increasing rapidity—and it is equally clear that the most obvious way to meet the nation's need...
for physicians is to use them in the most efficient way. The attending physician will have to begin to prepare himself for the role of coordinator and director of a team which includes specialists as well as allied health personnel. This is not the time nor the place to discuss the expanding role of the government (local, state, and federal) in the health field. What is certain is that government (with the consent of a very large part of the public) considers that it has a profound responsibility for the protection of the health of our nation. The medical profession now has a great opportunity to consider this vast problem in a thoughtful, objective, and constructive manner.

Other great changes in our social and economic situation will profoundly affect the medicine of the future. As most of the "killer diseases" are conquered, the older age group will undoubtedly continue to increase with all of the obvious implications for geriatrics, and the degenerative diseases, the increasing need for nursing homes, and the attendant overcrowding of all of our hospital facilities.

What can one predict when the work week is eventually reduced to 20 hours as a result of automation and the population explosion? The problem of finding avocations for millions of our citizens will become acute, and the medical profession in self-defense alone will be forced to give this problem very serious thought. Many of our citizens are now afflicted with leisure time, boredom, and the attendant emotional and psychological problems that take up the physician's time. Every physician of the future will need extensive psychiatric training.

'The physician no longer can master all areas'

The trends are clear. Medical schools are increasingly confronted with the need not only to assume comprehensive responsibility for medical education—from the pre-medical student to the medical student, the intern, the resident, and finally to the practicing physician, but in addition to consider the changing role of the physician. To quote from the Cogshell Report: "It should be recognized that the physician can no longer master all areas of the basic biomedical sciences—he cannot even be acquainted with all of them. Nor can he be competent in all technologies associated with his own specialty. He must be increasingly dependent upon personnel trained in related fields. The education of a physician must more and more include management and problem solving rather than encyclopedic capacity. No longer is the individual physician with his personal armamentarium of knowledge and tools the patient's sole resource. The physician must now assume the role of team leader having the broad familiarity and competence to marshal the appropriate expertise and resources beyond his individual skill. This ability to use technical assistance and to work cooperatively in a team should be the essence of professionalism. Basic principles required for intelligent decision-making should compose the curriculum, with emphasis placed on problem-solving and the use of human and technological resources.

"The concept of medicine as a single discipline concerned with only the restoration of individual health from the diseased state should be replaced by the concept of the 'health professions' working in concert to maintain and increase the health of society as well as the individual. The physician with his colleagues in public health, nursing, pharmacy, dentistry, and related professions can no longer represent the spectrum of service for promotion of health. They must collaborate with social scientists, economists, community planners, anthropologists, social psychologists, engineers, and a host of other disciplines to provide for society the entire range of available preventive and therapeutic measures."

It is apparent from all this that medical educators must think in terms of the educational background needed by these future physicians who (1) will be involved, in varying degree, in the team approach to health care and to an increasing degree will be associated with institutions and groups providing special skills and technologies for superb patient care; (2) who can work effectively with public and governmental agencies involved in health care; (3) who can treat the emotional, psychological, and physical ailments of their patients with understanding and wisdom; and (4) who possess sufficient scientific background to evaluate and utilize a significant portion of the flood of biomedical information which is only of academic value unless it is promptly applied to man.

It is obvious that beyond the M.D. degree better solutions are required for educational programs during the internship and residency years. The need for continuous learning during the professional lifetime of the practitioner of medicine is so obvious that the point need not be belabored. The problem is to provide the leadership, and to make available the opportunities, the facilities, and the teachers for an experience that will be worthwhile and stimulating for physicians. It seems to me that, metaphorically speaking, the medical school must now assume responsibility for its students "from the cradle to the grave."

