



PIONEERING MEDICINE

The Evolution of NYU Langone Medical Center



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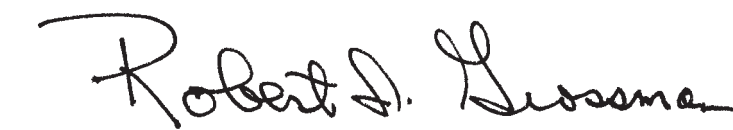
“We leave traces of ourselves wherever we go, on whatever we touch.”

That wonderful observation, by Dr. Lewis Thomas—a remarkable teacher, scientist, and author who was the 11th dean of our School of Medicine—gives us an opportunity to reflect on the countless individuals whose passion and dedication have helped make NYU Langone Medical Center what it is today.

Since NYU School of Medicine was officially founded in 1841, our physicians and researchers have made discoveries that have revolutionized the practice of medicine. They have set new standards for the diagnosis and treatment of diseases and have continuously pushed the boundaries of knowledge and science. And they have shown an unwavering commitment to training future generations of physicians, many of whom went on to make groundbreaking discoveries and bring medical advances to patients all over the globe.

Pioneering Medicine ighlights just some of the great number of contributions that our doctors, scientists, and alumni have made throughout history.

Today, NYU Langone Medical Center’s physicians and researchers are committed to building upon this outstanding legacy of discovery and service. As we set out to advance medical education, scientific research, and patient care, we look to these illustrious pioneers as a source of inspiration, gratitude, and pride.



Robert I. Grossman, M.D.
Saul J. Farber Dean and Chief Executive Officer



Kenneth G. Langone
Chairman, Board of Trustees

Lectures By Professors

F
Bott, Paine, Beever, Pattison

Bedford

FOUNDERS | Laying a Solid Foundation for a Brilliant Future

During

D
Session of 1843 & 44

of
NEW YORK UNIVERSITY

Corrns. --- "

Corrupted Nail --- 3

Whitlow or Paronychia --- 3

Frost Bites --- "

Chilblains --- 4

Montaneous Mortification 5

Amputation of the Toes 8

" " " Great Toe 9

Supernumerary Toes, 10

The Foot --- "

Relation (Anatomy) of
the Dorsum of the Foot, "

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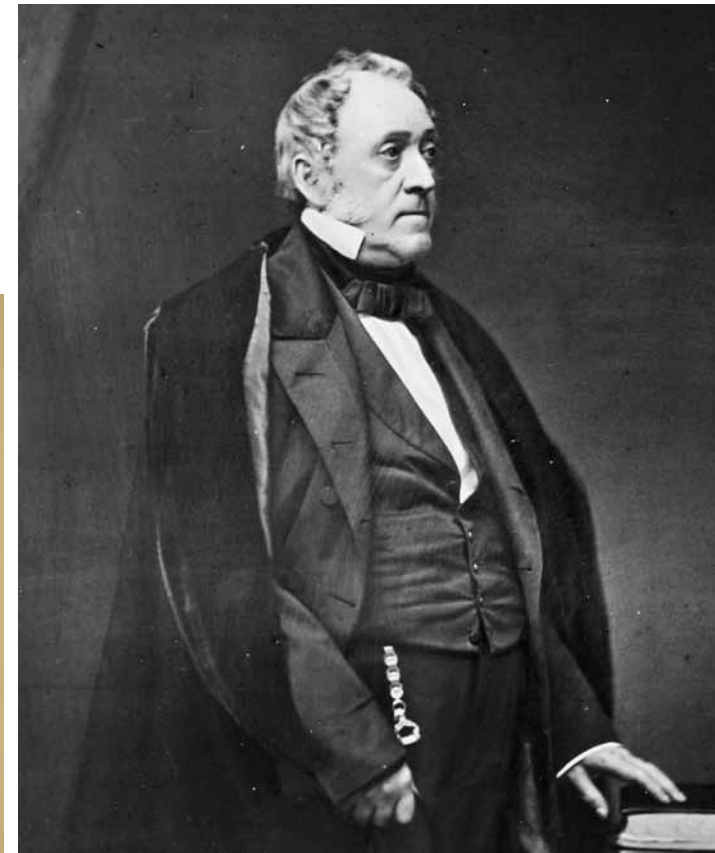
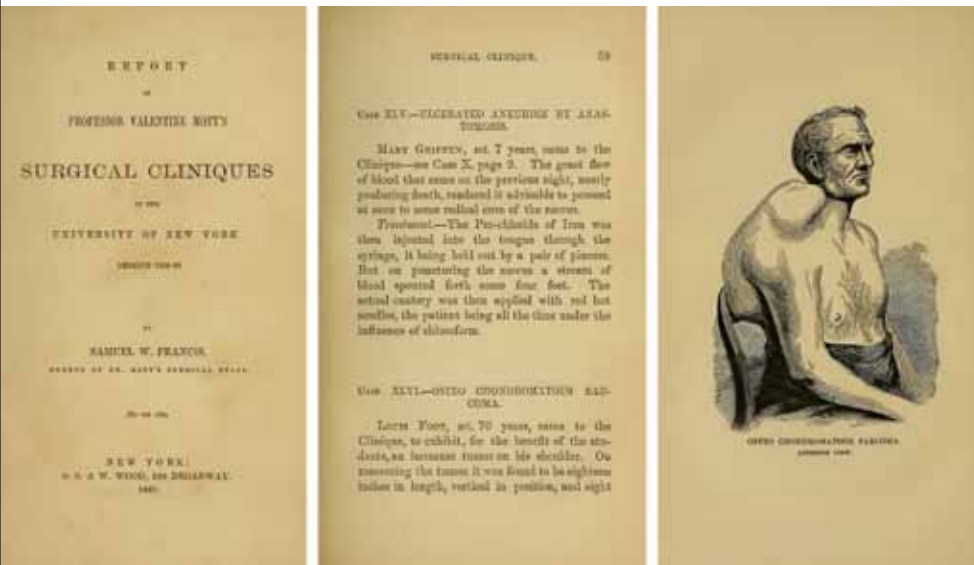
Wound of the Femoral Artery

FOUNDER

(noun) “one who sets or grounds on something solid, who takes the first steps in building”

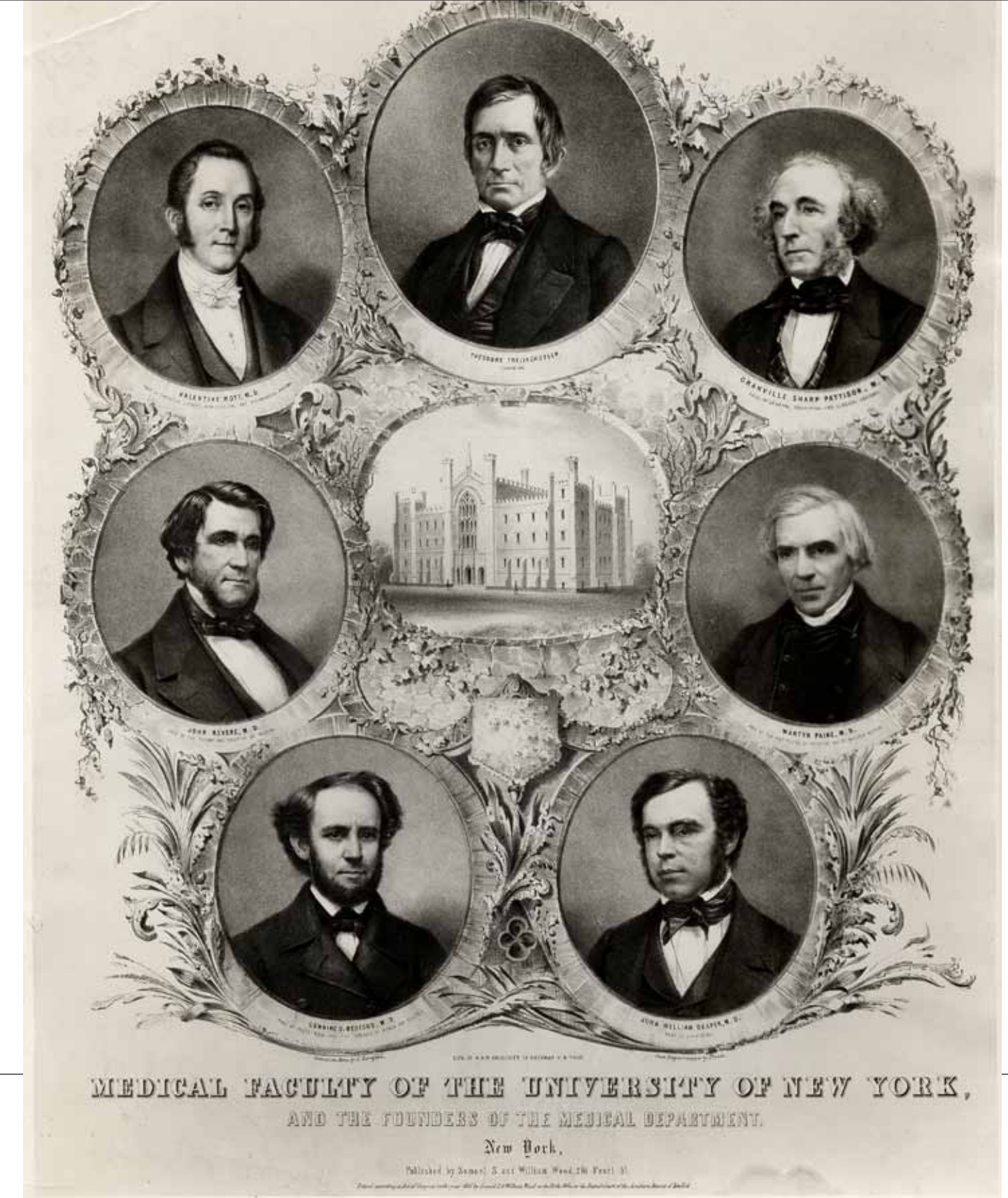
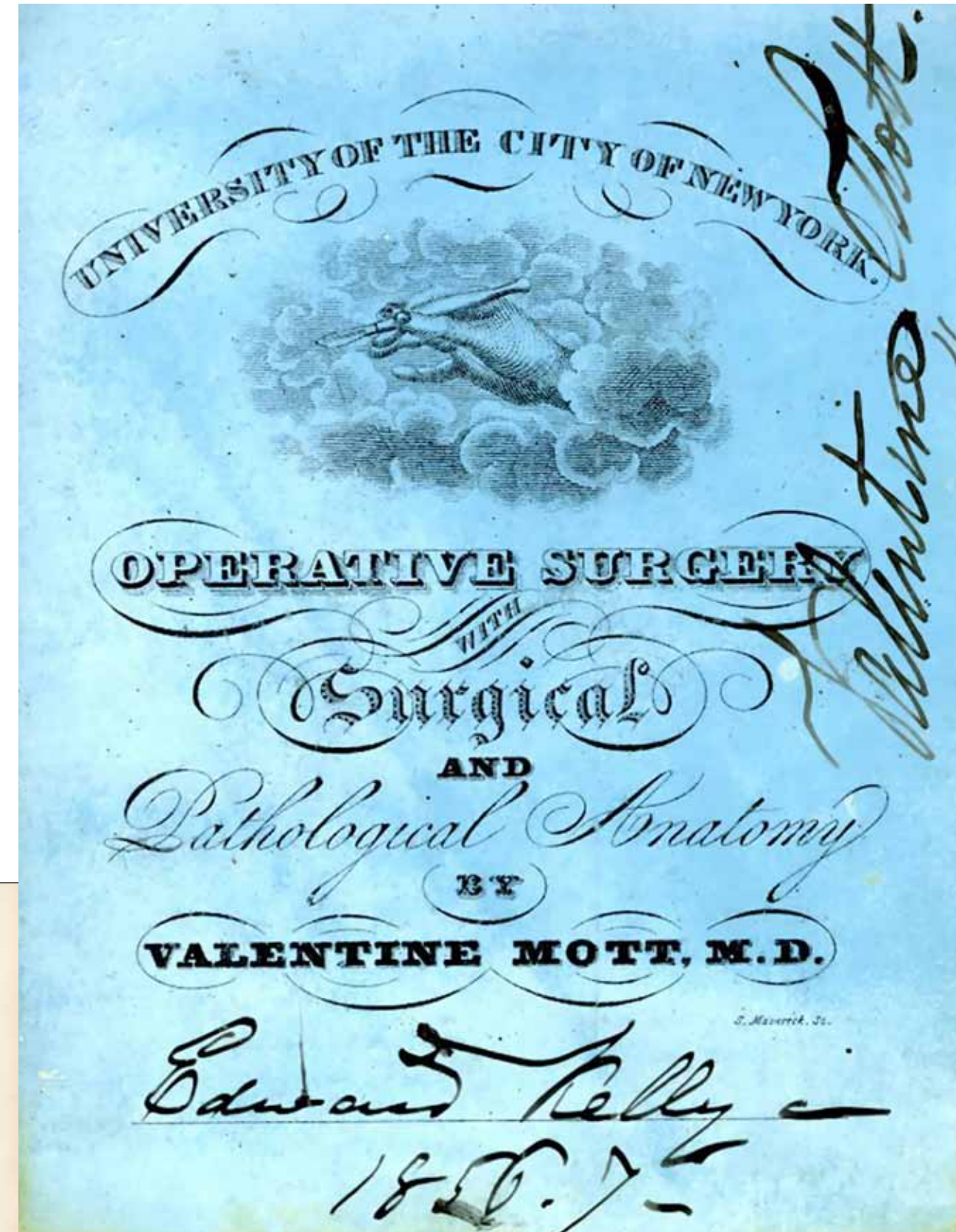
ON THE PREVIOUS PAGE: Manuscript notes and transcriptions of lectures given by Professors Mott, Paine, Revere, Pattison and Bedford during the medical school's 1843–44 session.

In 1841, six eminent physicians and scientists opened a medical college under the aegis of the University of New York, one of the nation's first progressive universities dedicated to providing widely accessible higher education. Valentine Mott, John William Draper, Granville S. Pattison, Gunning S. Bedford, John Revere, and Martyn Paine made major contributions to the diagnosis and treatment of disease, as well as to medical research and education, defining the three fundamental aspects of NYU Langone Medical Center's mission today: to serve, to teach, to discover.



The most famous American surgeon of his day, Valentine Mott began teaching surgery at Columbia College at the age of 26 and in 1818 performed the first successful ligation of the innominate artery, a procedure considered the most formidable operation of that day. He left Columbia to become one of the founding faculty of the University of New York's Medical Department in 1841. He was legendary for his knowledge and teaching of anatomy, and students and professors from all parts of the United States and abroad came to observe his work in the operating theater at Bellevue Hospital.

Mott initiated the "clinique" as a teaching method, bringing patients into the operating theater to present their ailments to the medical students, followed by a discussion of causes and demonstration of appropriate treatment. This emphasis on actual patients and treatment, in addition to theoretical study of texts and abstract anatomy, helped revolutionize the teaching of medicine. Mott also introduced the use of individual patient history charts at every hospital bedside, and his four-volume translation of *Velpeau's Operative Surgery* (1847) became the 19th-century surgeon's bible. In 1849, by unanimous vote, Mott was elected to the presidency of the New York Academy of Medicine.



OPPOSITE PAGE, FROM LEFT: Samuel W. Francis's Report of Professor Valentine Mott's Surgical Cliniques in the University of New York, Session 1859-60. Portrait of Valentine Mott, photographed by the Mathew Brady Studio, c.1860. Illustration from Mott's translation of *Velpeau's New Elements of Operative Surgery* (1847). THIS PAGE, FROM LEFT: Admission ticket to Mott's lecture series in 1856-57. The University chancellor and founding faculty of the Medical Department of the University of New York in 1841. Clockwise from top center: Chancellor Theodore Frelinghuysen, Granville Sharp Pattison, Martyn Paine, John William Draper, Gunning S. Bedford, John Revere, and Valentine Mott. The building at the center is the University of New York's Gothic marble home on the east side of Washington Square Park. It was designed by the architectural firm Town, Davis and Dakin, opened in 1835 and was built at an estimated cost of \$140,000 on land purchased for \$40,000.

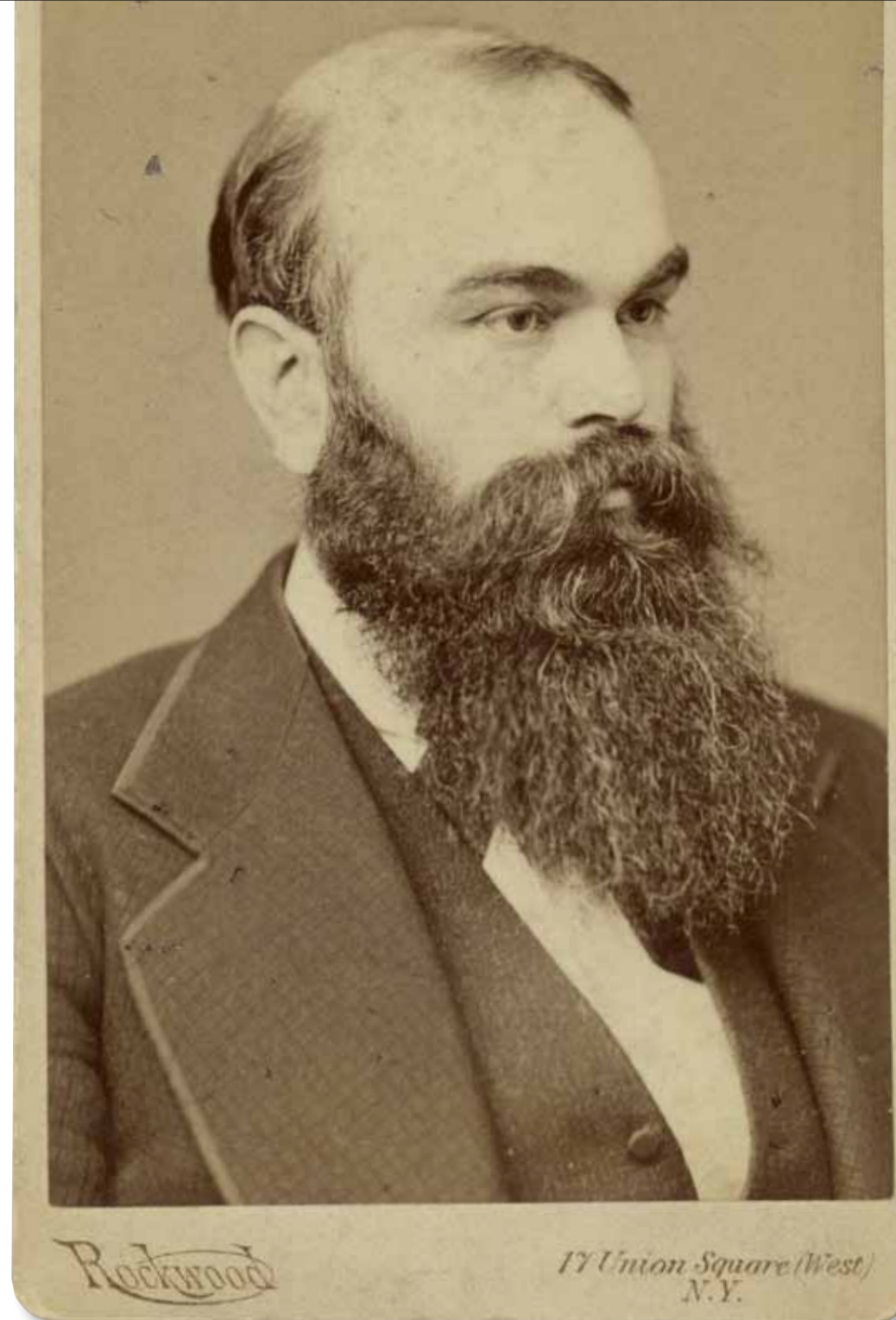
VALENTINE MOTT

Valentine Mott (1785-1865)
 Founder and Professor of Surgery,
 Medical Department,
 University of New York



Draper investigated the application of chemistry and physics to physiology, and as president of the Medical Faculty from 1850 to 1873, he spearheaded the legalization of dissection of the human body. His highly regarded textbook, *Human Physiology, Statical and Dynamical* (1856), argued for a strictly chemical basis of life, rather than following the dominant vital force theory, whose proponents claimed that living systems contained a nonchemical force that gave them life.

An early pioneer in photography, Draper produced, with Samuel F.B. Morse, the first daguerreotype portraits by an American. The two taught photography at the University of New York and counted Mathew Brady, the famed photojournalist, among their students. Draper made the first photograph of the moon to show its features (1840), and the first photographic plate of the solar spectrum (1843). He was also one of the first to take photographs of specimens under a microscope. Draper helped found the American Chemical Society in 1876 and served as its first president.



JOHN WILLIAM DRAPER

John William Draper
(1811-1882)
Founder, Professor
of Chemistry, and
President of the
Medical Faculty,
Medical Department,
University of New York

New-York Daily Times.

DISSECTION OF THE DEAD. DR. DRAPER'S LECTURE NEW-YORK UNIVERSITY. An Appeal to Legislators.

There was a large, intelligent, and fashionable audience gathered last evening in the lower lecture-room of the Fourteenth street Medical College to hear Dr. JOHN DRAPER'S introductory to the regular course of lectures which open to-day. Dr. DRAPER'S reputation stands so high that when he is announced for an introductory or a valedictory, the storm has not yet been brewed that will give him a meagre auditory. Punctually at eight o'clock, the gong beat and the faculty entered and took their seats on the platform. Dr. VALENTINE MOTT and Chancellor FERRIS lead the colum, Drs DRAPER and POST came next, and Drs. VAN BUREN and the newly-elected Professor SWEET succeeded. As soon as the applause that greeted their entrance had subsided, Dr. DRAPER without preface or introduction, arose, and in his usual calm, low, deliberate and distinct, but somewhat monotonous voice, delivered the following

APPEAL
To the State of New-York to Legalize the Dissection of the Dead.

Being an Introductory Lecture delivered at the opening of the session of the Medical Department of the University of New-York, by Dr. Draper, President of the Medical Faculty.

GENTLEMEN: It is related of a well-known minister of the Kirk of Scotland, who was invited to dine at the table of a lord, and requested to ask the accustomed grace on the various creature comforts so bountifully spread before them, that he took occasion not only to exercise himself at some length, as was usual in those times, but also in a suggestive way to observe, that the present blessings would be greatly enhanced if it should be put into the heart of his noble entertainer to send him a new coat; and still more particularly so if there should be added thereto a gown for his wife.



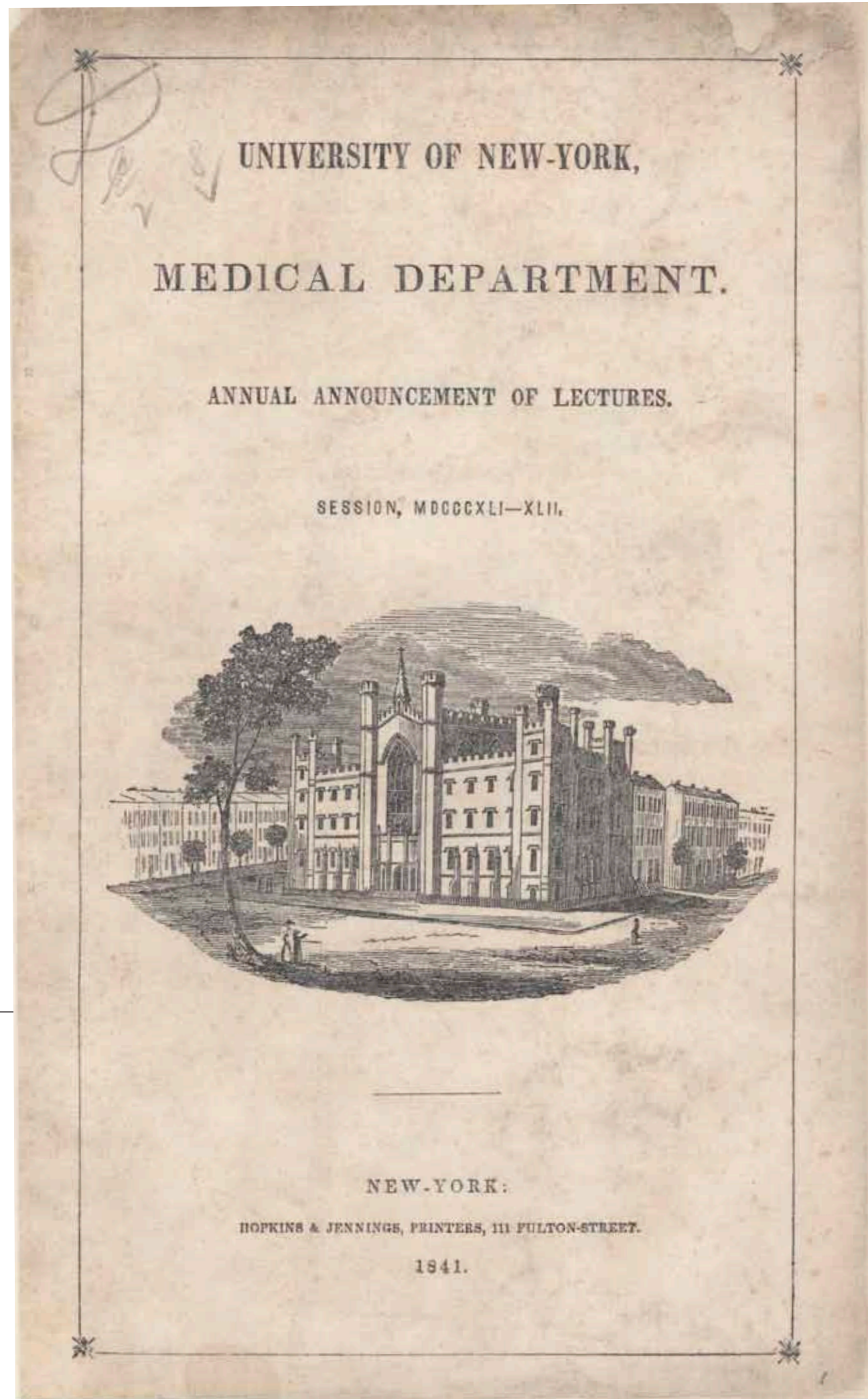
OPPOSITE PAGE, FROM LEFT: Draper's photograph of the moon in 1840 was the first to show its features. Portrait of William Draper. Admission ticket for Draper's lectures in 1858. THIS PAGE, FROM LEFT: *New-York Daily Times* report of Draper's lecture in support of the "Bone Bill." Draper's 1840 image of his sister is one of the first photographs of the human face. Title page of Draper's lecture in 1853, which was an appeal to the people of New York State to support passage of the "Bone Bill," then before the legislature.

John W. Draper

PETITION
OF THE
Medical Faculty of the University of the City of New-York,
TO THE
HONORABLE THE SENATE AND ASSEMBLY
OF THE
STATE OF NEW-YORK,
FOR
THE LEGALIZATION OF ANATOMY.
ALSO,
AN INTRODUCTORY LECTURE,
DELIVERED AT THE OPENING OF THE MEDICAL DEPARTMENT OF THE
UNIVERSITY, FOR SESSION 1853-4, AND ENTITLED
AN APPEAL
TO THE
PEOPLE OF THE STATE OF NEW-YORK,
TO
LEGALISE THE DISSECTION OF THE DEAD.

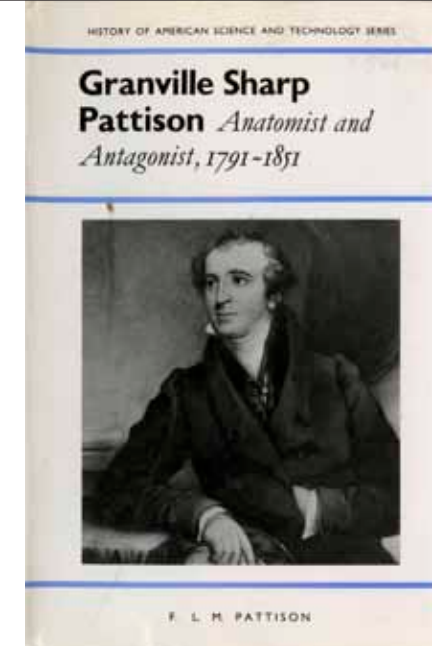
By JOHN W. DRAPER, M. D.
PRESIDENT OF THE MEDICAL FACULTY

NEW-YORK:
PUBLISHED BY THE FACULTY.
1853.



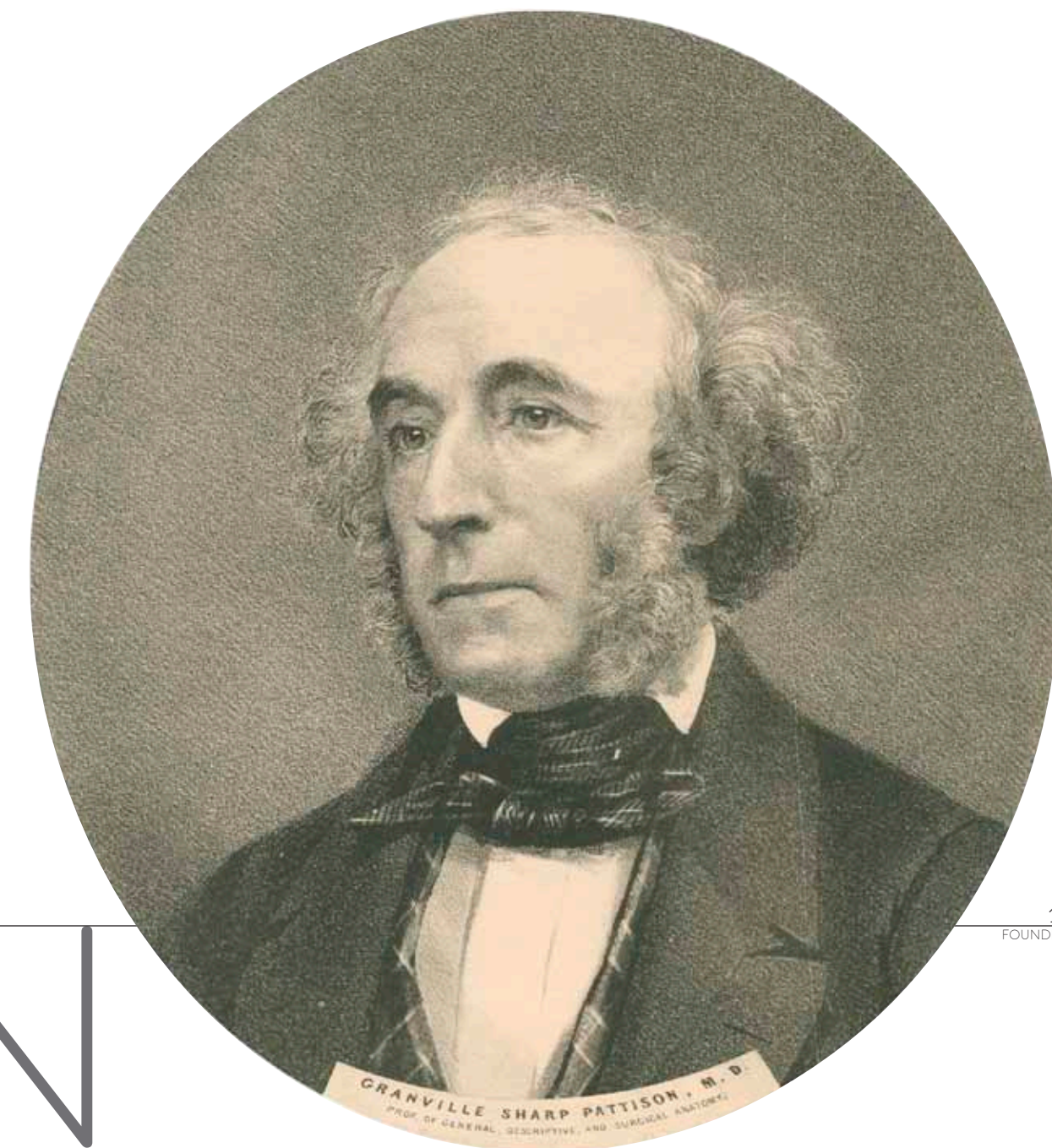
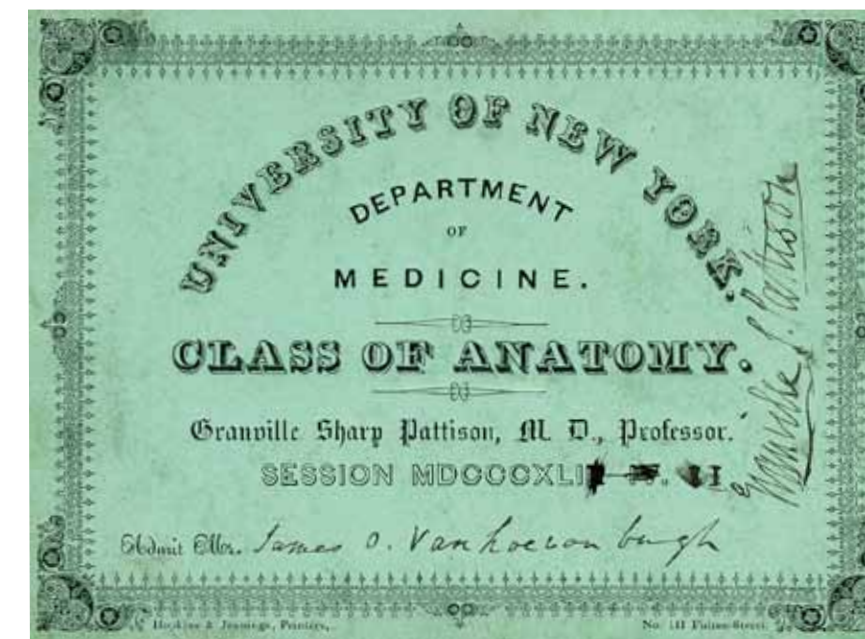
“...he (Pattison) almost made the dead body before him speak... His success in fortifying the student in the knowledge... to make free and bold incisions... made him one of the most successful lecturers that ever adorned a medical college.”

—STUDENT DESCRIBING PATTISON'S ANATOMY CLASS



A colorful and controversial man, Pattison was a brilliant lecturer and one of the greatest teachers of anatomy in the first half of the 19th century. He was indicted, but acquitted, for body-snatching as a 23-year-old instructor in anatomy in Glasgow, and lobbied the House of Commons in favor of the Anatomy Act, which passed in 1832, legalizing the use of cadavers for anatomical study in Britain. Before coming to New York, he practiced and taught in Glasgow (where he helped found the Glasgow Medical Society in 1814), London, Philadelphia, and Baltimore. While in Baltimore, he helped establish the Baltimore Infirmary, one of the first modern teaching hospitals in the United States, now known as the University of Maryland Medical Center.

In 1941 Pattison came to New York at Valentine Mott's invitation to join the inaugural faculty of the new Department of Medicine of the University of New York. His support for human dissection as an essential tool in the study of medicine, and for teaching in a clinical setting, significantly contributed to the medicine of his day.

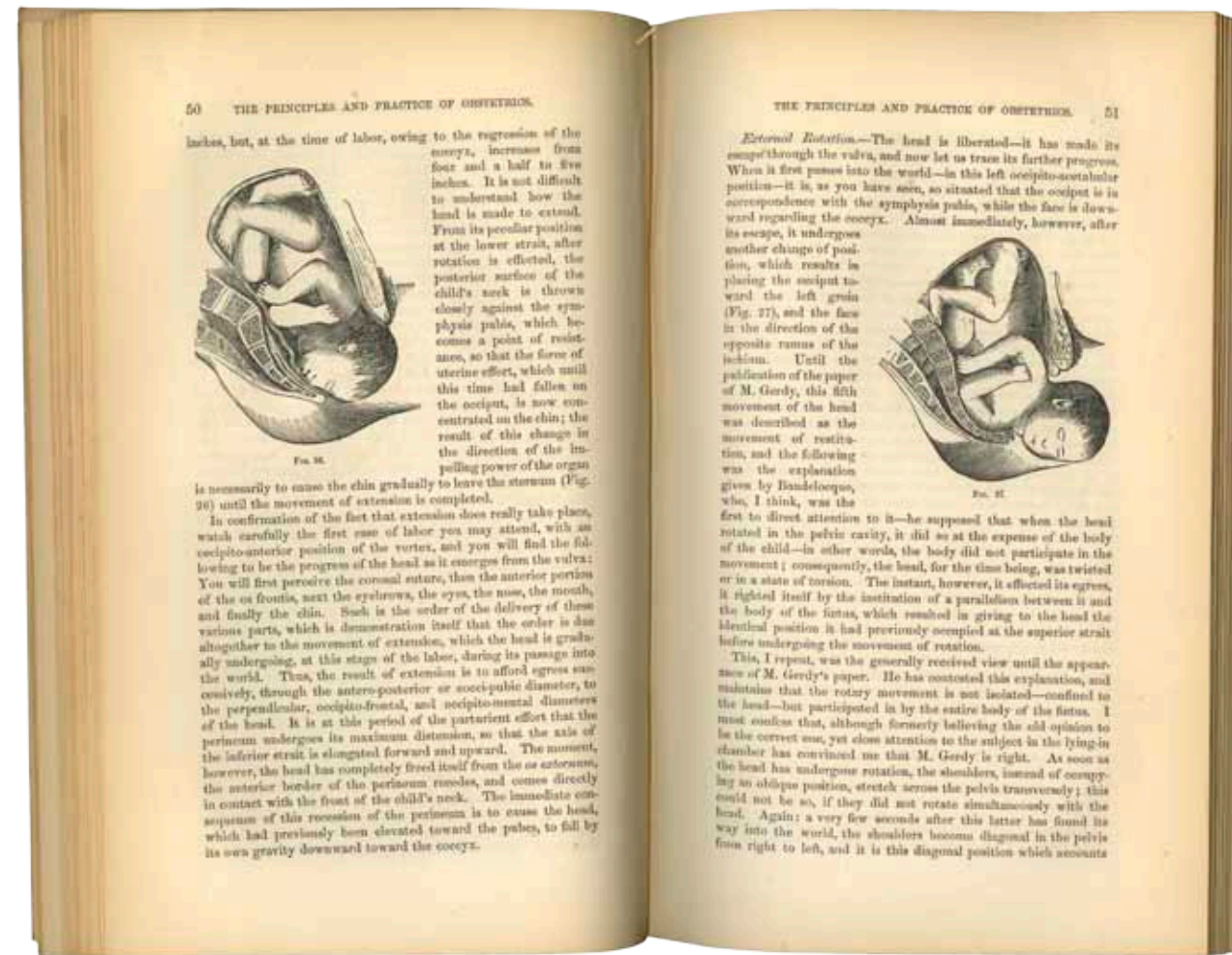
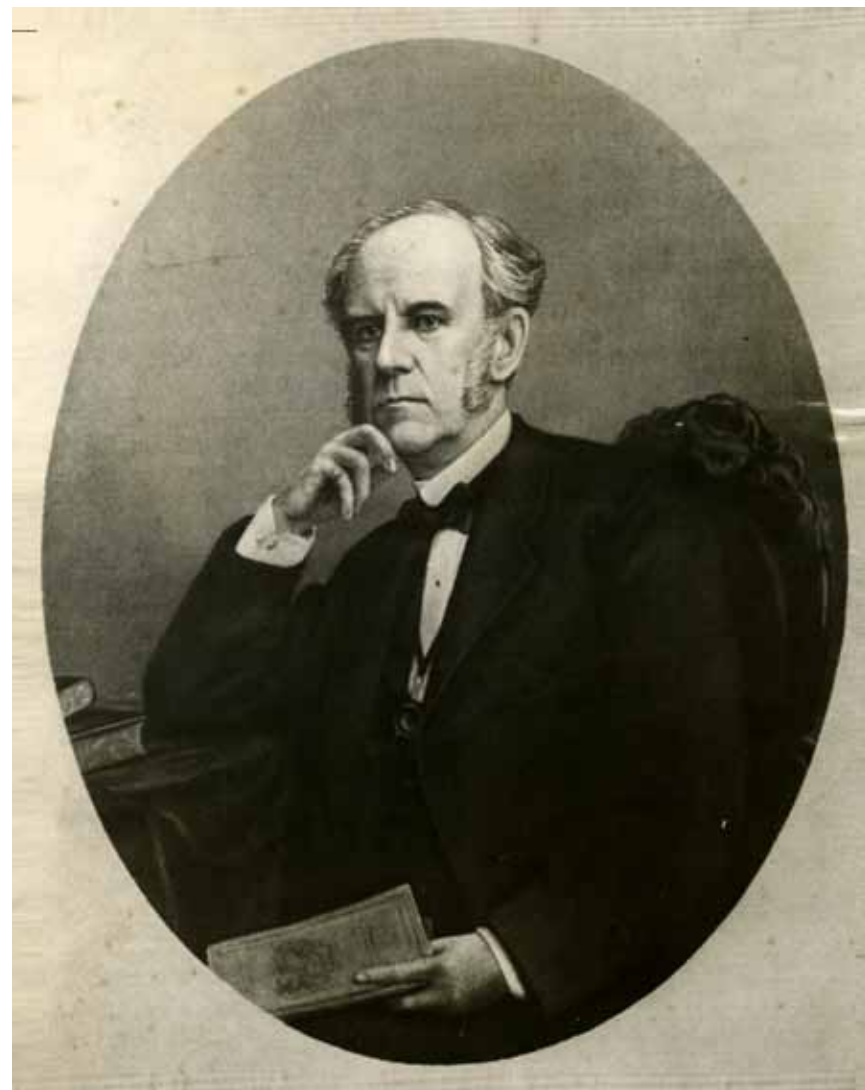


Granville Sharp Pattison (1791-1851)
 Founder and Professor of Anatomy,
 Medical Department, University of New York

GRANVILLE SHARP PATTISON

THIS PAGE: Cover of the Annual Announcement of Lectures for the Medical Department of the University of New York, for the 1841-42 session, the first academic year of the new medical school. **OPPOSITE PAGE, FROM TOP:** A biography of Pattison, by his great-great-great nephew, F. L. M. Pattison (Edinburgh, 1987), chronicles the professional and personal conflicts of Pattison's life on two continents, as well as his contributions to medicine. Signed admission certificate for Pattison's anatomy class. Portrait of Granville Sharp Pattison. "Numpskulls and Rumpskulls," the Glasgow Medical Society as pictured in the Northing Looking Glass, c.1814.





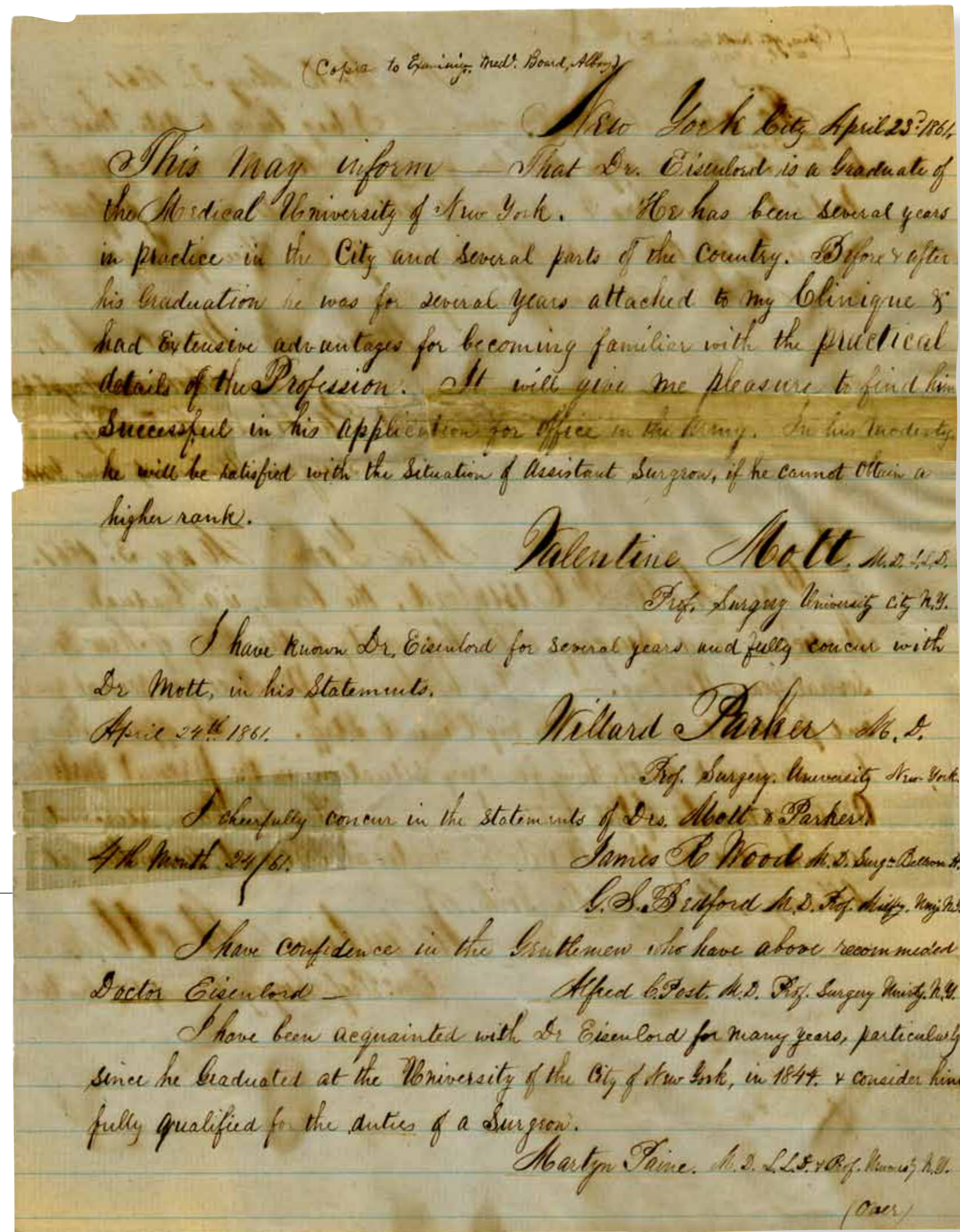
GUNNING S. BEDFORD



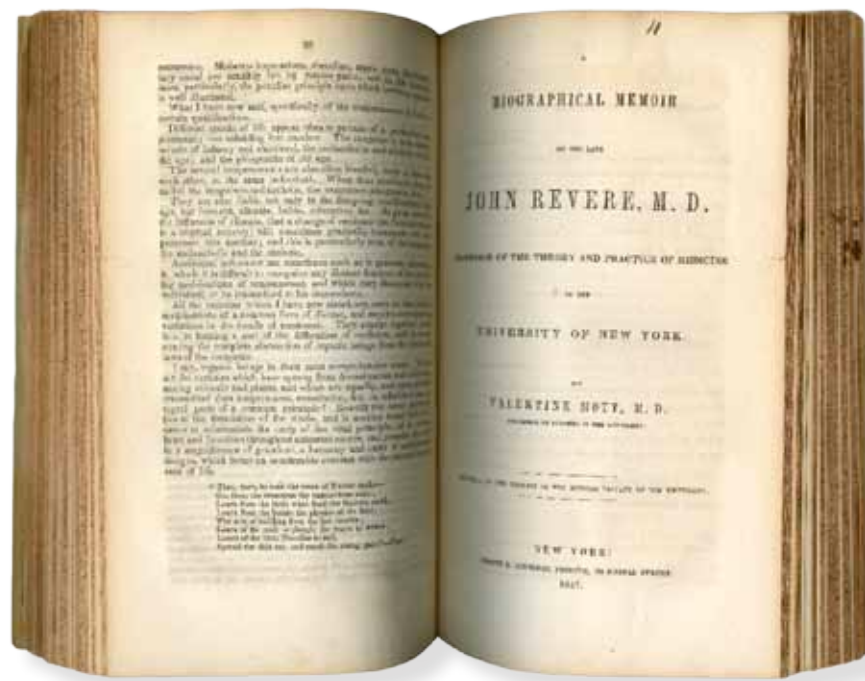
An innovator in women's health, Bedford used anatomical instruction and clinical training to improve the safety of obstetric procedures. His textbooks, *Diseases of Women and Children* (which went through ten editions during his lifetime) and *Principles and Practice of Obstetrics* (five editions), were widely adopted by medical schools in the United States and Britain, and were translated into French and German. He designed and introduced the Bedford forceps in 1846, to assist in deliveries.