To the prophets of "doom and gloom" I would assert that the future of the physician is a glorious one. He is and will continue to be the key man in the health care of the nation. His profession has truly become a great intellectual one—encompassing all of the social, physical, and biological disciplines of our great universities. The flood of scientific knowledge has put into his hands weapons of undreamed of power to attack, halt, and frequently eradicate disease. The physician is the pivotal figure required for the prompt and perceptive utilization and application of bio-medical information for the benefit of mankind. Only the physician who knows how to care for patients can do this. Our medical schools will never concentrate exclusively on research even though some think this is becoming the case. It is comforting and challenging to realize that all of the activities of our medical schools—education, research, and its application to man, superb patient care, and concern for the health of the nation—are directed toward one goal: the welfare of mankind. Does the medical profession find any fault in this? Are there any real divisions between us? I think not!
Luther L. Terry: The New Vice President
For Medical Affairs

If it seemed that Pennsylvania had a new public relations man down in Washington, there was good reason. For there was the President of the United States announcing, during a speech at the National Institutes of Health one day last August, that Dr. Luther L. Terry, Surgeon General of the U.S. Public Health Service, was resigning to become vice president for medical affairs at the University of Pennsylvania.

And the next morning, the New York Times let the world know, from a prominent spot on the front page, that Pennsylvania had a new vice president. It was the sort of thing the University's News Bureau dreams about, but never expects.

Neither Dr. Terry nor the News Bureau, it should be added, knew that President Johnson was going to announce the resignation. Until that time, very few people, in fact, knew that Dr. Terry was to be Dr. I. S. Ravdin's successor in the University's top medical post. Dr. Ravdin's impending retirement as vice president (he will continue as professor of surgery and as executive vice chairman of the Medical Development Campaign), had been announced some months ago and there was much speculation on campus about his successor.

The right man was found in Washington, where he had been surgeon general since January, 1961. In that position, he ran the largest public-health program in the world, with a budget of more than a billion dollars a year and almost 20,000 employees. He was also the man who released, almost two years ago, the controversial report on smoking and health prepared by his advisory committee and which said in plain language that there is a direct link between smoking and lung cancer.

Luther Terry was no stranger to government service when he became Surgeon General: his first assignment, in the Public Health Service had come in 1942 in Baltimore. Nor is he a stranger to academic medicine: he was associated with the Johns Hopkins medical school for eight years.

Dr. Terry was born in Red Level, Ala., in 1911 and named for a respected, local physician named Luther Leonidas Hill, whose son is the distinguished Alabama U.S. Senator, Lister Hill. He graduated from Birmingham Southern College in 1931 and received his M.D. from Tulane in 1935. He interned in Birmingham, then went to Cleveland, Ohio, where he was an assistant resident in medicine at University Hospital, and a resident in medicine, intern in pathology, and assistant admitting officer at City Hospital.

After teaching at Washington University (St. Louis) and the University of Texas, he took the PHS post in Baltimore. There he rose to become head of the medical service at the Baltimore PHS hospital, proving himself to be what Time called "a first-class bedside doctor." During this time, he taught medicine at Johns Hopkins and conducted extensive research on hypertension.

In 1950, he became chief of general medicine and experimental therapeutics at the National Heart Institute, later becoming assistant director of the National Heart Institutes. Time reported later that he "took the No. 2 administrative post at NIH only on condition that he could still see patients and teach at Johns Hopkins.

He was still making rounds when President Kennedy tapped him for the Surgeon General's position."

Dr. Terry has said he took the Pennsylvania post because it is one of the leading universities in the nation and because "we're on the brink of exciting developments in medical education, and the University...can't help being one of the leaders in these developments."

Dr. Terry, who began his new job on October 1, is now getting acquainted with his new job and his responsibilities for the Schools of Medicine, Dental Medicine, Veterinary Medicine, Nursing, and Allied Medical Professions and University and Graduate Hospitals.

His predecessor, Dr. Ravdin, told the press on the day of President Johnson's announcement: "Dr. Terry is...a distinguished administrator and a distinguished physician. I am delighted that he is coming here. Nothing could be of greater value to the University."
ALUMNI Who Became Leaders in Their Profession

A portfolio of 14 graduates of the School of Medicine—practitioners, educators, investigators—who have brought distinction to themselves and their University.

RUSK: Authority On Rehabilitation

The physician whom CBS Television dubbed "Man With a Mission" when it produced a special program in 1964 was none other than Howard A. Rusk ('25 M), professor and chairman of physical medicine and rehabilitation, New York University-Bellevue Medical Center, and director of its famous Institute of Physical Medicine and Rehabilitation. CBS's title is appropriate since, during wartime service, Dr. Rusk realized a void existed in the nation's medical program and pioneered the organization of a convalescent services program for the Army Air Forces.