Bedford opened the first obstetrical clinic for indigent women in the United States, where as many as ten thousand women received care each year without charge. His promotion of safe obstetric procedures and his instruction to students helped raise the existing standard of care for women. He was one of the founders of the New York Academy of Medicine in 1847.

Gunning S. Bedford (1806–1870)
 Founder and Professor of Obstetrics and Diseases of Women and Children, Medical Department, University of New York

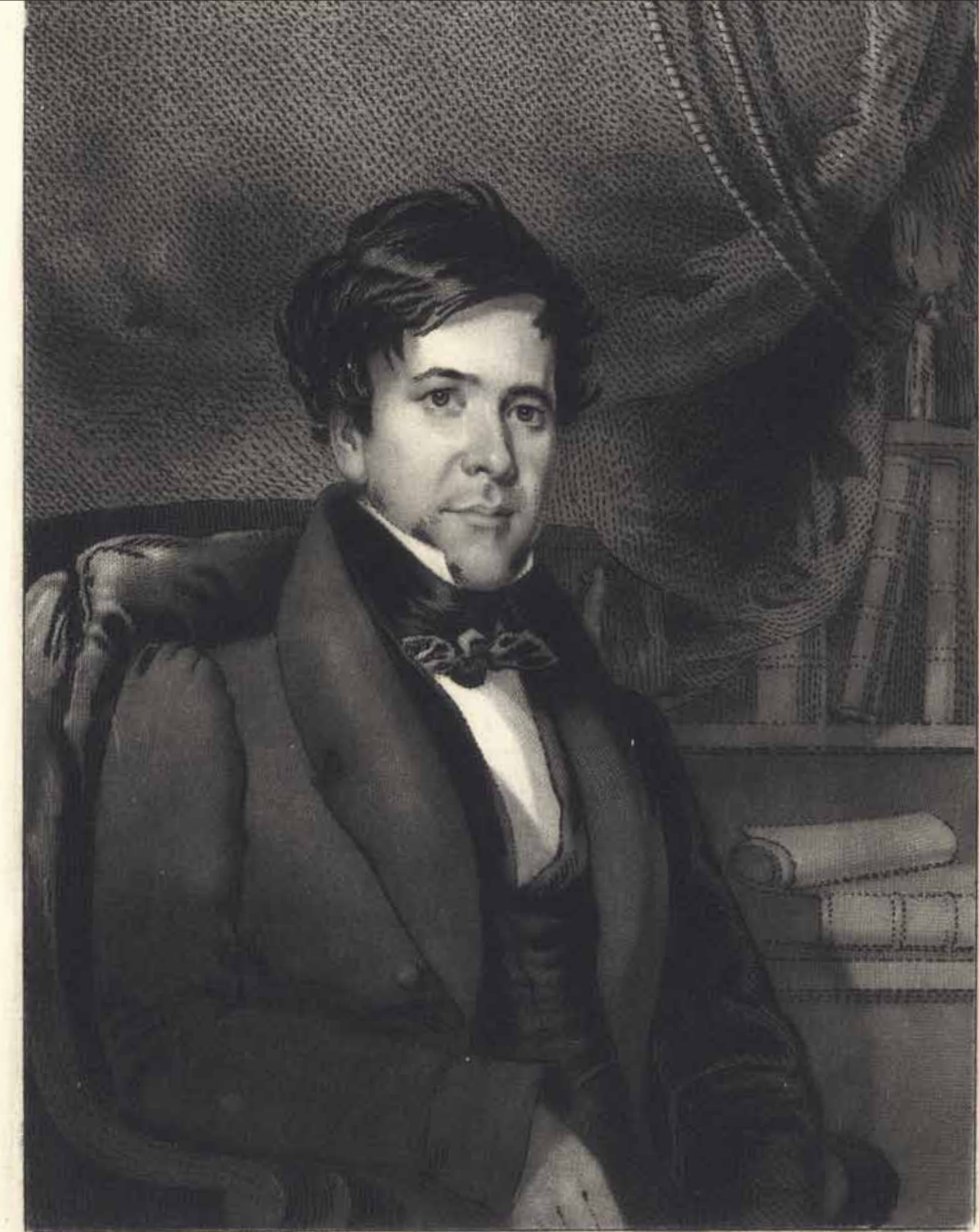


OPPOSITE PAGE, FROM LEFT: Portrait of Gunning S. Bedford. Pages from Bedford's *Principles and Practice of Obstetrics*. Bedford forceps, by Shepard and Dudley, c.1875. Ebony-handled forceps, small forceps (center) with ebony handles, and ebony-handled speculum, also part of this set. THIS PAGE: Letter written in 1861 by Valentine Mott, Gunning S. Bedford, and James Rushmore Wood on behalf of Dr. Peter O. Eisenlord, class of 1848, recommending him for a position as surgeon during the Civil War.



JOHN REVERE

John Revere (1787-1847)
Founder and Professor of the Theory and Practice of Medicine,
Medical Department, University of New York



Painted by H. Friarport Engraved & Printed by J. Sartain

J. Revere *M.D.*

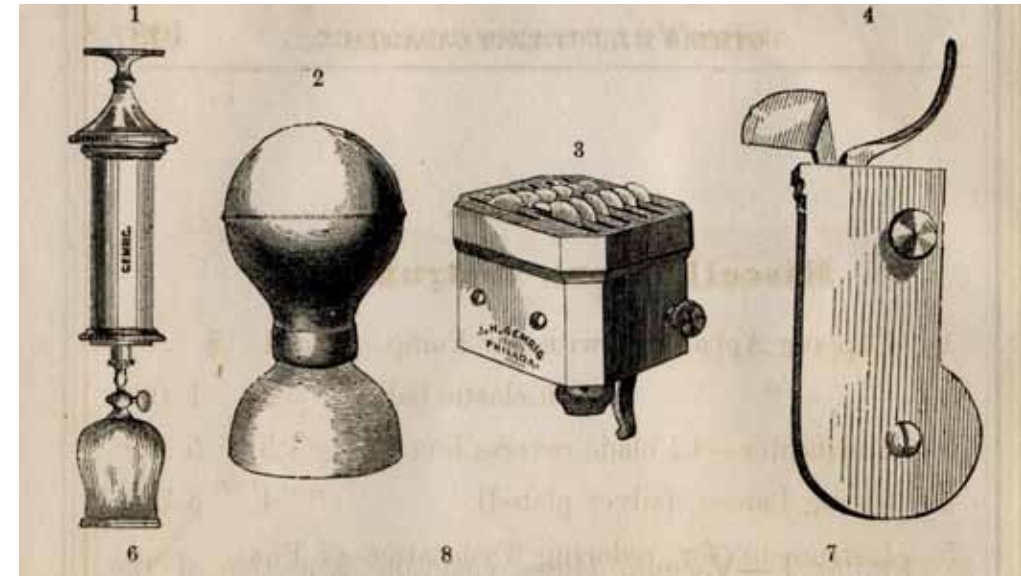
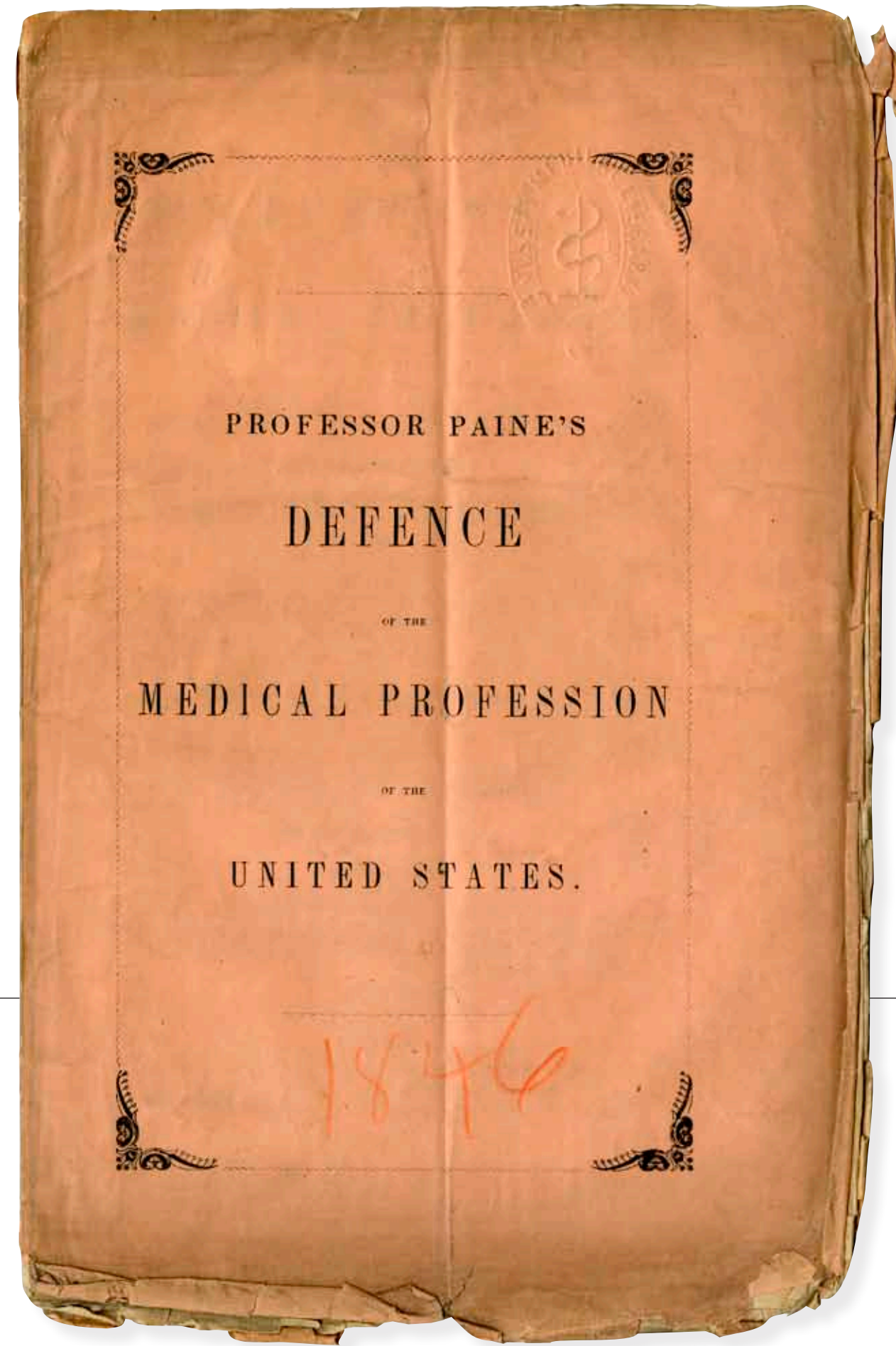
PROFESSOR OF THE THEORY AND PRACTICE OF PHYSICK IN JEFFERSON MEDICAL COLL

“Both as a physician and as a man, (Revere) was a model gentleman... There was indomitable honor, cool determination, unflinching devotion to truth, and an abhorrence of deceit and treachery.” —VALENTINE MOTT

The youngest son of patriot Paul Revere, John Revere wrote *Treatise on Medicine* and translated Magendie's *Physiology* from the original French. He received a classical education at Harvard and studied medicine there with Dr. James Jackson. He also studied in Paris and graduated from the University of Edinburgh in 1811. Revere practiced medicine in Boston and Baltimore, and helped found the University of New York's Medical Department in 1841, where he taught the Theory and Practice of Medicine. He died just six years later, the victim of typhus contracted in the course of attending a sick medical student. Highly regarded by his peers, Revere was eulogized by Valentine Mott in *Biographical Memoir of the Late John Revere, M.D.*

OPPOSITE PAGE, FROM LEFT: Title page from Valentine Mott's *Biographical Memoir of the Late John Revere, M.D.* (1847). Portrait of John Revere. THIS PAGE: Revere and the other five founders established NYU School of Medicine, then called the Medical Department of the University of New York, at 659 Broadway, illustrated to the right. In 1851 the school moved to a larger building on 14th Street between Third Avenue and Irving Place. This building burned down in 1866 and temporary accommodations were used until the school moved to 26th Street, opposite Bellevue Hospital.

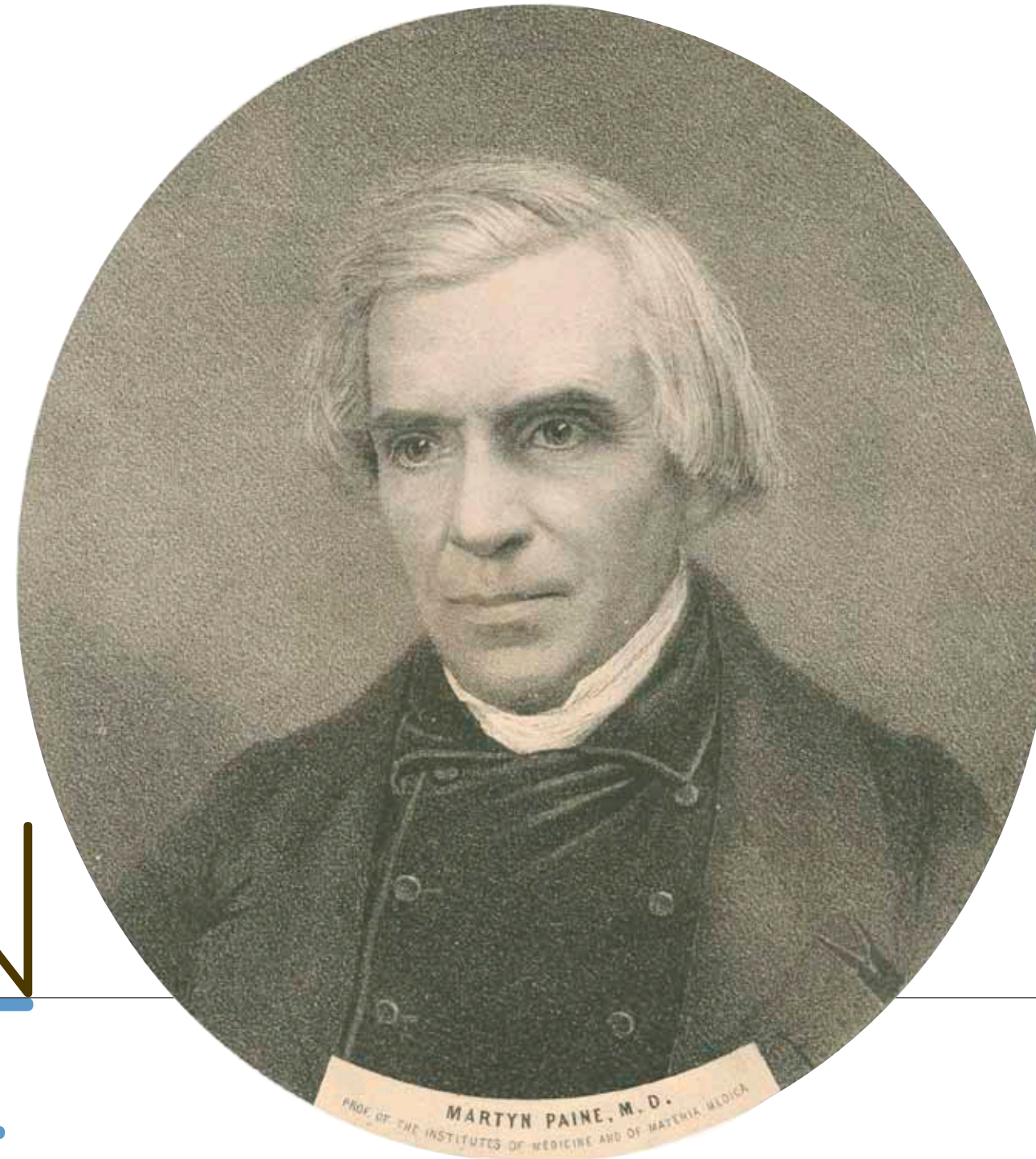




A traditional medical practitioner, Martyn Paine is said to have prescribed bloodletting for virtually all complaints, outraging Oliver Wendell Holmes, among others. His most popular book, *The Institutes of Medicine* (which went through many editions between 1847 and 1870), devotes almost 100 pages to the subject of bloodletting, leeching, and cupping, in addition to documenting an 1822 operation by Valentine Mott. In 1853 Paine successfully lobbied in Albany for passage of the New York State Anatomy Act (commonly referred to as the “Bone Bill” at the time), which passed in 1854, legalizing the use of human bodies for the teaching of anatomy.

MARTYN PAINE

Martyn Paine (1794–1877)
 Founder and Professor of Medical and Materia Medica,
 Medical Department, University of New York



New-York Daily Times.

The Dissection Bill Passed.

The bill legalizing dissection has passed both Houses of the Legislature, and by this time probably is a law. The Senate concurred in the amendments made to the bill, by a vote of 23 to 3. This is well. Now we opine that our graveyards may be protected. When a body is given up for dissection, we know just who the responsible parties are. If it is abused in any manner, we may know precisely who offended, and proceed against them summarily. The occupation of the Resurrectionists henceforth is gone. The “material” will not be furnished any more abundantly than heretofore, but it will be lawfully furnished; and the scandalous traffic in dead men, of which our City has been the centre and mart, will be stopped. The law is alike a protection to the living from persecution, and the dead from insult—creditable to the body that enacted it, and promotive of science.



OPPOSITE PAGE, FROM LEFT: Paine's *Defence of the Medical Profession* in the United States, delivered at the 1846 commencement of the Medical Department. A variety of bloodletting instruments available in 1866 from J.H. Gemrig Company, Philadelphia. THIS PAGE, FROM LEFT: Portrait of Martyn Paine. Report in *The New-York Daily Times* of passage of the “Bone Bill” on April 1, 1854. Signed admission certificate to Paine's class in 1841–42.

“It was a popular school from its beginning. Such professors as Mott, Draper, Payne, Pattison, Post and Bedford could not fail to draw from all parts of the Union young men who desired to put themselves in relations with the best sources of medical knowledge, and the best exhibitions of surgical skill.”

—REV. HOWARD CROSBY, CHANCELLOR OF NEW YORK UNIVERSITY (1870)



A D V O

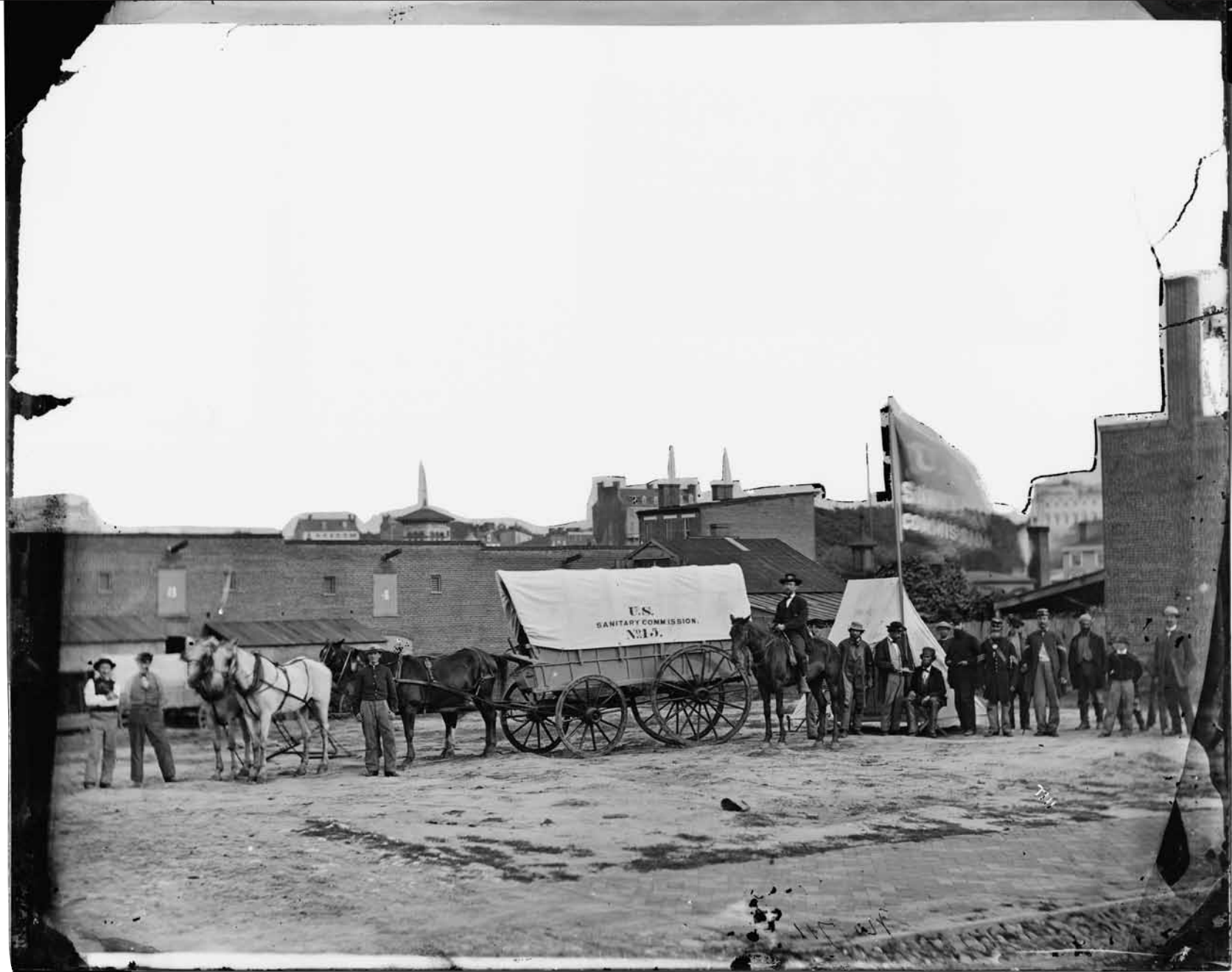
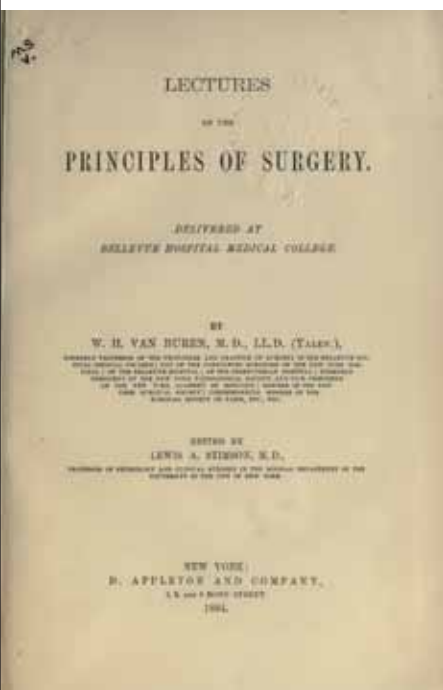
ADVOCATES | Promoting Health and Healing Around the World

C A T E S

AS they better understood the biological basis of disease through the 19th and 20th centuries, the doctors and scientists of NYU's medical school and Bellevue Hospital's medical school increasingly turned their attention to its causes and prevention, in addition to its treatment. They advocated for sanitation, both urban and personal, and worked to eliminate breeding sites for disease and its carriers. They championed the development of vaccination, quarantine, record keeping, and other methods of minimizing the spread of disease, transforming the landscape and expectations of public health, a transformation that continues into the 21st century.