It all began when, as a colonel in the medical corps, he was assigned to the areas of convalescence and rehabilitation. Dr. Rusk founded the training program, developed the service's rehabilitation procedure.

MAYO: Third Generation

When Charles W. Mayo retired on October 1, 1963, he stepped from a post as senior surgeon of the Mayo Clinic, professor of surgery at the Mayo Foundation, member of its board of governors—and as a representative of the third generation of Mayos to practice in the town of Rochester, Minn. His famous surgeon father, Dr. Charles H. Mayo, was a founder of the Mayo Clinic; his grandfather was a frontier doctor during the 1800's.

Dr. Mayo, a graduate of Princeton (1921), received his medical degree from Pennsylvania in 1926. In 1927 he returned to Rochester as a surgical fellow of the Foundation and in 1931 was granted a master's in surgery from the University of Minnesota (with which the Foundation is associated). In 1931 Dr. Mayo began a 32-year career with the internationally known...
dure, and emphasized individualized treatment. For this he was awarded a Distinguished Service Medal in 1946.

Since that time Dr. Rusk has occupied many important positions in his specialty, is also an associate editor of The New York Times. As an international authority on rehabilitation, Dr. Rusk has studied and assisted in setting up similar programs in Great Britain and other nations. He is a member of numerous professional associations, and has been the recipient of many awards, including the 1952 Lasker Award of the American Public Health Association. He is consultant in rehabilitation to the United Nations, New York City Department of Hospitals, and the Veterans Administration. Since 1962 he has been a trustee of the University. He also serves as chairman of the Health Resources Advisory Committee of the Selective Service System.

Clinic, one which was concluded when he reached the mandatory retirement age of 65.

Charles W. Mayo has maintained a special interest in surgery of the colon and small intestine, and has contributed about 375 papers to the literature of his field as well as writings on other subjects. In 1958 President Eisenhower appointed him an alternate delegate to the Eighth General Assembly of the United Nations; he also served as chief delegate to the Eighth World Assembly in Mexico (1959). In 1956 he was a delegate to the World Health Organization meeting.

Dr. Mayo was president of the American Association for the United Nations (1954-1957) and a member of the Policy Committee for the National Citizens’ Committee for WHO (vice president, 1958). He has also served as a trustee of the University (1955-1961), a trustee of Carleton College, and is a former chairman of the board of regents, University of Minnesota.

Continued
COMROE: World-Famous Physiologist

"Anywhere from California to Azerbaijan, Dr. Julius H. Comroe, Jr., could probably be identified as one of the world's leading authorities on cardiopulmonary physiology and function," says Modern Medicine (June 22, 1964). A popular lecturer and writer, Dr. Comroe has been director of the famed Cardiovascular Research Institute of the University of California at San Francisco for the past eight years. During his 1960-1961 term as president of the American Physiological Society he developed a course in physiology for practicing physicians, and in 1963 he founded and edited for that society a monthly publication called *Physiology for Physicians*. He has twice been chairman of the Annual Teaching Institute of the Association of American Medical Colleges.

A 1930 Phi Beta Kappa and honors graduate of the University, Dr. Comroe came from a Pennsylvania family (father, '03 M, and brother, '29 M) and completed medical school here (1934). He interned at the University Hospital and joined its pharmacology staff in 1936. From 1946 to 1957 he served as professor of physiology and pharmacology in the Graduate School of Medicine.

WILBUR: Clinical Medicine

Pennsylvania alumni are often sons of famous men who go on to become well-known in their own right. One good example is Dwight L. Wilbur, son of former Stanford University president and chancellor Ray Lyman Wilbur who also served as Secretary of the Interior, 1929-1933. Dr. Wilbur came to Pennsylvania from Stanford (1928) for medical school (1928), went on to the Mayo Foundation as a medical fellow (1929-1931), and received a master's degree in medicine from the University of Minnesota (1933). He was first connected with the
Mayo Foundation and later returned to Stanford where he became professor of clinical medicine in 1949.

Author of numerous articles on the kidney, the gastrointestinal tract, and nutrition, Dr. Wilbur is also chief of the medical service at French Hospital. In 1955 he became president of the California Academy of Medicine. He has served as associate editor of Modern Medicine and as a member of the medical advisory board of Postgraduate Medicine. He is also a trustee of the Mayo Foundation and the American Medical Association, and a commissioner on the Joint Commissions on Accreditation of Hospitals.