ADVOCATE

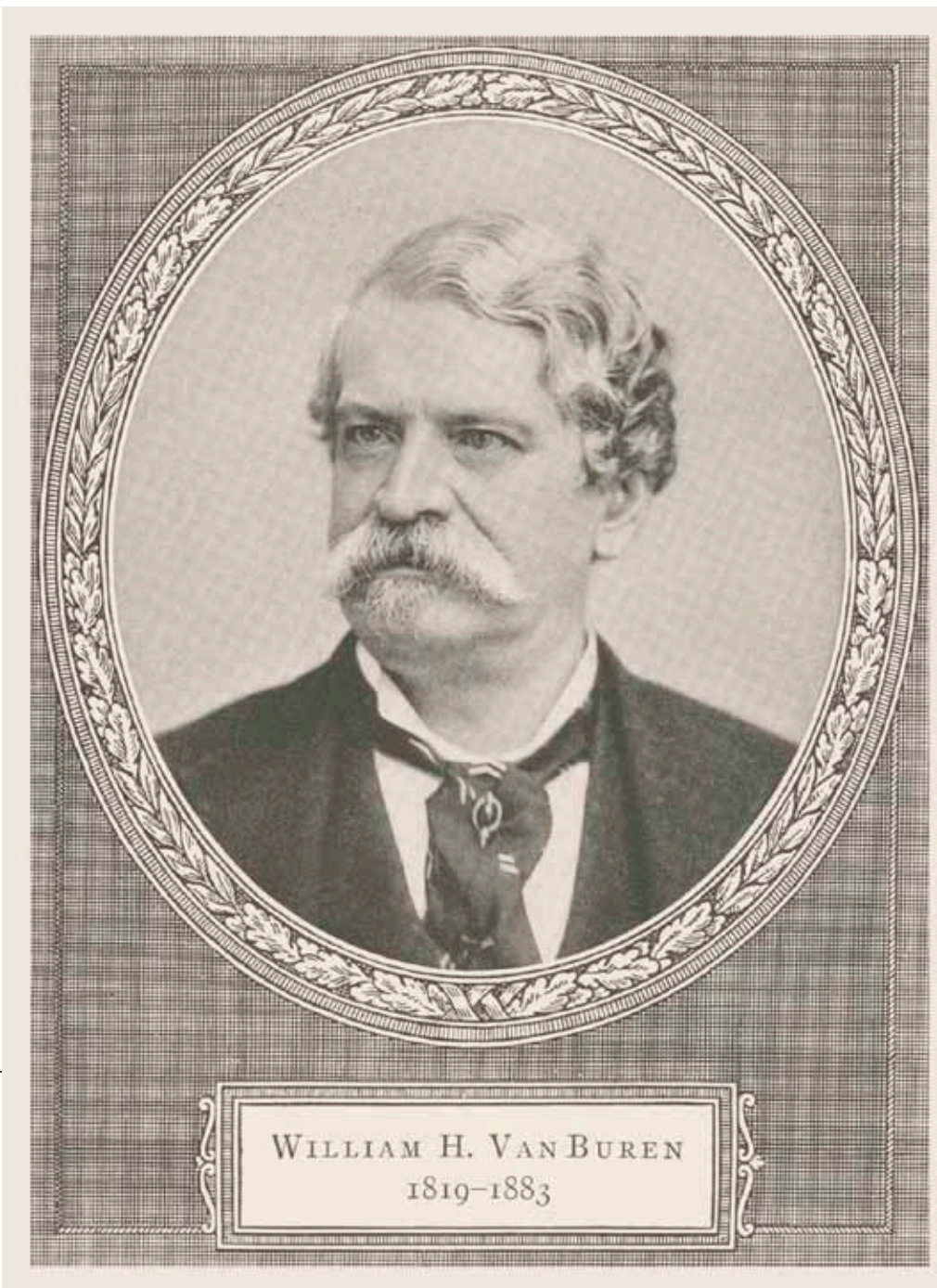
(noun) one who pleads another's cause, supports or urges by argument, publicly recommends a cause or proposal.



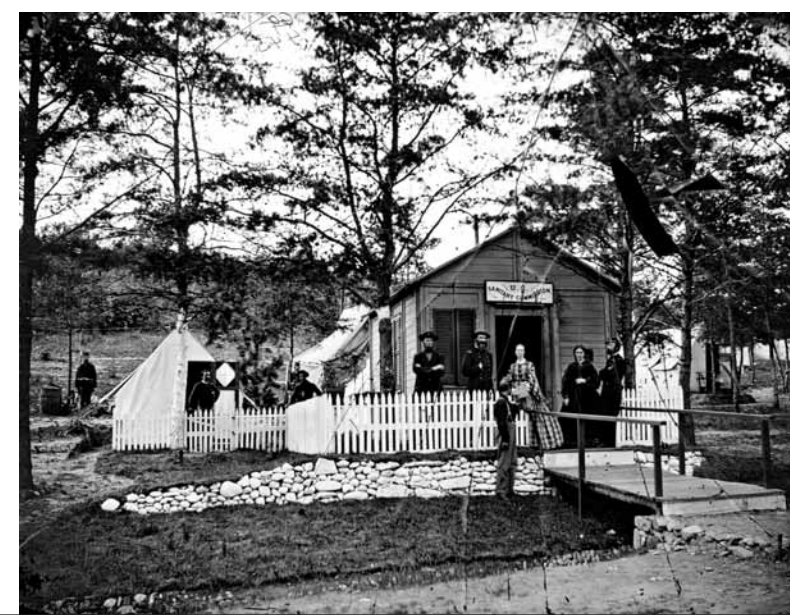
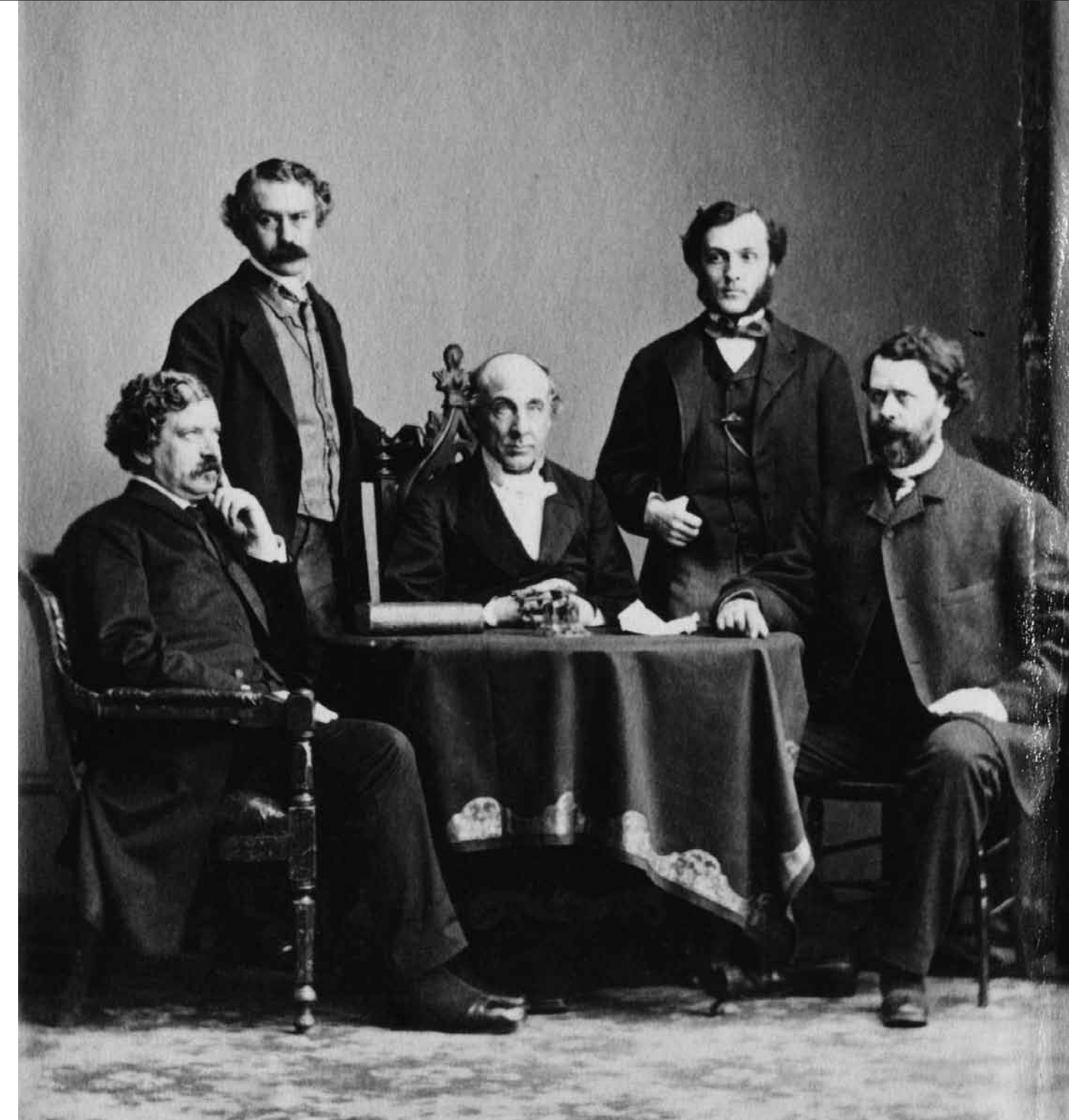
Van Buren was a distinguished surgeon and specialist in diseases of the urogenital system. He conducted the first public surgical clinic in Bellevue Hospital's new operating amphitheater, which opened in 1849, and taught in NYU's Medical Department from 1852 to 1865.

Van Buren was instrumental in organizing the United States Sanitary Commission, a civilian organization that cared for sick and wounded soldiers and their dependent families during the Civil War. Van Buren declined appointment as surgeon general of the Army, but helped organize the publication of a series of monographs for use by Army surgeons. Among these was his *Rules for Preserving the Health of the Soldier*, which was published in 1861. His textbooks on surgical procedures included *Contributions to Practical Surgery* (1865) and *Lectures on the Principles of Surgery* (1884).

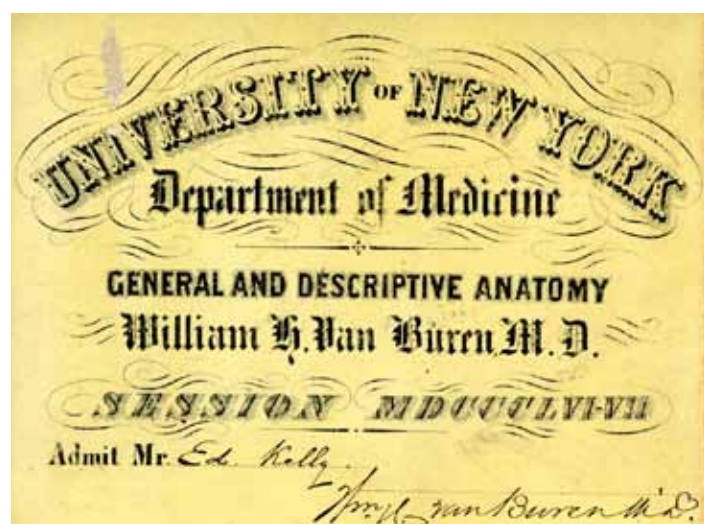
After the war, Van Buren served as a founding member of New York City's Council of Hygiene and Public Health. The council's 1865 report has been called the most thorough health survey ever made in an American city, and it led to the establishment of the New York City Department of Health in 1866.



OPPOSITE PAGE, FROM LEFT: Van Buren's Lectures on the Principles of Surgery, delivered at Bellevue Hospital Medical College and published in 1884. Photograph of a United States Sanitary Commission wagon used to move supplies to battlefield hospitals. The commission raised about \$5 million in cash and \$15 million in donated supplies for the war effort. Admission ticket for Van Buren's anatomy class in 1856-57. **THIS PAGE, FROM LEFT:** Portrait of William Holme Van Buren. United States Sanitary Commission members William H. Van Buren, George J. Storey, Chairman Henry W. Bellows, Cornelius Rea Agnew, and Oliver W. Gibbs. Volunteer nurses and army surgeons at the United States Sanitary Commission quarters, photographed by Mathew Brady.



WILLIAM HOLME VAN BUREN



William Holme Van Buren (1819-1883)
Professor of Anatomy (1852-65), Medical Department, University of New York

WILLIAM A. HAMMOND

William A. Hammond (1828-1900)
Alumnus, Class of 1848, Medical Department, University of New York; Professor of Diseases of Mind and Nervous System (1867-74), Professor of Materia Medica and Therapeutics (1872-74), Bellevue Hospital Medical College; Professor of Mind and Nervous System (1874-82), University Medical College

BUFFALO LITHIA WATER, in Bright's Disease of the Kidneys, the Gouty Diathesis, Nervous Dyspepsia, etc.

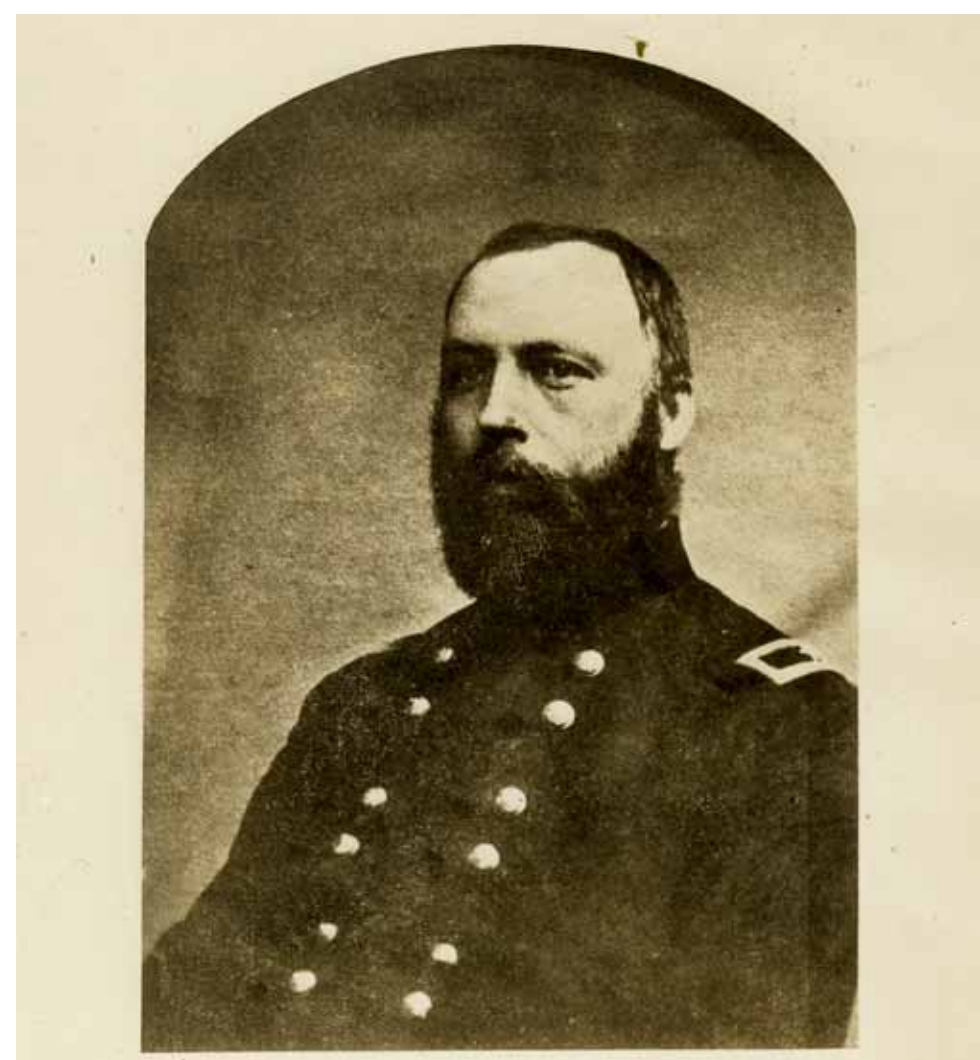
DR. WM. A. HAMMOND,
WASHINGTON, D. C.

Surgeon-General U. S. Army (retired), formerly President of Division of the Mind and Nervous System in the University of New York, etc., says: "I have for some time made use of the **BUFFALO LITHIA WATER** in cases of affections of the nervous system, complicated with BRIGHT'S DISEASE OF THE KIDNEYS or with a GOUTY DIATHESIS. The results have been uniformly satisfactory. Lithia has for many years been a favorite with me in like cases, but the **BUFFALO LITHIA WATER ACTS BETTER THAN ANY EXTEMPORANEOUS SOLUTION** of the Lithia salt, and in, moreover, better borne by the stomach. I also often prescribe it in those cases of cerebral hyperaemia, resulting from over mental work—in which the condition called NERVOUS DYSPEPSIA exists—and generally with marked benefit."

Write to order of one dozen half dozen bottles, \$1.25, 50 c. here. For sale by all first-class druggists. Illustrated Orange paper cover giving further information and, postpaid, on application to

THOMAS F. COODE, Proprietor,
BUFFALO LITHIA SPRINGS, VA.

THIS PAGE, FROM LEFT: Illustration from a promotional pamphlet for Buffalo Lithia Water, a patent medicine endorsed by Surgeon General Hammond for the treatment of Bright's disease and other ailments, as well as "nervous dyspepsia" (c.1890). Portrait of William A. Hammond. OPPOSITE PAGE, FROM LEFT: Page from Hammond's personal scrapbook, with articles and other items about his life and times. Mathew Brady's contact prints of Surgeon General Hammond.



BRIGADIER GENERAL WILLIAM ALEXANDER HAMMOND, SURGEON GENERAL, U. S. ARMY, 1862-1864.



WHY NOT HYPNOTIZE THE STREET COMMISSIONERS, AND MAKE THEM CLEAN THE STREETS?

Character of article
From the
Date

NEW BOOKS.

FICTION AND FANCY ALLIED TO COMMON SENSE.

Admiral Porter's "Incidents and Anecdotes of the Civil War," Dr. Hammond's "Strong-Minded Woman."

and vitalizing atmosphere which his characters breathe we are again faced with Lal (now Lalage Roubille), Mr. Mohr, Theodore (his wife) and John Tycovus. But there are quite a number of other characters, among whom Tom Burton, Rachel Meadows, Miss Brennan and Miss Richardson prominently figure. Accessions are also found in Mrs. Castor, Mrs. Pollux, General Bluffton, Mrs. Vandertrunk and the twin brothers of Hoboken—personages which those who are skilful in detecting identities may "spot" and place as they will. We fear, however, that on one of his pages the author reveals the source whence he derived his inspiration for use of the word "Billy" as a feminine pronoun. In a section underlined with science allusion to a Dendrogonomorphous animal Association. The sketches of "society" people are very clever, particularly the passages at arms between Messieurs Castor and Pollux, who "Billie" and "Carrie" one another with the perfection of epistolary polish. In one instance there is perhaps a too obvious attempt at portrait painting with respect to one of the minor characters—or shall we say types? It is more of a specification than a reference of an allusion. Dare we suggest that in instances of this kind identification should be hindered rather than helped, asserted instead of invited? The character of Lal retains its old charm, for its essence was its honesty under a rude maidenliness, and now its essence is still the same, enfolded in a maidenliness that has been cultured. Theodore impresses as a wife. The struggle between her scientific ambition and her womanly instincts is nicely shown, and the manner in which it is made to crystallize upon the side of womanhood is delicately interwoven with the prominence of approaching motherhood. Not less successful has Dr. Hammond been in his treatment of the vulgar elements which relieve the more refined portions of his story. The machinations of Billy Brennan, who derives part of her means from an attorney, and in whom intrigue picks its way through a nature swayed in its gross animality, are painted with great breadth and freedom. The conversations between Miss Rogers and Miss Sordy are in useful contrast to those which come from

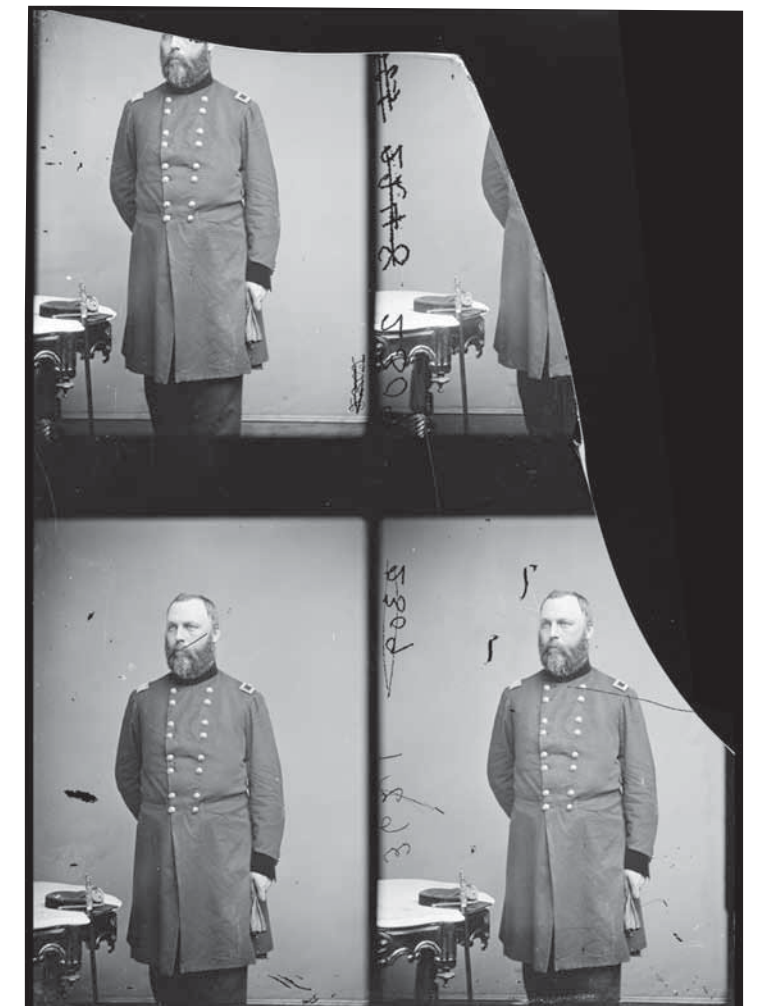
The lips of "showing swells" by right divine. The difference between the people and the purple is well accentuated. The Maidenhood has its portals thrown open so that the reader may know where he has been. The treatment of the trouble created between Lal and Tycovus by John Sincote's wicked alteration of a date is for the sake of showing how shallow are the methods of novelists and playwrights whose heroes and heroines suffer from calamities which a little rationality on either side might avert. In fact, "A Strong-Minded Woman" is a most wholesome novel. If we said it runs the nerves like bromide and stimulates them like cocaine we should be betrayed by a perhaps too subtle sympathy into medical similitude. It is better and simpler to compare its effect to air and sunshine. The Apollonians are the physicians.