TED STERHINSKY

KETY: Famed for Studies in Psychiatry

Seymour S. Kety is an alumnus of both the College ('36) and the University's School of Medicine ('40). He is known for his research in the fields of cerebral circulation and biological psychiatry, and for at least 146 articles on his work. Dr. Kety joined the pharmacology department in 1943, was appointed professor of clinical physiology (Graduate School of Medicine) in 1948, and in 1951 became the first Scientific Director of the National Institute of Mental Health and the National Institute of Neurological Diseases and Blindness. In order to resume active research he left his post in 1956 to become Chief of the Laboratory of Clinical Science in the National Institute of Mental Health. In 1961-1962 he was Henry Phipps Professor and Chairman of Psychiatry at Johns Hopkins, but then returned to the Laboratory.

Dr. Kety is active in several professional organizations, is a member of the National Academy of Sciences, editor of the Journal of Psychiatric Research, a board member of the Foundation for Advanced Education in the Sciences, and former chairman of the Biomedical Science Advisory Committee, National Aeronautics and Space Administration.

Continued
LANDIS: Harvard's Chief Physiologist

Eugene Markley Landis is known best for his contributions to the physiology of the circulatory system, particularly the capillary circulation. His fundamental investigations, set out in 125 publications, have contributed to a better understanding of certain clinical conditions including kidney disease, hypertension, edema, and peripheral vascular disease.

Recipient of four degrees from Pennsylvania ('22 C, '24 G, '26 M, '27 Gv), Dr. Landis also holds an honorary master of science from Yale (1958). While a medical student here he won the Bell Prize for the best piece of medical research done by a student--three years in a row. In 1925-1927 he was a National Research Council Fellow, and held a Guggenhein Research Fellowship from 1929-1931.

During the years 1929-1939 Dr. Landis progressed from an assistant in zoology to an assistant professor in medicine at Pennsylvania. From 1939-1943 he was professor and head of the department of internal medicine at the University of Virginia. Since 1943 he has been George Higgenson Professor of Physiology and head of the department of physiology at Harvard Medical School. From 1949 to 1952 he was also chairman of the Division of Medical Sciences.

Dr. Landis is a Fellow of the American College of Physicians, of which he was a Phillips Medalist in 1956. Among other associations, he is a member of the National Academy of Sciences and past president of the American Society of Clinical Investigation. In 1953 he was president of the American Physiological Society and since 1953 he has been editor of Circulation Research, a journal of the American Heart Association.

BROWN: Navy's Surgeon General

On February 15, 1965, Rear Admiral Robert B. Brown ('33, M, '41 GM), Medical Corps, U. S. Navy, was appointed to the highest medical post in the Department of the Navy: Surgeon General and Chief of the Bureau of Medicine and Surgery. Prior to his appointment, Admiral Brown served as deputy and assistant chief of the Bureau of Medicine and Surgery, and Commander of the National Naval Medical Center, Bethesda, Md.

The admiral began his naval career in 1942. He saw active duty in the South Pacific in World War II, receiving the Asiatic-Pacific Campaign Medal with one star, the American Campaign Medal, the World War II Victory Medal, and the National Defense Medal. He was later in the Korean area of hostilities and was awarded the
Bronze Star Medal and the Korean Service Medal. He also holds the Korean Presidential Unit Citation and the UN Service Medal.

His medical specialty is surgery. Following his internship at University Hospital, Admiral Brown was a surgical fellow in thyroid and neurosurgery and a fellow in general surgery. In 1951 he became chief of surgery at the Naval Hospital in Bethesda, and was named commanding officer there in 1960. He was promoted to rear admiral in 1961 and assumed command of the National Naval Medical Center in 1962.

Admiral Brown has served as clinical professor of surgery at Georgetown University's medical school, as Navy member of the Surgery Study Section of the National Institutes of Health, and as Navy representative to the Board of Governors, Graduate Training Committee of the American College of Surgeons.