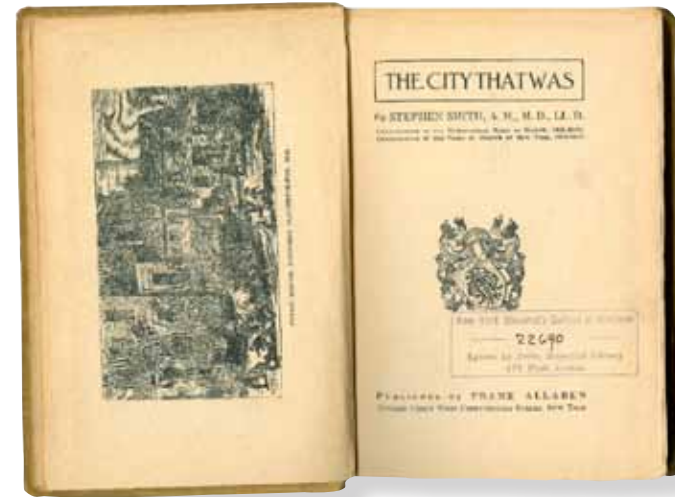
ADmiral PORTER'S NEW BOOK.
Admiral Porter has written another large book—not so large as "Allan Dare and Robert le Diable," or as "Harry Martine; or, Notes from an American Shipman's Lucky Bag," but still nearly 400 pages in length. It would have been more interesting had there been an index, but a labor requiring so much plodding wonder Admiral Porter regrets he may have thought the entitled "Incidents and Anecdotes of the Civil War," was really not important enough to merit such a labor. It is a book, however, which is not only interesting but also valuable for the sake of the history of our civil war. We have already mentioned Lalage Roubille, in estimation equal to him comes General Grant. Admiral Porter knows how to be warmly appreciative. His justice overflows until it flows into generosity. He has a great love for humor and humor, accordingly, makes a large part of the volume. The dialect and queer verbiage of uneducated persons make up a considerable proportion of the tale. Admiral Porter is not what can be called an accomplished writer. He has nothing that can be called style, but must not on any account be mistaken for literary cultivation. It is rather the colloquialism of the most unassuming of the old-fashioned, speaking familiarly, as though to private friends, instead of to a more or less crusading public. The work is printed with a portrait of the author and is published by D. Appleton & Co.

Character of article
From the
Date

THE attack made by *Town Topics* upon the charming and clever daughter of Dr. William A. Hammond—whose literary work, beg leave to say, is not "trash"—is simplifying his argument, declares that Dr. Hammond also writes "trash." I should not mind being known as the author of two such vigorous and interesting novels as "Lal" and "Mr. Oldmixon."

One of the first American physicians to specialize in neurology, Hammond wrote *A Treatise on Diseases of the Nervous System* (1871), the first American text on the subject. His early career was spent chiefly in the U.S. Army, which he entered as an assistant surgeon only a year after graduating from the medical school, serving for 11 years. As surgeon general of the Army (1862-64), he improved Civil War field hospitals and established the U.S. Army Hospital for Diseases of the Nervous System and the Army Medical Museum.





An unrelenting critic of the unsanitary conditions common in New York City tenements, Smith waged a life-long battle to improve sanitation in the city, exposing irresponsible landlords and challenging city officials. His work led to the establishment of the Department of Health in 1866—the first such public health agency in the United States—and he was responsible for drafting the act which gave it virtually autocratic powers. In addition to his sanitation efforts, Smith was also an early proponent of vaccination.

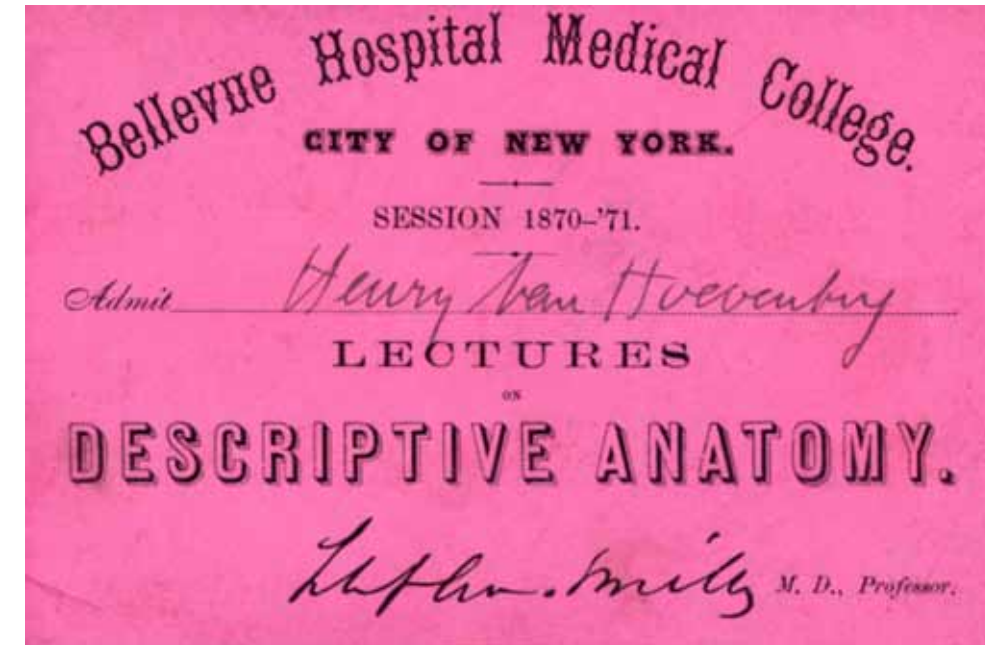
Smith later founded the American Public Health Association and was its first president. He wrote *Amputations for the United States Sanitary Commission*, and his *Handbook of Surgical Operations* is said to have been issued to every Union army surgeon throughout the Civil War. In his 90s, Smith was appointed president of the Department of Charities, where he initiated reforms which outraged Tammany Hall and resulted in his dismissal “for the good of the service,” which Smith regarded as a great tribute to his efforts.

STEPHEN SMITH

Stephen Smith (1823–1922)
 Founder and Professor of Principles and Practice of Surgery, Bellevue Hospital Medical College; Professor of Clinical Surgery (1874–94), Medical Department, University of New York



OPPOSITE PAGE, FROM LEFT: At the age of 90, Smith wrote *The City That Was*, describing the deplorable health conditions that prevailed in New York City before sanitation was improved. Photograph taken when Smith was 97, at the Battle Creek Sanitarium. THIS PAGE, FROM TOP: A New York tenement in 1888, photographed by Jacob Riis. Signed certificate for Lectures in Descriptive Anatomy by Smith in 1865–66. A cartoon satire of the Board of Health from 1865, a year before Smith’s report.



“Nuisances dangerous to life and detrimental to health existed everywhere. Large areas were undrained, giving rise to miasmatic fevers in the Autumn. The cobble-stone paved streets were lined and littered with garbage. Small butcher shops were in every section, requiring herds of cattle, sheep and hogs to be driven through the streets; the scavenger’s cart, loaded with filth, filled the night airs with suffocating odors; the river front was lined with fat melting and other offensive industries.”

—STEPHEN SMITH WRITING IN 1918 ABOUT THE CITY’S CONDITIONS PRIOR TO 1866

MARVELS OF ANTITOXINE

Prof. Hermann M. Biggs Tells of Its Great Success in Europe.

THE ONLY REMEDY FOR DIPHTHERIA

Foreign Physicians Tell of Wonderful Results—Serum Treatment and the Decrease of Mortality.

Prof. Hermann M. Biggs, pathologist and director of the Bacteriological Laboratory of the Health Department of this city, has just returned home from a two months' sojourn abroad. His principal object in visiting Europe was to attend the sixty-third annual meeting of the British Medical Association, which was held in London during July and August.

He had been invited to take part in a discussion of the "Sanitary Management of Diphtheria," with particular reference to the use of bacteriological examinations in the diagnosis and sanitary surveillance of the disease.

Dr. Biggs said to a reporter for The New York Times last night that the methods which were first adopted by the Health Department of this city for the sanitary surveillance of diphtheria are now employed in London and the larger cities of Great Britain. They were adopted by the sanitary authorities of London after Dr. Biggs had read a paper explaining the "New York method" before the Congress of the British Institute of Public Health in 1894. They have met with success wherever adopted, and the results have been excellent.

"But the most interesting discussion during the meeting," said Dr. Biggs, "was on the subject of the treatment of diphtheria by antitoxin. Several of the most eminent physicians of England and Germany took part in the discussion, and the results which they reported following the use of antitoxin in the treatment of the disease were simply marvelous."

"Prof. Van Ranke of the University of Munich reported that the mortality from ordinary diphtheria in his clinic from 1887 to 1894 ranged from 42.2 per cent. to 57 per cent. Since the commencement of the serum treatment from August 24, 1894, to July 1, 1895, the mortality had been reduced to 17.7 per cent. The mortality had been reduced to considerably more than one-half, compared with the best years, and to two-thirds, compared with the worst years."

"Prof. Van Ranke also stated that under the influence of the serum treatment diphtheria loses its progressive character, and he gave it as his firm opinion that the serum treatment is a most powerful and specific remedy against diphtheria."

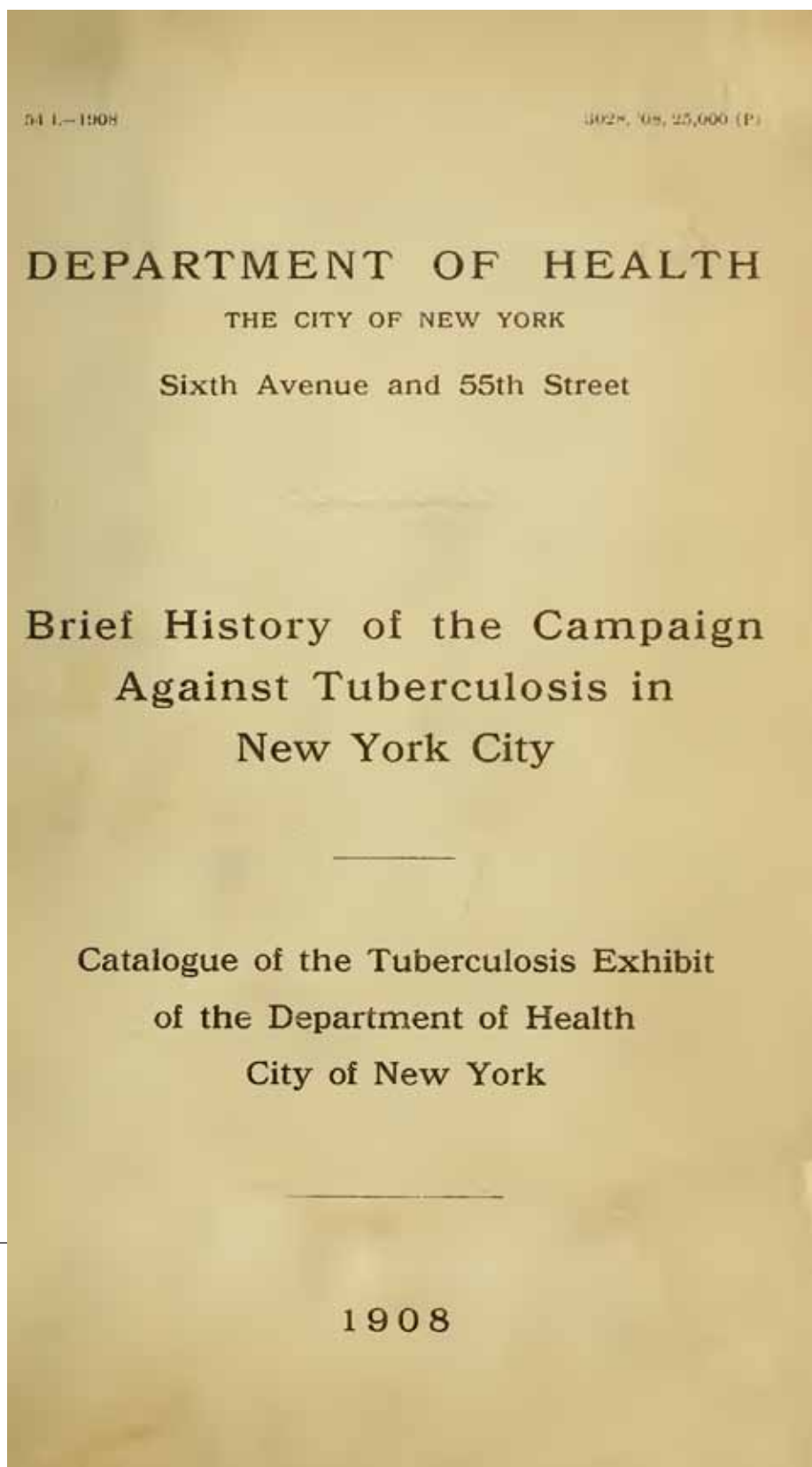
"A very interesting statement was that made by Prof. A. Baginsky of the University of Berlin. He said that during the last year he had treated 525 diphtheria patients with serum. Previous to the introduction of this form of treatment the mortality during four years averaged 41 per cent., but by the serum treatment it had been reduced to 15.6 per cent. The serum treatment was said by Prof. Baginsky not only to reduce the mortality, but the whole condition of the child was improved by it."

"A recent paper by Dr. Richet of Paris was quoted during the discussion, which stated that in Paris from 1884 to 1894 the smallest number of deaths from diphtheria in fourteen days had been 20, while the highest number had been 145 in the same period."

"There is more of the antitoxin used in Paris to-day than in any other city in the world, and the result has been that during 1895 the highest figure of mortality for fourteen days was 27, and the lowest was 4. No better evidence of the efficacy of the serum treatment is needed to establish its value and extend its use."

Dr. Biggs, in taking part in the discussion, dwelt at length on the importance of antitoxin in preventing the spread of the diphtheria, by rendering those who were exposed to the infection immune. He said:

"In one institution in this city, there had been a large number of cases of diphtheria, 107 cases having occurred during the 108 days preceding the injection of the serum. The antitoxin was then injected, 290 units of Behring's preparation being used in each case. During the next thirty days only one very mild case occurred; in



THIS PAGE, FROM LEFT: Article in *The New York Times* (September 4, 1895) reporting the discovery of an antitoxin for diphtheria, one of the most common deadly childhood diseases of the time. Report on New York City's campaign against tuberculosis, published in 1908 by the Department of Health. OPPOSITE PAGE, FROM LEFT: Biggs (center left) with William Gorgas (center right) at the Rochester meeting of the American Public Health Association in September 1915. Portrait of Hermann M. Biggs.

TABLE GIVING DEATH RATE, NUMBER OF DEATHS, AND OTHER DATA CONCERNING TUBERCULOSIS IN THE CITY OF NEW YORK FROM 1881 TO 1907.

I.—MANHATTAN AND THE BRONX.

| YEAR | General Population | Total Deaths All Causes | General Death Rate | Total Tuberculosis Deaths | Death Rate All Tuberc. | Deaths Pulm. Tuberc. | Deaths Other Tuberculosis | Per Cent. of Total Deaths | Death Rate Pul. Tuberc. | Total No. Cases (After Deducting Duplicates) | Duplicates | No. Spec. Sputum. |
|------|--------------------|-------------------------|--------------------|---------------------------|------------------------|----------------------|---------------------------|---------------------------|-------------------------|--|------------|-------------------|
| 1881 | 1,244,511 | 38,624 | 31.04 | 6,123 | 4.92 | 5,312 | 811 | 15.85 | 4.27 | | | |
| 1882 | 1,280,857 | 37,924 | 29.61 | 6,052 | 4.72 | 5,247 | 805 | 15.90 | 4.10 | | | |
| 1883 | 1,318,204 | 34,011 | 25.80 | 5,943 | 4.51 | 5,200 | 653 | 17.47 | 4.01 | | | |
| 1884 | 1,356,764 | 35,034 | 25.82 | 6,039 | 4.45 | 5,235 | 804 | 17.28 | 3.86 | | | |
| 1885 | 1,396,388 | 35,682 | 25.55 | 5,945 | 4.26 | 5,196 | 749 | 16.66 | 3.72 | | | |
| 1886 | 1,437,170 | 37,351 | 25.99 | 6,349 | 4.42 | 5,477 | 872 | 16.99 | 3.81 | | | |
| 1887 | 1,479,143 | 38,933 | 26.32 | 6,007 | 4.06 | 5,260 | 747 | 15.43 | 3.56 | | | |
| 1888 | 1,522,341 | 40,175 | 26.39 | 6,073 | 3.99 | 5,260 | 813 | 15.12 | 3.46 | | | |
| 1889 | 1,566,801 | 39,679 | 25.32 | 6,041 | 3.86 | 5,179 | 862 | 15.22 | 3.30 | | | |
| 1890 | 1,612,559 | 40,103 | 24.87 | 6,409 | 3.97 | 5,492 | 917 | 15.98 | 3.41 | | | |
| 1891 | 1,659,654 | 43,659 | 26.31 | 6,109 | 3.56 | 5,160 | 949 | 13.99 | 3.11 | | | |
| 1892 | 1,708,124 | 44,329 | 25.95 | 6,061 | 3.55 | 5,033 | 1,028 | 13.67 | 2.95 | | | |
| 1893 | 1,758,010 | 44,486 | 25.30 | 6,163 | 3.51 | 5,124 | 1,039 | 13.85 | 2.91 | | | |
| 1894 | 1,809,353 | 41,175 | 22.76 | 5,720 | 3.16 | 4,658 | 1,062 | 13.89 | 2.57 | 4,166 | | 51 |
| 1895 | 1,873,201 | 44,420 | 23.18 | 6,283 | 3.35 | 5,205 | 1,078 | 14.47 | 2.78 | 5,824 | | 1,14 |
| 1896 | 1,906,139 | 41,622 | 21.84 | 5,926 | 3.11 | 4,994 | 932 | 14.24 | 2.62 | 8,334 | | 1,85 |
| 1897 | 1,949,553 | 38,877 | 20.03 | 5,791 | 2.98 | 4,843 | 948 | 14.89 | 2.50 | 9,735 | | 2,79 |
| 1898 | 1,976,527 | 40,438 | 20.46 | 5,901 | 2.99 | 4,957 | 944 | 14.59 | 2.51 | 10,798 | 2,239 | 2,92 |
| 1899 | 2,014,330 | 39,911 | 19.81 | 6,209 | 3.08 | 5,238 | 971 | 15.59 | 2.60 | 10,484 | 2,472 | 3,11 |
| 1900 | 2,055,714 | 43,227 | 21.03 | 6,179 | 3.00 | 5,278 | 901 | 14.29 | 2.56 | 9,639 | 2,436 | 3,51 |
| 1901 | 2,118,209 | 43,307 | 20.44 | 6,049 | 2.85 | 5,233 | 816 | 13.97 | 2.47 | 12,135 | 3,005 | 4,39 |
| 1902 | 2,182,836 | 41,704 | 19.11 | 5,744 | 2.63 | 4,893 | 851 | 13.77 | 2.24 | 13,383 | 3,738 | 4,63 |
| 1903 | 2,241,680 | 41,749 | 18.56 | 6,080 | 2.70 | 5,250 | 836 | 14.60 | 2.33 | 15,787 | 4,698 | 7,76 |
| 1904 | 2,318,831 | 48,693 | 21.00 | 6,275 | 2.71 | 5,495 | 780 | 12.89 | 2.37 | 20,451 | 6,638 | 9,66 |
| 1905 | 2,399,382 | 45,199 | 18.91 | 6,348 | 2.66 | 5,078 | 670 | 14.04 | 2.38 | 24,142 | 9,166 | 11,43 |
| 1906 | 2,464,432 | 46,108 | 18.71 | 6,696 | 2.72 | 5,900 | 796 | 14.52 | 2.39 | 22,092 | 8,201 | 16,00 |
| 1907 | 2,541,084 | 47,668 | 18.76 | 6,809 | 2.68 | 6,030 | 779 | 13.49 | 2.37 | 24,363 | 10,746 | 20,59 |

II.—GREATER NEW YORK.

| | | | | | | | | | | | | |
|------|-----------|--------|-------|--------|------|-------|-------|-------|------|--------|--------|-------|
| 1898 | 3,272,418 | 66,224 | 20.26 | 9,265 | 2.69 | 7,724 | 1,541 | 13.97 | 2.25 | | | 3,94 |
| 1899 | 3,356,722 | 65,344 | 19.47 | 9,575 | 2.70 | 8,016 | 1,559 | 14.65 | 2.26 | | | 4,50 |
| 1900 | 3,440,042 | 70,872 | 20.57 | 9,630 | 2.79 | 8,154 | 1,476 | 13.59 | 2.37 | 14,433 | 2,456 | 5,28 |
| 1901 | 3,554,079 | 70,717 | 19.91 | 9,389 | 2.64 | 8,135 | 1,254 | 13.28 | 2.29 | 17,588 | 4,191 | 6,74 |
| 1902 | 3,665,825 | 68,112 | 18.58 | 8,883 | 2.42 | 7,571 | 1,312 | 13.44 | 2.07 | 16,614 | 4,268 | 7,82 |
| 1903 | 3,781,423 | 67,923 | 17.96 | 9,287 | 2.46 | 8,001 | 1,286 | 13.70 | 2.12 | 20,266 | 5,052 | 11,85 |
| 1904 | 3,901,023 | 77,985 | 19.99 | 9,744 | 2.50 | 8,495 | 1,249 | 12.49 | 2.18 | 28,444 | 9,721 | 16,97 |
| 1905 | 4,024,780 | 73,714 | 18.31 | 9,658 | 2.40 | 8,535 | 1,123 | 13.10 | 2.12 | 31,963 | 11,132 | 18,63 |
| 1906 | 4,152,860 | 76,203 | 18.35 | 10,194 | 2.45 | 8,955 | 1,239 | 13.38 | 2.16 | 30,826 | 10,741 | 21,77 |
| 1907 | 4,285,435 | 79,295 | 18.70 | 10,262 | 2.26 | 8,999 | 1,263 | 12.96 | 2.10 | 32,730 | 13,005 | 27,27 |

Time magazine described Biggs as "perhaps the most distinguished state or city health officer in the U.S.—a man even more widely known abroad than at home as a pioneer in both the laboratory and administrative phases of preventive medicine."

The first American physician to systematically apply bacteriological knowledge and methods to control disease, Biggs introduced diphtheria toxin-antitoxin into the United States in 1894 and supervised its production and distribution through the city's health department. For the first time, it was possible to combat an epidemic by providing free and effective therapy to the poor.

Biggs also developed highly successful methods to control tuberculosis, the leading cause of death among adults in New York in the 1880s. He issued a widely distributed pamphlet on its prevention in 1887 and made it a reportable disease in New York City in 1897. Biggs also started the first municipal program for the control of venereal disease in 1912. He served as chief medical officer of the NYC Department of Health from 1901 to 1914, making it a model for cities across the nation. In 1914, he was called to Albany to serve as the state's health commissioner, a post he held continuously until his death in 1923.



HERMANN M. BIGGS

Hermann M. Biggs (1859-1923)
 Alumnus, Class of 1883, Bellevue Hospital Medical College;
 Professor of Pathological Anatomy (1885-94),
 Professor of Materia Medica, Therapeutics, Diseases of Nervous System, Clinical Medicine (1892-97), Professor of Therapeutics and Clinical Medicine (1897-98), Bellevue Hospital Medical College; Professor of Therapeutics and Clinical Medicine (1898-1912), Associate Professor of Medicine (1912-16), University and Bellevue Hospital Medical College



Hermann M. Biggs



Fig 51 Typhoid Mary breaking skulls into skillet 1909



SARA J. BAKER

Sara Josephine Baker (1873–1945)

Alumna, Class of 1917, University and Bellevue Hospital Medical College; Lecturer (1920–32), University and Bellevue Medical College



OPPOSITE PAGE, FROM LEFT: An article in the *New York American* about Typhoid Mary. Portrait of Sara J. Baker. THIS PAGE, FROM LEFT: The Little Mothers' League was a program set up by Baker and the New York City Department of Health in 1909-10 to teach young girls how to feed and care for babies. Members of the Little Mothers League for Better Babies, c. 1920.



Baker, an 1898 graduate of the Woman's Medical College of the New York Infirmary, was the first woman to earn a doctorate in public health from NYU's medical school. She interned at the New England Hospital for Women and Children in Boston where she observed the connection between poverty and ill health, and went to work for the New York City Department of Health. In 1907 Baker was made assistant commissioner of health, and she was instrumental in helping track down and quarantine "Typhoid Mary," an asymptomatic carrier of typhoid whose cooking had unwittingly infected dozens of New Yorkers.

Baker was appointed director of the city's new Bureau of Child Hygiene in 1908, and developed programs for midwife training, basic hygiene, and preventive care. She expanded the city's school nurse program, home visits by city nurses to new mothers, well baby and milk distribution stations throughout the city, and the Little Mothers' Leagues to teach young girls how to care for their infant siblings while their mothers went out to work. During her tenure, between 1908 and 1914, the mortality rate for children under one year dropped more than 40 percent. Baker's program became a model for programs in other cities and for the United States Children's Bureau, which was established in 1912.



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CLINICIANS | Advancing the Quality of Medical Care

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CLINICIAN

(noun) a physician or other qualified person who is involved in the treatment and observation of living patients; one who assists in the identification, prevention, or treatment of an illness or disability.

ON THE PREVIOUS SPREAD: Cardiac Clinic at the New York Post Graduate Hospital in 1910.

NYU Langone Medical Center physicians and researchers have always pushed the limits of medicine, expanding its scope and redefining its functions. Disciplines like pediatrics, forensic medicine, rehabilitation medicine, surgery, and psychiatry have been pioneered or developed at NYU School of Medicine to better serve patients and to advance the practice of medicine everywhere. Innovative surgical procedures and treatment options have prolonged lives, diagnostic screening and early treatment have prevented unnecessary suffering, and a better understanding of the emotional needs of patients and their caregivers has radically transformed medical care today.



In 1917 Lincoln became one of the first female physicians to be accepted as an intern at Bellevue Hospital, where she later recalled being advised to take her meals with the nurses, but insisted on eating with the other interns. She founded the Chest Clinic of the Children's Medical Service at Bellevue Hospital in 1922 and directed it until her retirement in 1956, studying the progress of the disease among children and testing many possible treatments. In the 1930s, one in every five children admitted to Bellevue with tuberculosis died, usually within a year. Thanks in part in Lincoln's studies of the new drugs streptomycin, promixole, and isoniazid in the 1940s and '50s, the death rate declined dramatically.

Lincoln joined the faculty of the University and Bellevue Hospital Medical College in 1930, and 20 years later was named clinical professor of pediatrics. In 1939 Lincoln was elected chair of the pediatric section of the New York Academy of Medicine. Lincoln wrote extensively on pediatric tuberculosis, including a book, *Tuberculosis in Children* (1963), co-authored with Edward M. Sewell. In 1951 she received the Elizabeth Blackwell Award conferred by the American Medical Women's Association to a woman physician who has made the most outstanding contributions to the cause of women in the field of medicine, and in 1959 she was awarded the Trudeau Medal of the National Tuberculosis Association for her early work with chemotherapy for the treatment of childhood tuberculosis.



OPPOSITE PAGE: Young boys with tuberculosis on the babies sun porch at the New York Post Graduate Hospital.
THIS PAGE FROM LEFT: Lincoln with a young TB patient. The Trudeau Medal, which Lincoln received in 1959 for lifelong major contributions to prevention, diagnosis, and treatment of lung disease. Photo of Edith Lincoln sitting on an ambulance, from *A History of a Pediatrics Department*, by Joseph Dancis.



Edith M. Lincoln (1891–1977)
 Founder and Director (1922–56), Children's Chest Clinic, Bellevue Hospital; Instructor (1930–50), University and Bellevue Medical College; Clinical Professor of Pediatrics (1950–56), New York University School of Medicine.

EDITH M. LINCOLN



The first African-American woman to graduate from University and Bellevue Hospital Medical College, Chinn interned at Harlem Hospital, but was denied hospital privileges there and elsewhere in New York. She became a family doctor in Harlem, performing major medical procedures in her patients' homes and minor procedures in her office. She was finally granted admitting privileges at Harlem Hospital in 1940.

In 1949 Chinn joined the staff of the Strang Clinic, a premier cancer detection facility affiliated with Memorial and New York Infirmary Hospitals, and worked there for 29 years, helping to develop the Pap smear test for cervical cancer.



MAY EDWARD CHINN

May Edward Chinn (1896–1990)
Alumna, Class of 1926, University and
Bellevue Hospital Medical College

THIS PAGE, FROM LEFT:
May Edward Chinn with a young patient
in the 1930s. Honorary Doctor of
Science degree awarded to Chinn on
June 5, 1980. Portrait of May Edward
Chinn. OPPOSITE PAGE: May Edward
Chinn (second from right) in women's
suffrage march, New York City, 1919.





“What is being done for the two million persons in this country whose correctible physical disabilities prevent them from holding jobs? What happens to the thousands disabled each year from industrial, automobile and home accidents? Where can these casualties of the home front go to receive the aid they need?”

—HOWARD RUSK IN THE MEDICAL VIOLET IN 1947

HOWARD A. RUSK

The “father of rehabilitation medicine,” Rusk worked with the Army Air Force during World War II to devise rehabilitation programs for injured soldiers. He joined the NYU medical faculty in 1948 and founded the Institute of Physical Medicine and Rehabilitation, using more than \$1 million donated by Bernard Baruch. He spent his life working to improve what happens to severely disabled people “after the stitches are out and the fever is down,” as he put it in a 1982 interview.

Rusk founded the World Rehabilitation Fund in 1955 to provide technical assistance programs for rehabilitation in underdeveloped countries, and served as its president until 1982. Rusk wrote weekly on medical topics as a columnist for *The New York Times* from 1946 to 1969. He was awarded more than 11 honorary degrees.



OPPOSITE PAGE: The nearly completed Institute of Physical Medicine and Rehabilitation in 1949. The institute was renamed the Rusk Institute of Rehabilitation Medicine in 1984, in honor of Rusk. THIS PAGE, FROM LEFT: Howard A. Rusk with a patient in the 1940s. Rusk in his office, 1966. A disabled patient in physical rehabilitation at the Rusk Institute.



Howard A. Rusk (1901–1989)
Founder and Director (1948–78), Institute of Physical Medicine and Rehabilitation; Professor and Chairman (1948–78), Department of Rehabilitation and Physical Medicine, and Distinguished University Professor (1978–89), New York University School of Medicine





STELLA CHESS

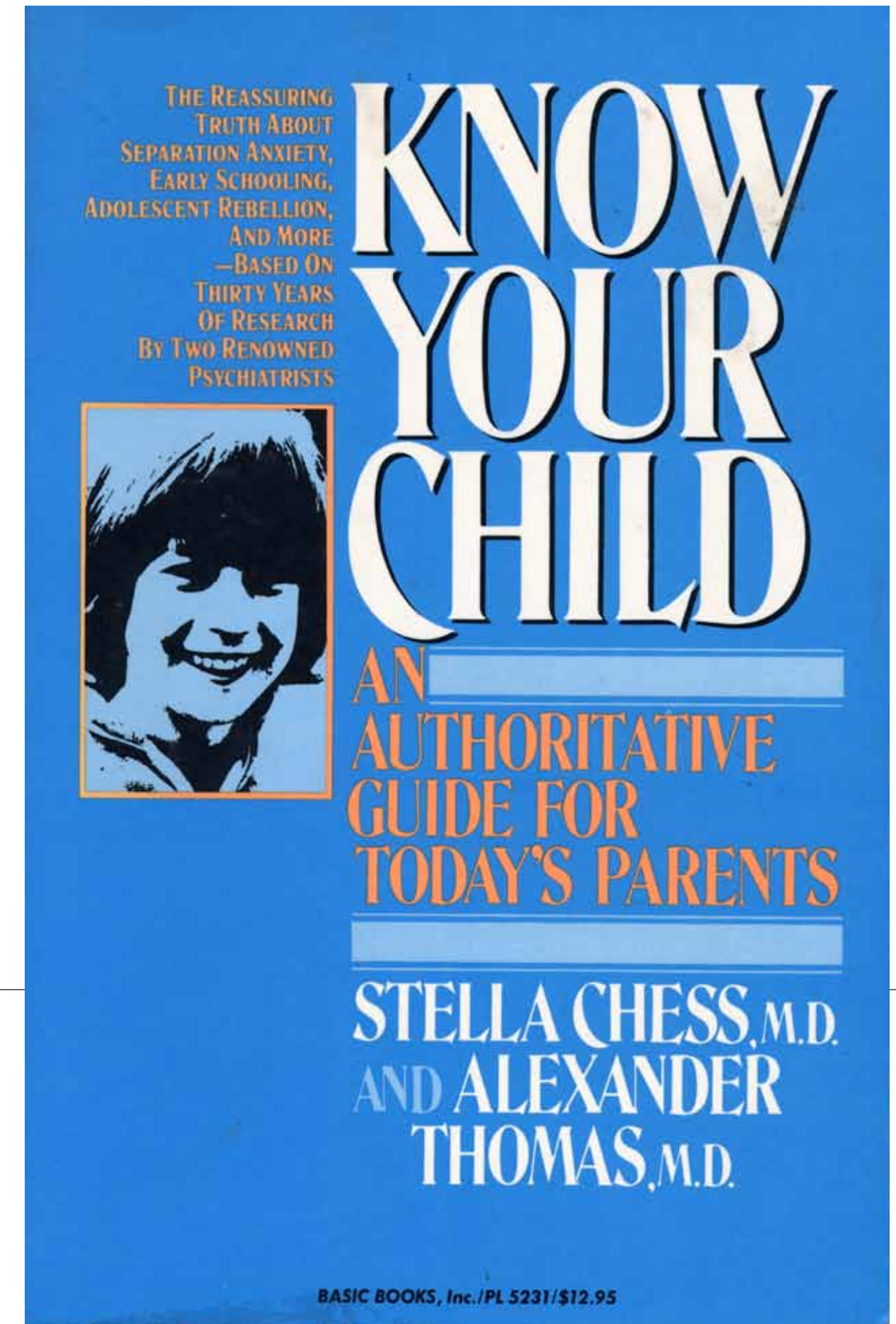
Stella Chess (1914–2007)
Alumna, Class of 1939, New York University
College of Medicine; Professor of Pediatric
Psychiatry (1966–2006), New York University
School of Medicine

Activity
Persistence & Attention span
Regularity Distractibility
Sensitivity Adaptability
Intensity Mood
Initial Reaction

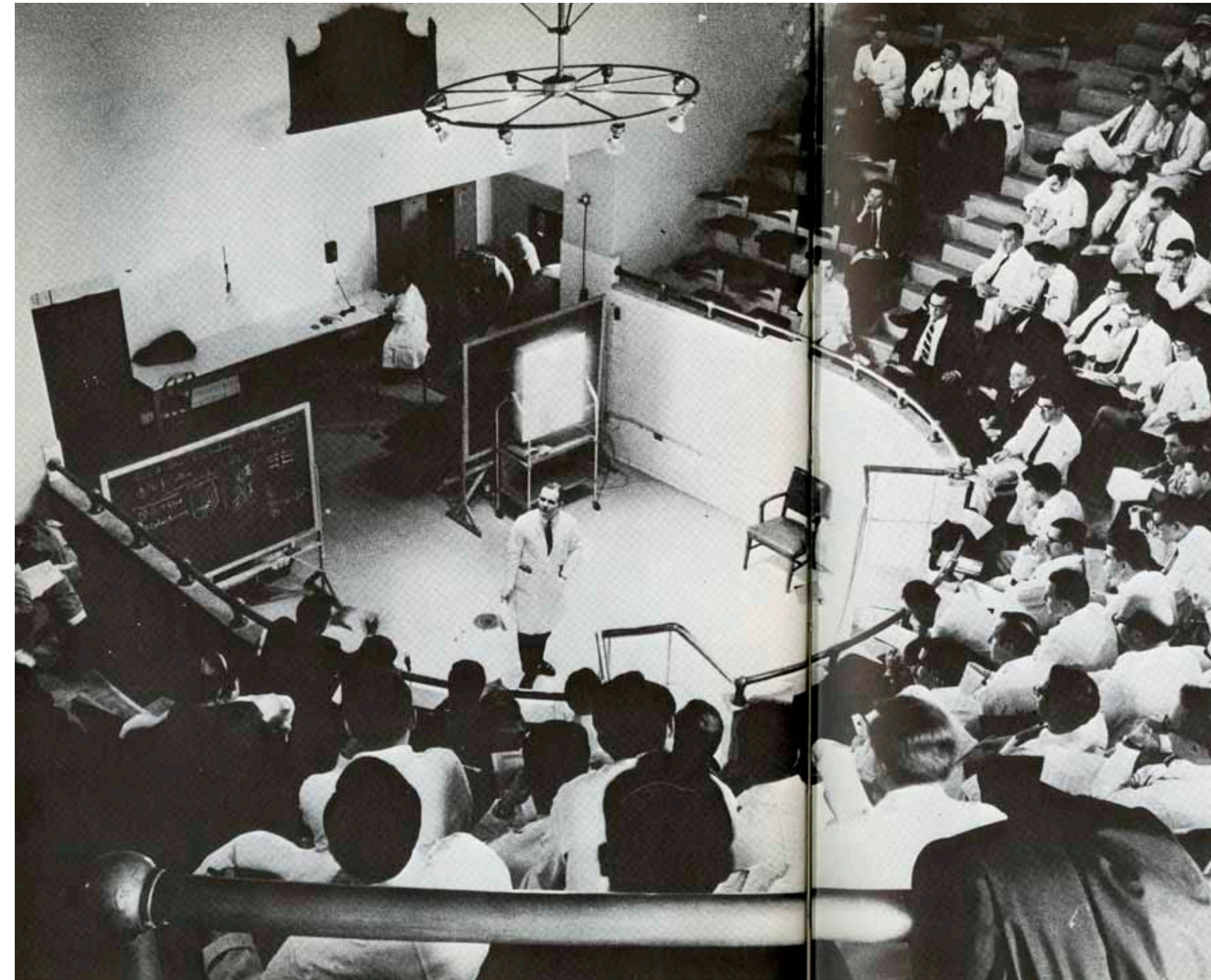
Chess and her husband, Alexander Thomas, originated the New York Longitudinal Study, begun in 1956 and still ongoing, in which 133 children were carefully observed from infancy to adulthood. The study identified nine distinct and characteristic qualities—or traits—that constituted what came to be called the temperament of the child. She documented three broad categories of temperament: “the easy child,” “the difficult child,” and “the slow-to-warm-up child.” She also challenged the notion that children’s personality problems are caused by bad parenting.

During the 1960s and ’70s Chess studied psychiatric disorders in children who had contracted rubella, or German measles, and explored the possibility that the rubella virus was a cause of autism. She was the author of several popular books for parents, including *Know Your Child* (1987) and *Temperament and Development* (1977), written with Thomas, and a practical book for parents, *Your Child Is a Person* (1965) with Thomas and Herbert Birch.

OPPOSITE PAGE, FROM LEFT: Portrait of Stella Chess. Stella Chess in 1974.
THIS PAGE: The nine distinct and characteristic qualities of children, as identified by the New York Longitudinal Study, which was started by Chess and her husband. Chess’s book (with her husband Alexander Thomas) on children’s temperament, *Know Your Child*, published in 1987.



“Vivid in the N.Y.U. medical student’s memory is the barely audible voice of Dr. Frank C. Spencer looking in the eyes of a chief resident standing in ‘the pit’ and asking, ‘What did you learn?’” —1969 MEDICAL VIOLET



A pioneer in open-heart surgery, Spencer introduced at Bellevue Hospital techniques developed by John W. Kirklin at Mayo Clinic that successfully used a Gibbon-type pump-oxygenator to maintain circulation during surgery. What was originally a highly risky surgery became an almost routine procedure, and Bellevue Hospital became a national center for open-heart surgery. Spencer’s seminal work on coronary artery bypass grafting and other techniques helped form the foundation of modern-day cardiac surgery. Spencer also made important contributions in general cardiothoracic surgery (including reoperative surgery), surgery for congenital heart disease, valvular heart surgery, thoracic aneurysm and experiments with artificial hearts.

In addition to surgery, administrative responsibilities, and publishing, Spencer has always made teaching a major priority, and has received numerous accolades for his teaching and interest in his students. He has been equally involved in maintaining strong relationships with his colleagues—house staff, faculty, and national surgical associations. Spencer initiated the weekly Surgical Mortality-Morbidity Conference at Bellevue and has conducted the majority of these over three decades.



The Alumni of
New York University
Are Proud to Acclaim
Frank Cole Spencer
a
Great Teacher

In recognition of singular accomplishment in leading students to knowledge and understanding, and of dedication and intellectual integrity representative of the highest ideals of the teaching profession.

Thomas J. Kane
President
ALUMNI FEDERATION

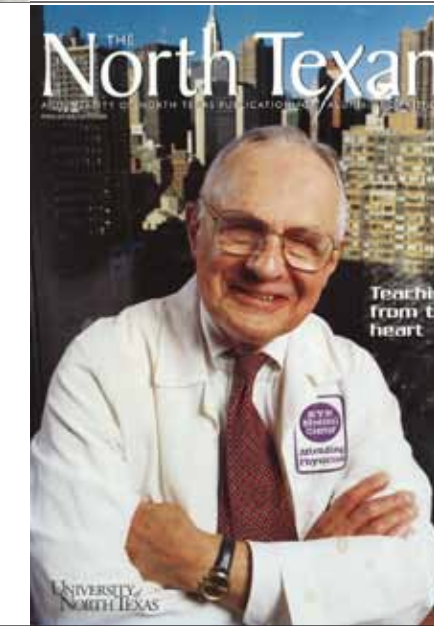
Joseph M. Cudde
Executive Vice President
ALUMNI FEDERATION

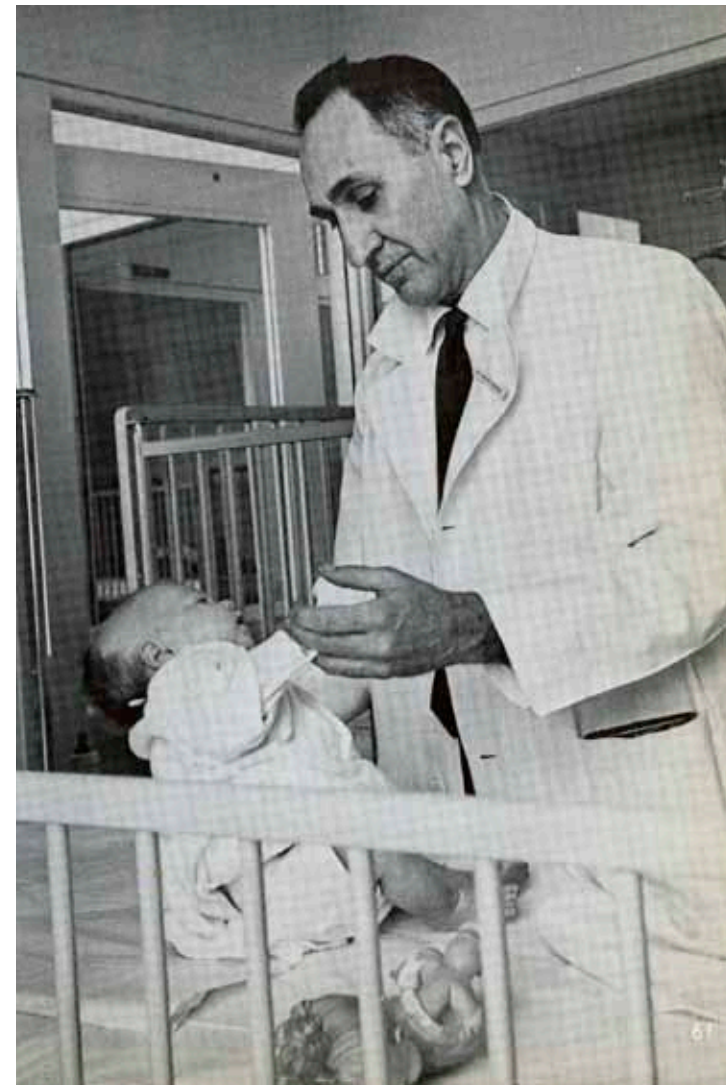
APRIL 18, 1977

FRANK C. SPENCER

Frank C. Spencer
(b. 1925)
Professor of Surgery and
Chairman (1966–98),
Department of Surgery,
New York University
School of Medicine

THIS PAGE: Spencer lecturing to a class in 1969. OPPOSITE PAGE, FROM LEFT: Frank C. Spencer in 2005. Spencer in the 1969 *Medical Violet*. In 1977 Spencer received the Great Teacher Award from the NYU Alumni Federation (now the NYU Alumni Association).