Ivan Massar-Black Star

MURPHY: UCLA Chancellor

When Franklin D. Murphy was chancellor of the University of Kansas, he said in 1954: "We must make certain that students do not lose enthusiasm for self-learning while wandering about in a maze of rules and regulations." The man who thus foresaw today's major educational problem is now chancellor of one of the nation's largest institutions, the University of California at Los Angeles.

A graduate of the University's School of Medicine ('41 M), Dr. Murphy stayed on at Pennsylvania for his internship and residency. Following his discharge from the Army in 1946, he returned to Kansas City where two years later he was named dean of KU's medical school (of which his father was a founding faculty member). In this post he won national attention with his program dealing with the physician shortage in rural Kansas areas. From 1951-1960 he was chancellor of KU, and then went to UCLA.

Dr. Murphy has served as chairman of the executive committee of the Commission on Higher Education in the American Republics, as a trustee of the Menninger Foundation, and as chairman of the U.S. Advisory Commission on Education Exchange of the State Department. He is a member of the Carnegie Foundation for the Advancement of Teaching, a member of the National Advisory Council to the Peace Corps, and president of the Kress Foundation.

Continued
APPEL: AMA President

This past summer James Z. Appel ('32 M) became the twenty-third alumnus of the University's School of Medicine to take office as president of the American Medical Association. It also marked the twentieth year since he first attended an AMA function (in 1945 he was state delegate). Subsequently Dr. Appel has been an AMA trustee and vice chairman of its Board.

Dr. Appel is a surgeon and general practitioner in Lancaster, where his father practiced before him. He was a pre-medical student at Franklin and Marshall and, following his medical education and internship, returned to join his father. Since 1956 he has served as president of the medical staff of Lancaster General Hospital.

Dr. Appel's been active in local, state, and county medical affairs. Concerned with the possibility of a physician shortage, he has been instrumental in building the Pennsylvania Medical Society's loan and scholarship program for medical students. He participated in the U.S. Public Health Service's survey on nurses, in 1963 was named a delegate to the World Health Organization, and has been chairman of the Joint Commission on Accreditation of Hospitals.

SCHMIDT: Famed Pharmacologist

Carl F. Schmidt ('18 M) is a physician who spent most of his academic career and nearly 40 years of his life at Pennsylvania. When he reached retirement in 1959, he became emeritus professor of pharmacology after having served as professor (1931-1959) and director of that department (1956-1959) at the University.

Known for research in such areas as respiration, coronary circulation, and aviation physiology, Dr. Schmidt is perhaps most widely known for his original work in the discovery of ephedrine (a basic drug still in use in the treatment of hay fever, asthma, and upper respiratory congestions). In 1948 he was named to the board of directors of the American Bureau for Medical Aid to China, in 1954 he became secretary of the Interna-
tional Council of Pharmacologists, and in 1957 editor of *Circulation Research*, a bimonthly journal of the American Heart Association. The International Union of Physiological Sciences (an affiliate of the World Health Organization) sent him to South America in 1958 to discuss medical research and education problems.

In 1959 Dr. Schmidt assumed a key post as research director of the aviation medical acceleration laboratory, U.S.N. Air Development Center, Johnsville (where he is shown before the human centrifuge). His laboratory, where U.S. astronauts have received basic training, is heavily involved in America's man-in-space program.

The recipient of the rarely-conferred Schmiedeberg Plakette of the German Pharmacological Society in 1963, he received an honorary degree from Charles University of Prague (1964), the second American to be honored in the institution's 615-year history.

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**MIDDLETON: Dean, VA Director**

A Veterans Administration official once said of the former chief medical director of the VA (1955-1963), William Shainline Middleton ('11 M): "As a practicing physician, as a historian of medicine, as a dean of a famous medical school, he carried a rich cargo of knowledge and skills to his job as leader of the largest hospital system in the world."

Dr. Middleton's medical career began some 43 years before he went to the VA. Following his medical training he joined the staff of the University of Wisconsin Medical School. His entire academic career (1912-1955) was spent there where, in 1938, he was named professor of medicine and, in 1939, dean of the medical school—a post he held for 20 years. Here he stands before a medical library named for him, now under construction at Wisconsin.

During World War I he served with the British and American Expeditionary Forces in France and in 1942 became Chief Consultant in Medicine for the European Theatre of Operations. In 1945 he received a Legion of Merit and was later elected to Fellowship in the Royal Society of Medicine and the Royal College of Physicians.