THIS PAGE, FROM LEFT: Dancis in the 1969 *Medical Violet*. Dancis received Bellevue Hospital's "TLC" Tender Loving Care Award for his caring work with children. He is pictured here with Cindy, a young patient who was diagnosed with and treated for maple syrup urine disease. Story from *NYU Medical Center News* (October 1965) announcing that Dancis had received the Borden Award from the American Academy of Pediatrics for "outstanding achievements in research related to infant nutrition and/or the development of children." OPPOSITE PAGE: Dancis with Olivia Holt, wife of Luther Emmitt Holt, chairman of the Department of Pediatrics, 1944–1960, at the opening of the Holt Room.

JOSEPH DANCIS
"TLC" Tender Loving Care Award

Children of Bellevue joins the colleagues and friends of Doctor Joseph Dancis, outgoing Chairman of the Department of Pediatrics, to thank him for his many years of dedicated service to Bellevue's youngest patients.

Dr. Dancis joined Bellevue Hospital as a Resident in Pediatrics in 1946 and was appointed Chairman of the Department in 1974.

TLC or Tender Loving Care was first used by a Bellevue physician in the 1930's when she prescribed it for babies who failed to thrive. It was soon adopted nationally.

Children of Bellevue presents the first "TLC" (Tender Loving Care) award to Joseph Dancis, a humanitarian, renowned research scholar and beloved doctor to Bellevue's children.



A pediatrician and a research scientist, Dancis was a pioneer in the study of the placenta and its crucial role in the immediate welfare of the fetus and newborn, as well as its contribution to some late-appearing adult diseases, such as hypertension and diabetes. He advanced the understanding of the role of the placenta as an organ of synthesis and maternal-fetal transport, and made major contributions to knowledge about genetic diseases including maple syrup urine disease, Lesch-Nyhan disease, dysautonomia, and Sellweger's syndrome. He later developed an interest in the transfer and metabolism of anti-HIV drugs intended for use during pregnancy to protect the fetus.

In recognition of his academic excellence, Dancis was appointed chair of pediatrics at NYU School of Medicine in 1974. He led the Department of Pediatrics for the next 15 years and became mentor to many of the trainees and young faculty. In 1983 he was elected president of the American Pediatric Society and subsequently, in 1986, received its most prestigious award, the Howland Award.

COVETED HONOR BESTOWED
Dr. Dancis Wins Borden Award

the Academy, was given to Dr. Dancis for his investigations of placental transport and fetal metabolism.

Established in 1944, the Borden Award is awarded annually for "outstanding achievements in research related to infant nutrition and/or the development of children." Dr. Dancis had developed techniques to study, in the guinea pig, placental transport of nutrients and steroids. Subsequently these methods were adapted to the human and give promise of yielding basic information about nutrition and development of the fetus.

Dr. Dancis received his M.D. degree from St. Louis University in 1938 and did his residency in pediatrics at Bellevue. He has taught at the School of Medicine since 1947 and is the author of more than 40 publications. His paper, presented at the Academy's meeting, is entitled, "The Placenta and Interdisciplinary Multicategorical Phenomenon."

Dr. Joseph Dancis, FAAP, professor of pediatrics, was presented the 1965 Borden Award of the American Academy of Pediatrics on October 25 at the Academy's annual meeting in Chicago. The Award, consisting of \$1,000 and a gold medal, presented by Dr. Harry A. Towseley, president of



Joseph Dancis (1916–2010)
 Professor (1962–74) and Chairman (1974–89), Department of Pediatrics, New York University School of Medicine

JOSEPH DANCIS

“The movement is to make a medical education more relevant to the stated objectives of the student... and it is the students themselves who are the driving force behind this change.”

—JOSEPH DANCIS, IN *THE MEDICAL VIOLET*, 1969



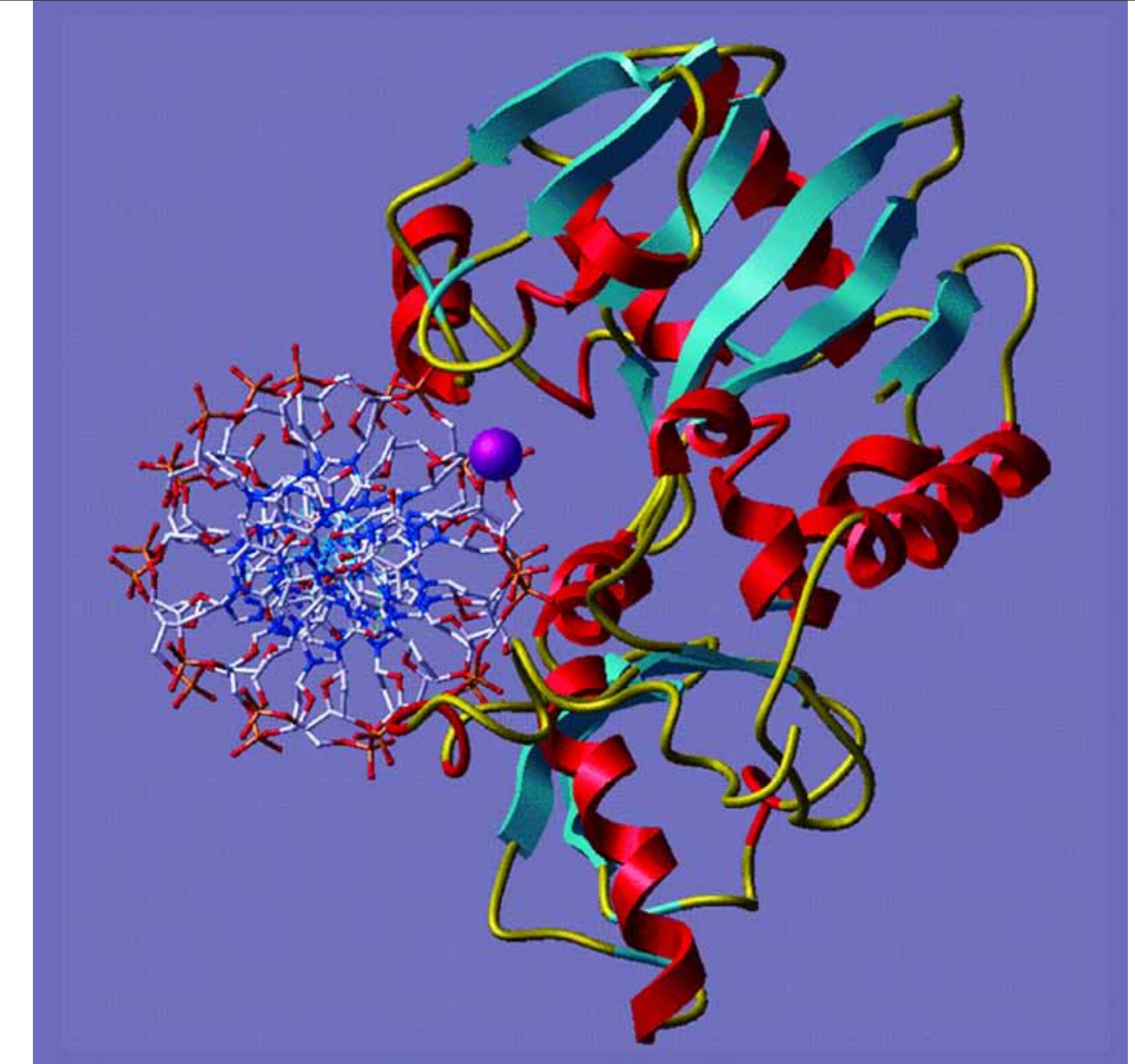
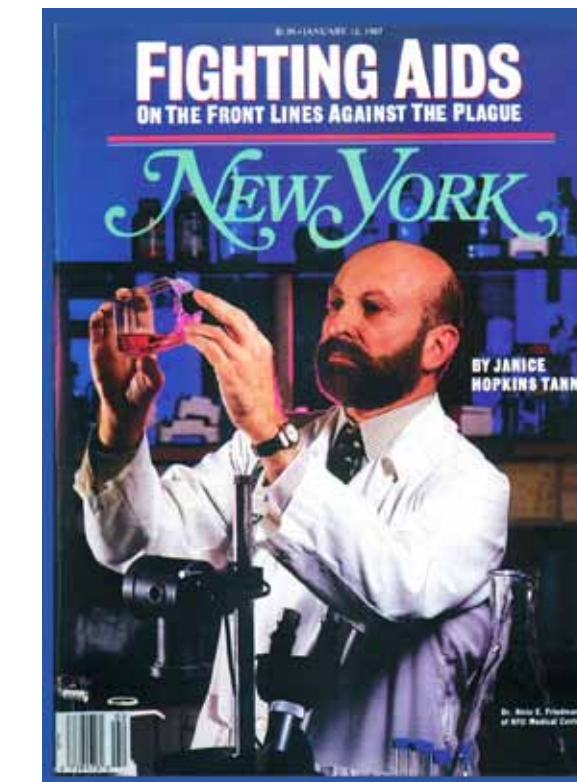
In the early 1980s, clinicians and researchers at NYU School of Medicine—a diverse group of dermatologists, infectious disease specialists, immunologists, oncologists, epidemiologists, and others—were among the first in the world to identify an alarming increase in Kaposi's sarcoma, opportunistic infections, and immune system failure among young gay men and alert public health authorities to an imminent health catastrophe, soon to be known as HIV/AIDS. As the years progressed, NYU School of Medicine faculty members wrote many of the initial papers on opportunistic infections, have been involved in the clinical development of the vast majority of drugs used for the treatment of HIV/AIDS, were the first to demonstrate in a randomized clinical study that a combination of three drugs was able to hold HIV at undetectable levels, and have contributed to the search and development of a vaccine.

NEW YORK SURVEILLANCE FIGURES 4-28-82

| Men: | | | |
|----------|--------------------|------------------|-------------|
| Disease | as P.D. (New-York) | Total (New-York) | Total (NYC) |
| KS | 82 (74) | 87 (79) | |
| PCP | 53 (47) | 70 (62) | |
| Other OI | 18 (16) | 44 (39) | |
| Total | 153 (137) | | |

| Women: | |
|----------|---|
| Kaposi's | 2 |
| PCP | 5 |
| Other OI | 0 |

*OI is Opportunistic Infection. Total cases NYC = 159 (Total reported to CDC = 325)



HIV/AIDS PIONEERS

Alvin E. Friedman-Kien, Jeffrey B. Greene, Kenneth B. Hymes, Linda J. Laubenstein, Eddie Louie, Fred Valentine, Susan Zolla-Pazner, and Colleagues

OPPOSITE PAGE: The NAMES Project AIDS memorial quilt in front of the Washington Monument. Today there are more than 44,000 panels, each representing someone who died of AIDS, making it the largest ongoing art project in the world and reminding us of the continued devastation caused by the disease. **THIS PAGE, FROM TOP:** A handwritten tally of some of the earliest cases of HIV/AIDS, as reported by clinicians from NYU School of Medicine and other healthcare facilities (1982). Alvin E. Friedman-Kien on the cover of *New York* magazine, January 12, 1987. Molecular model of MAP30, an anti-HIV protein discovered, cloned, and crystallized by Dr. Sylvia Lee-Huang in the NYU Department of Biochemistry.



THE AC

TEACHERS | Leading the Way in Medical Education

HERS

TEACHER

(noun) one who imparts knowledge or guides in the study of a subject or acquisition of a skill.

ON THE PREVIOUS PAGE: A clinic in the operating theater, c.1880.

From its origins in a master-apprentice teaching model to the team-based experience that it is today, medical education has evolved to meet the realities of its time and the expanding scope of its subject matter. New York City has always been at the forefront of educational progress, promoting scientific investigation and even licensing the first medical school for women. NYU's medical school was among the first to initiate an M.D./Ph.D. program, and today it is redefining itself yet again, to create a uniquely integrated program in which patient care, research, and education work together synergistically to the benefit of all.

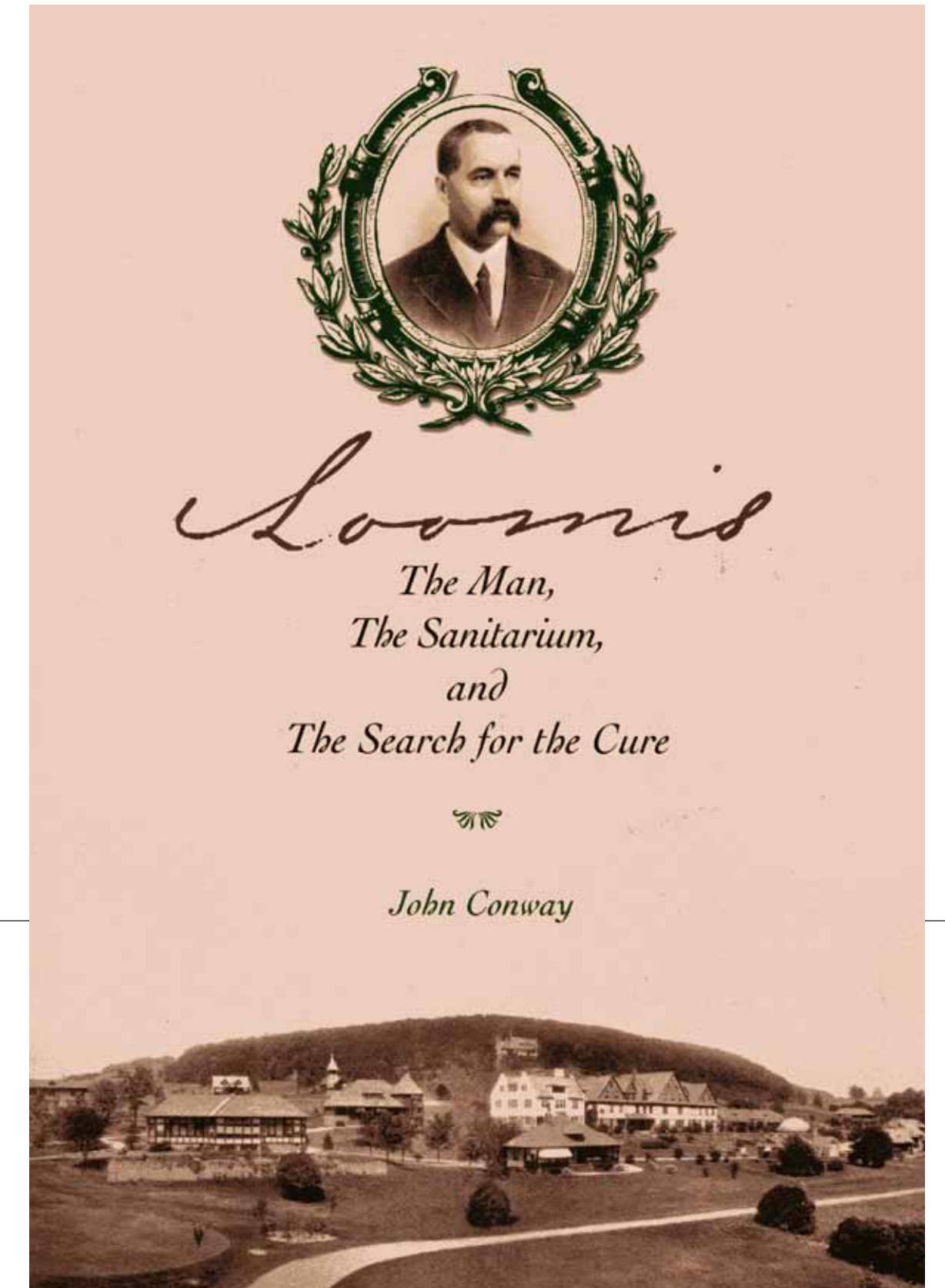


A promising young physician whose career was interrupted when he developed tuberculosis, Loomis took on diseases of the lungs and heart as his specialty. He was appointed visiting physician to Bellevue Hospital in 1859 and became professor of the theory and practice of medicine in the Medical Department of the University of the City of New York in 1866. When the medical department's building burned in May of that same year, it was largely due to Loomis's efforts that the school continued to grow steadily. The Loomis Laboratory, built in 1888, was named in recognition of his work.

Loomis was twice president of the New York Academy of Medicine (1889–90 and 1891–92), and in 1893 served as president of the Association of American Physicians.

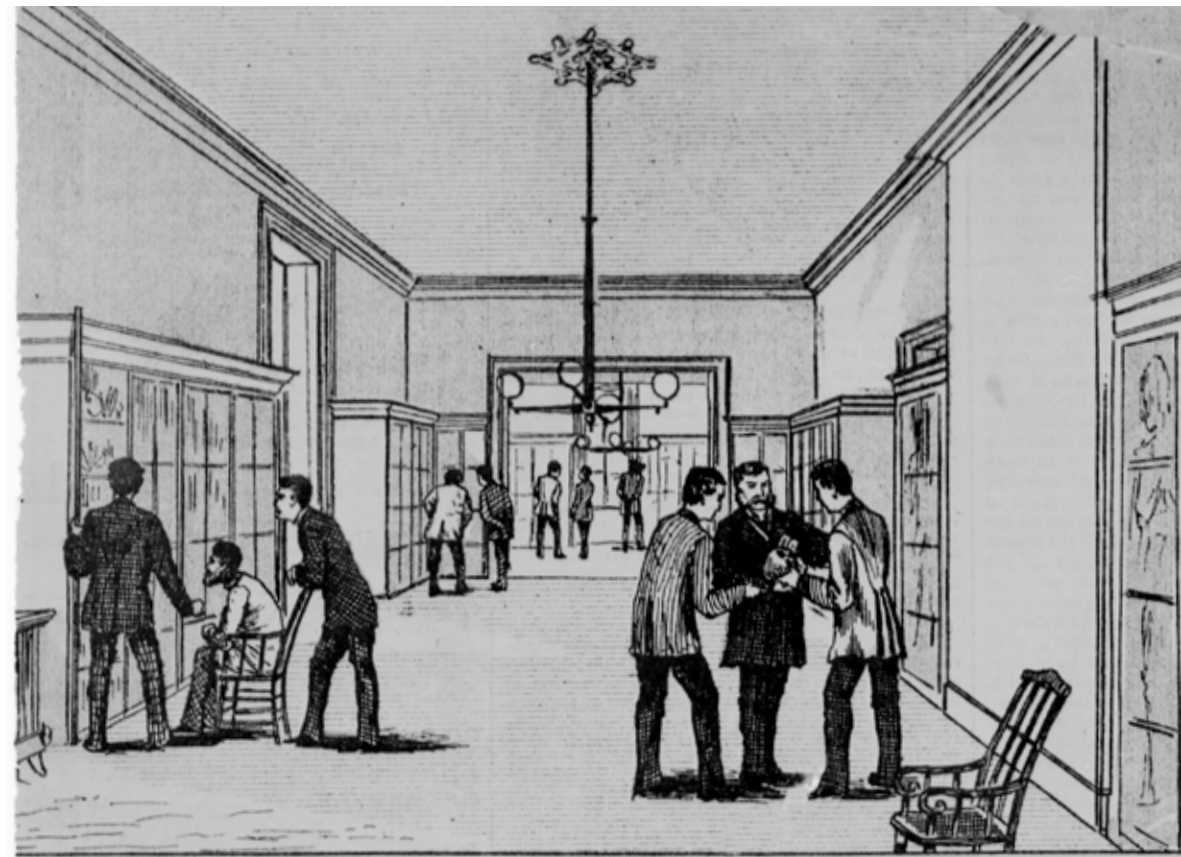


OPPOSITE PAGE: Portrait of Alfred Lebbeus Loomis.
THIS PAGE, FROM LEFT: The Loomis Laboratory, far right, built in 1888. Cover of John Conway's 2006 biography, *Loomis: The Man, The Sanitarium, and The Search for the Cure*.