In his field, Dr. Middleton is known as a clinical internist and a teacher. He has served as visiting professor at four universities; five honorary degrees have been conferred upon him. A prolific writer, he has published over 250 papers relating to disorders of the blood and blood-forming organs, lung and cardio-vascular systems, and to the history of medicine.

Dr. Middleton is a past president of the American College of Physicians, the Central Society for Clinical Research, and the American Association of the History of Medicine.

Continued
ASKEY: County, State, National

He earned his B.S. at Allegheny College (1917) and his M.D. at Pennsylvania (1921), and later served his internship and residency in Philadelphia before beginning a practice in Los Angeles (1923).

Since then, E. (for Edwin) Vincent Askey has held several prominent medical positions and become a distinguished community figure. From 1937-1943 he was a member of the Los Angeles Board of Education, of which he was president in 1941. In 1955 he became speaker of the house of delegates of the American Medical Association and in 1960 was elected the AMA's 114th president.

The 22nd alumnus of the University's School of Medicine to serve in the top post of organized medicine since its beginning in 1847, Dr. Askey followed in the footsteps of the first American Medical Association president, Dr. Nathaniel Chapman of Pennsylvania's Class of 1801. Upon his election to the presidency it was said that Dr. Askey was "probably the only practicing physician who has ever held major offices in his county, state, and national medical associations." Dr. E. Vincent Askey had previously been president of the California Medical Association as well as president of the Los Angeles County Medical Association.

KERN: Specialist In Clinical Medicine

Richard A. Kern's specialty has been clinical medicine. A graduate of the College ('10) and the School of Medicine ('14), Dr. Kern was on the staff of the University Hospital until 1946. He served his internship and residency here and was named associate in 1928, assistant professor in 1938, and professor of clinical medicine (a post he held until 1946) in 1934. From 1934-1946 he was visiting professor of clinical medicine at the Graduate School of Medicine and chief of the medical outpatient department and allergy section of the Hospital.
In 1944 he was chief of medicine at the U.S. Naval Hospital in Philadelphia and a consultant for the entire South Pacific area.

From 1946-1956 Dr. Kern was professor and head of the medical department at Temple University Hospital. In 1951 he became editor of the American Journal of Medical Sciences and in 1952 was president of the College of Physicians. From 1955-1958 he was president of the Board of Health of Lower Merion Township and in 1960 became vice president of the Philadelphia Board of Health.

Dr. Kern was named professor emeritus in 1956 and a trustee of Temple University in 1958. He is also president of the University's medical class of 1914.

PRIESTLY:
Family Tradition

The fifth member of the Priestley family to come through the University's School of Medicine (his grandfather, father, brother, and great-uncle preceded him), James T. Priestley ('23 C, '26 M) was graduated with honors and interned at the University Hospital before taking a fellowship in surgery at the Mayo Foundation in 1928.

Named to the staff of the Mayo Clinic in 1933, he became head of a section of surgery the following year, a post he still retains. Following a series of promotions he was named professor in 1948 and appointed to the Board of Governors of the Clinic in 1947. He was vice chairman from 1953-1957 and chairman from 1956-1964. In 1961 he was appointed to the Board of Members of the Mayo Association.

Dr. Priestley is especially known for his contributions to the surgery of the pancreas and adrenal glands and has long been active in teaching and research. In 1958 he was elected president of the Western Surgical Association and he has also been president of the Central Surgical Association.

In 1933 he was a Fellow of the American College of Surgeons, in 1964 he became its president. Dr. Priestley is also chairman of the University's National Medical Council.
"Perhaps this Medical institution, the first of its kind in America; though small in its beginning, may receive a constant increase of strength, and annually exert new vigor. It may collect a number of young persons, of more than ordinary abilities; and so improve their knowledge as to spread its reputation to distant parts. By sending these abroad duly qualified, or by exciting an emulation amongst men of parts and literature, it may give birth to other useful institutions of a similar nature, or occasional rise, by its example, to numerous societies of different kinds, calculated to spread the light of knowledge through the whole American continent, wherever inhabited."

—Dr. John Morgan—founder of the University of Pennsylvania School of Medicine and first medical professor in this country.