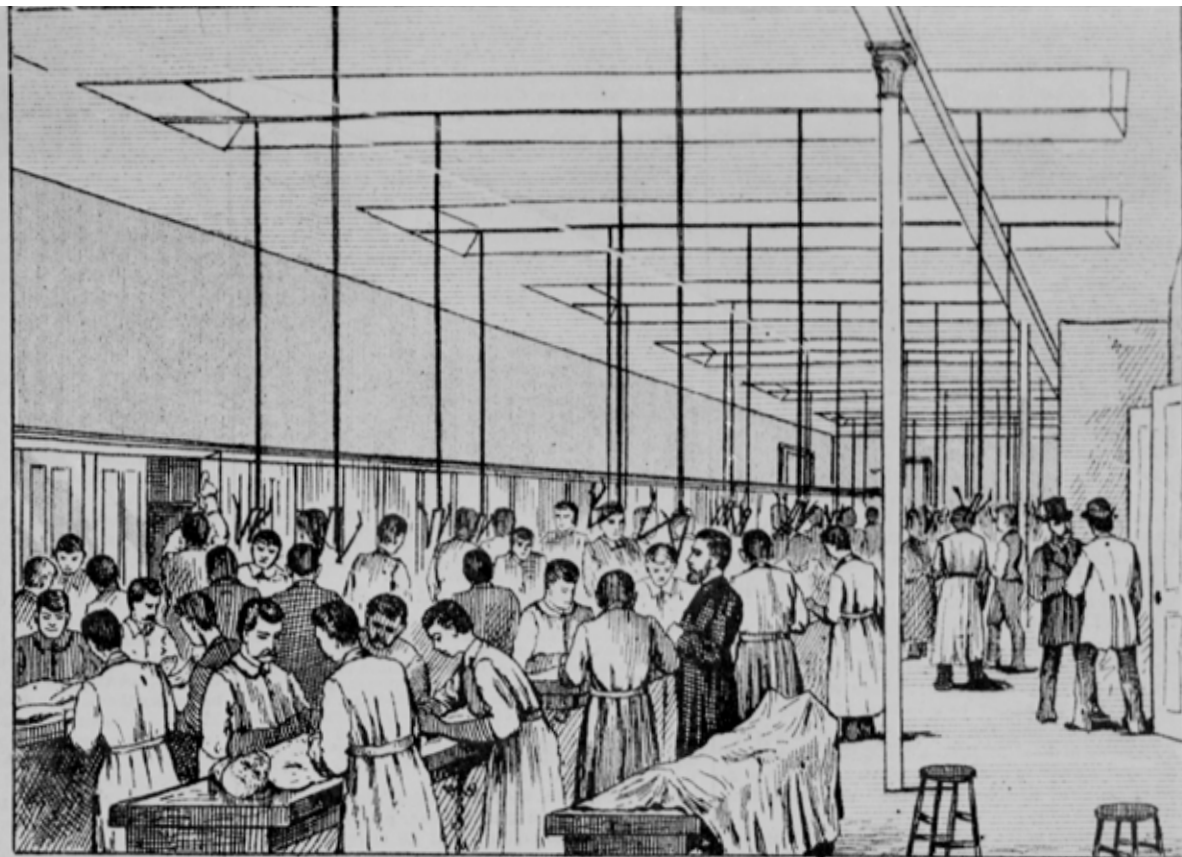


ALFRED LEBBEUS LOOMIS

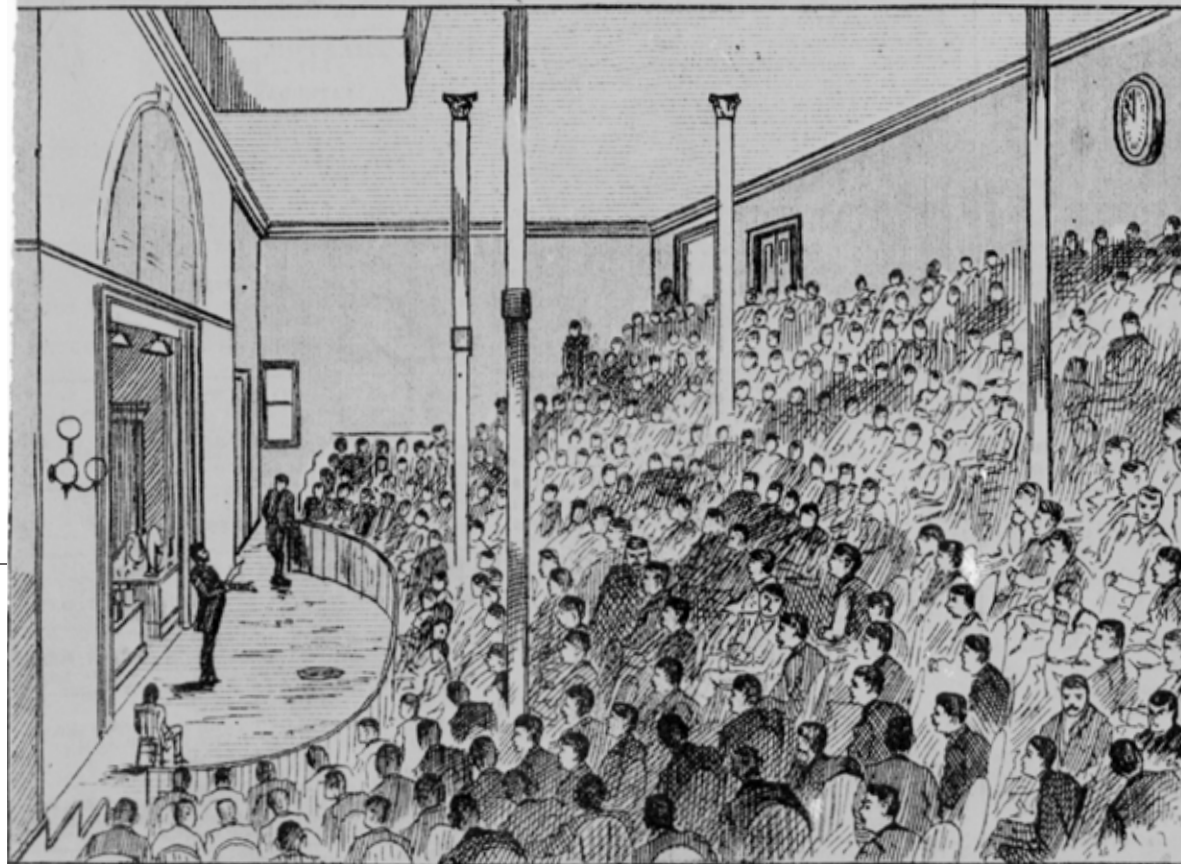
Alfred Lebbeus Loomis
(1831–1895),
Professor of Pathology and
Practical Medicine (1866–95),
Medical Department,
University of New York



ANATOMICAL MUSEUM



DISSECTING ROOM



LECTURE ROOM

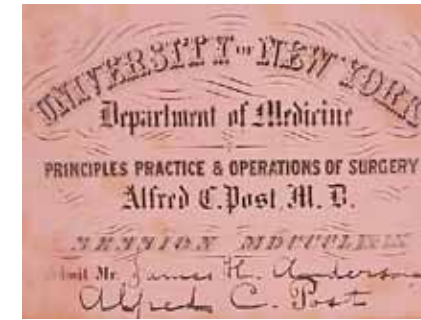


VIVISECTING ROOM

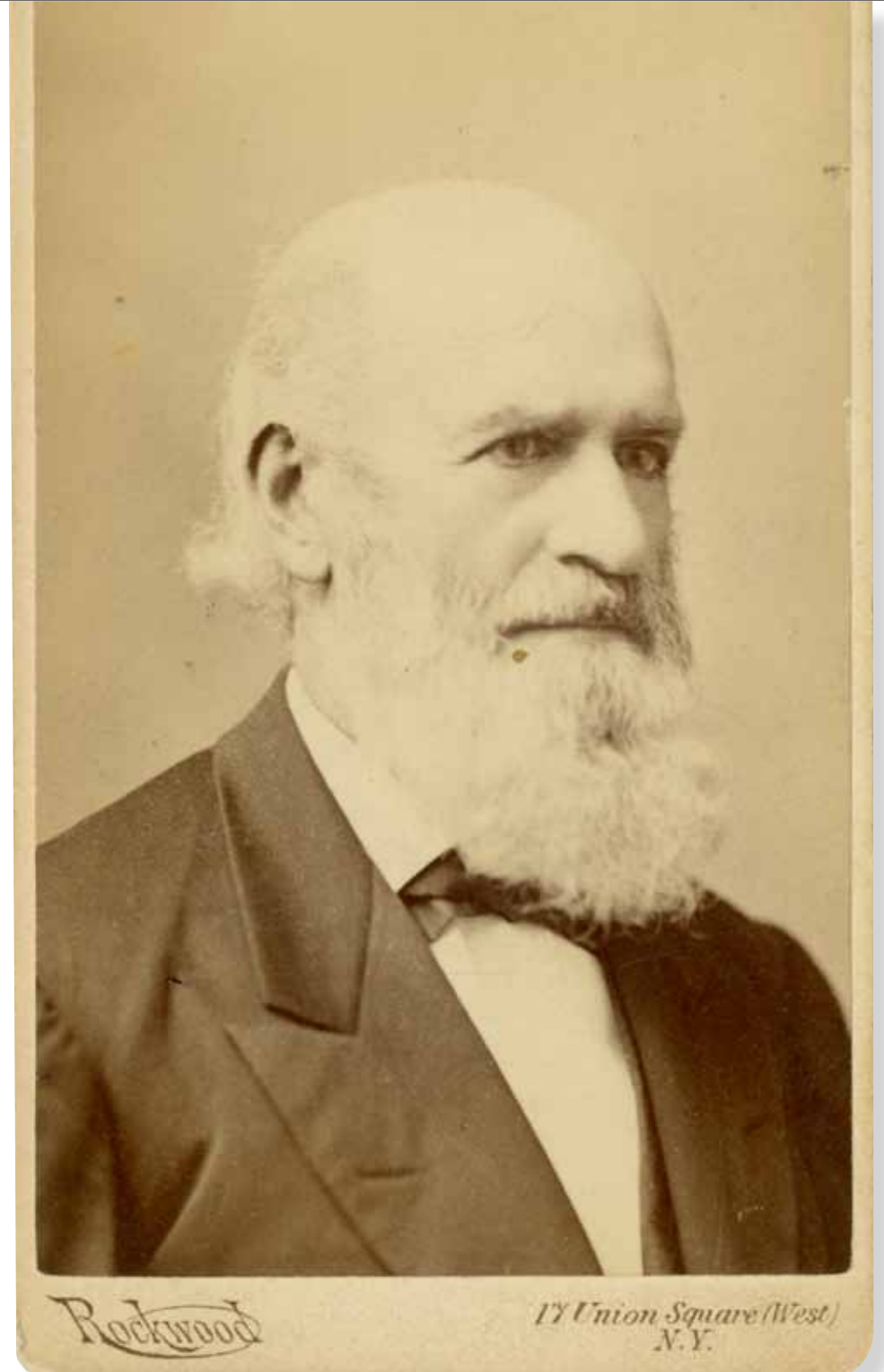
INTERIOR VIEWS IN THE NEW MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK

The Daily Graphic, September 18, 1875

OPPOSITE PAGE:
An interior view of the
Medical Department when
Post was president of the
faculty, reprinted from *The
Daily Graphic*, September
18, 1875. THIS PAGE,
FROM LEFT: Signed
lecture admission ticket for
Post's Principle, Practice
& Operations of Surgery,
for the 1859-60 Session.
Portrait of Alfred C. Post.



**Alfred C. Post
(1806-1886)**
Professor of
Surgery (1851-75),
President of the
Faculty (1873-77),
Department of
Medicine, University
of New York



Rockwood
17 Union Square (West)
N.Y.

ALFRED C. POST

A graduate of the Columbia University College of Physicians and Surgeons (1827), Post studied in Paris, Vienna, Berlin, and London, and taught at Castleton Medical College in Vermont before joining the faculty of the University of New York Department of Medicine in 1851 as professor of surgery. He became the second president of the medical faculty in 1873, a position he held until 1877. Post invented several surgical instruments and appliances and wrote *Observations on the Cure of Stammering* (1841). He was an active member of the New York Medical Missionary Society and a director of Union Theological Seminary. Post was a fellow of the Academy of Medicine (serving as its president in 1867-68), and the New York Pathological Society, of which he was elected president in 1861.

BELLEVUE VIOLET



JOHN HENRY WYCKOFF

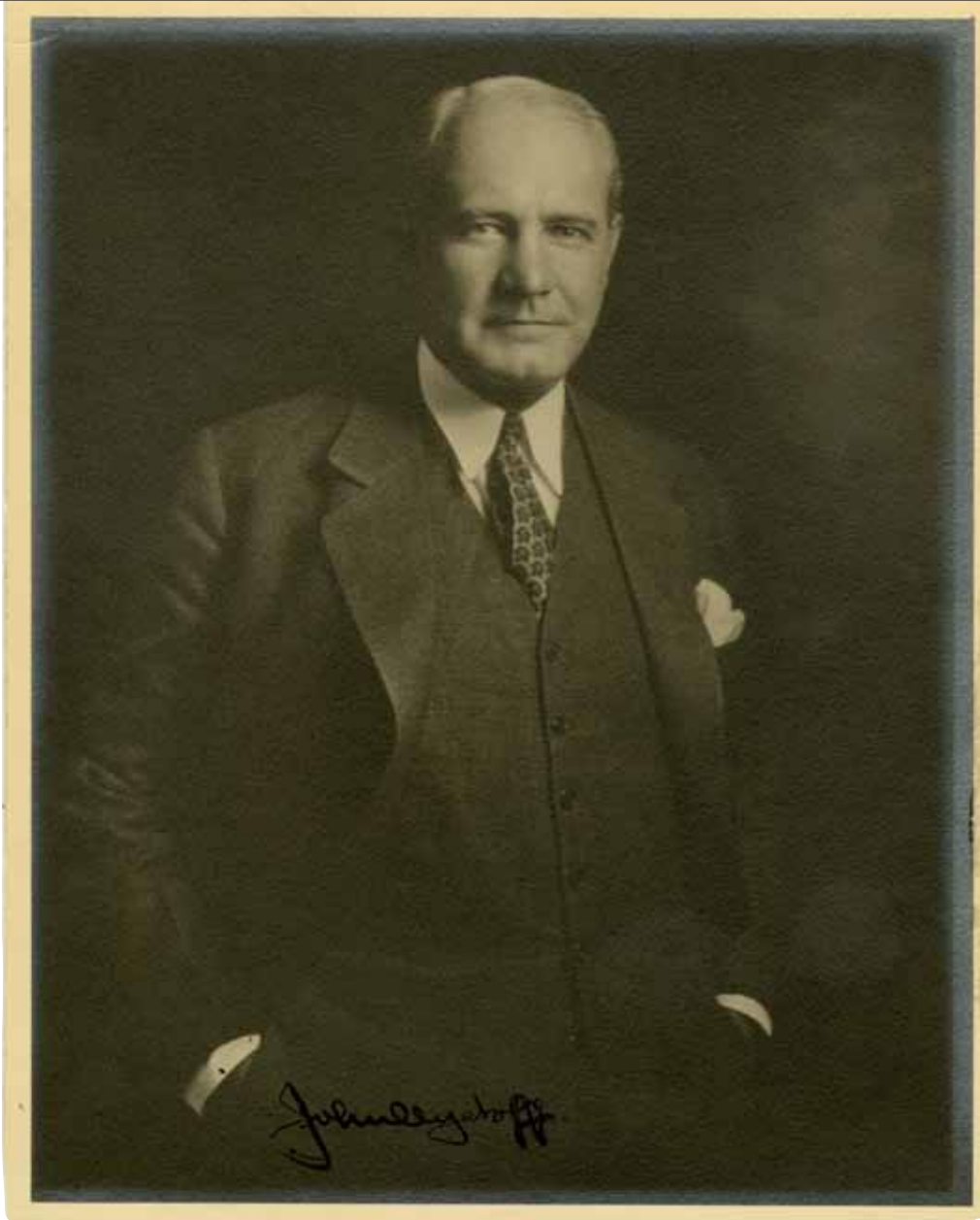
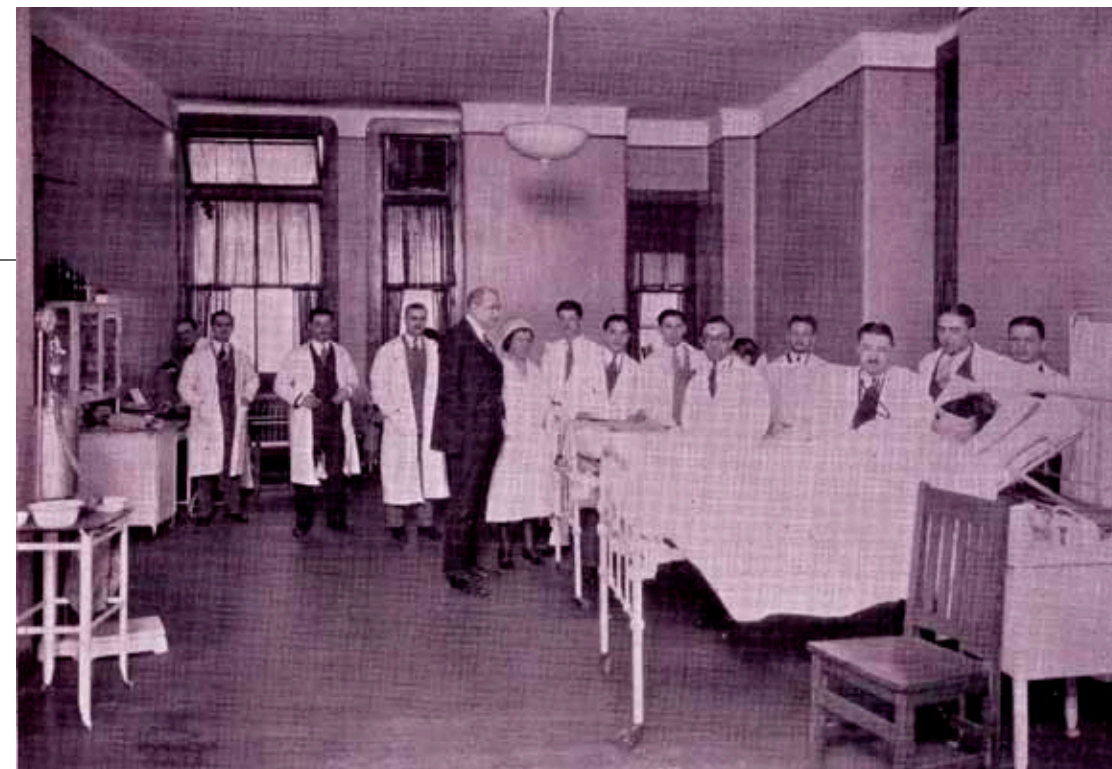
Dean

University and Bellevue Hospital Medical College

1933



THIS PAGE, FROM LEFT: Wyckoff in the 1933 *Bellevue Violet*. Wyckoff making rounds in the cardiology ward in 1926. "Jack" Wyckoff (left) while serving in the Medical Corps in France during World War I. OPPOSITE PAGE: Portrait of John Henry Wyckoff.



Wyckoff joined the faculty of University and Bellevue Hospital Medical College in 1910, soon after his graduation. He served in the Bellevue Unit of Army Medical Corps in World War I at Base Hospital No. 1 in France. As dean of the New York University College of Medicine from 1932 to 1937, Wyckoff guided it through the Depression and reorganized its divisions. Wyckoff played an important role in the admission of Jewish students fleeing Nazi Europe, encouraging liberal admission policies for these applicants, in contrast to other schools. This resulted in at least one-half of NYU students being Jewish between 1920 and 1940.

A distinguished cardiologist, Wyckoff made the Bellevue Cardiac Clinic a model for other hospitals and introduced the idea of a three-fold cardiac diagnosis—etiological, anatomical, and physiological—which became the standard diagnostic nomenclature. He is also known for his work in standardizing the dosing of the cardiac drug digitalis.

JOHN HENRY WYCKOFF

John Henry Wyckoff (1881-1937)

Alumnus, Class of 1907, University and Bellevue Hospital Medical College; Professor of Medicine (1910-32), University and Bellevue Hospital Medical College; and Dean (1932-37), New York University College of Medicine

An expert on rheumatic diseases, McEwen worked at Rockefeller Institute for Medical Research (now Rockefeller University) before joining the NYU faculty in 1932. He served as dean of the College of Medicine from 1937 to 1955. At the urging of Albert Einstein, McEwen invited Otto Loewi to join the faculty of NYU at the beginning of World War II, helping him to escape Nazi Europe. McEwen himself served in the U.S. Army Medical Corps during the war.

McEwen was instrumental in creating the Medical Center complex as it now exists and his 1956 "Report to the Medical Center Advisory Committee" outlined his vision for the Medical Center after his tenure. An internationally known authority on the hybridization of irises, he also wrote more than 100 articles on horticulture and won an award from the American Horticultural Society.



THE SIBERIAN IRIS

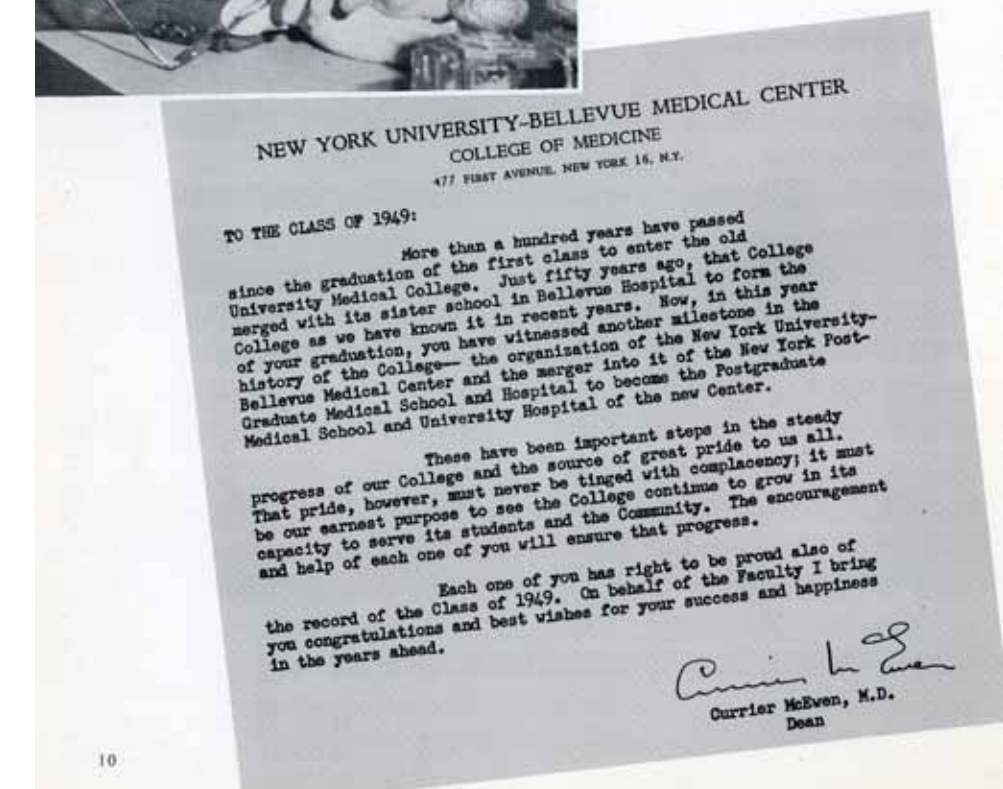


Currier McEwen

O. Currier McEwen (1902-2003)
 Alumnus, Class of 1926, University and Bellevue Hospital Medical College;
 Professor of Medicine (1932-70),
 Dean (1937-55), New York University College of Medicine



Currier McEwen M. D.
 DEAN

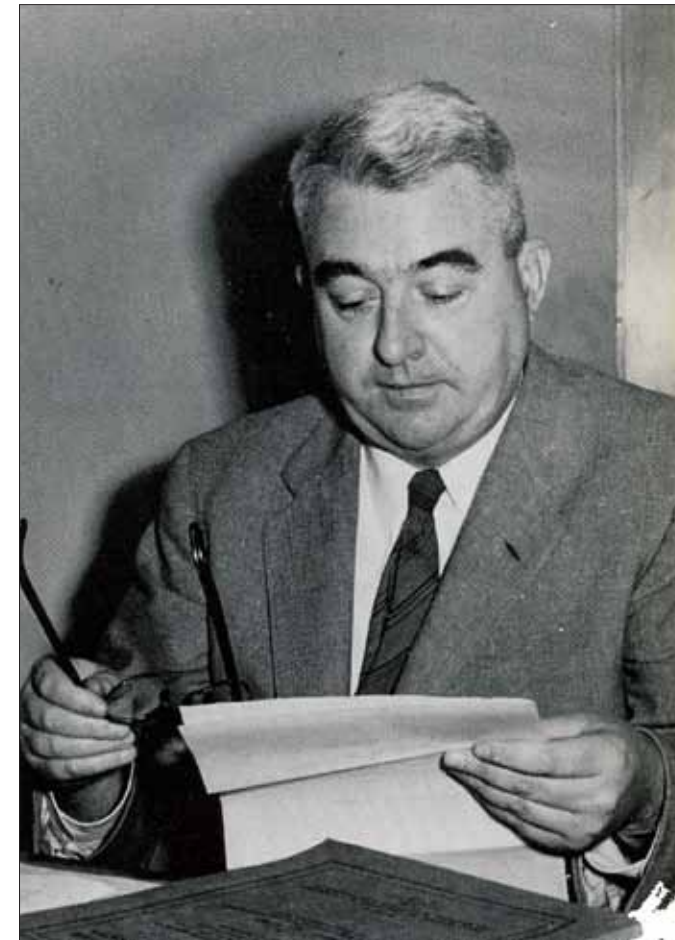


THIS PAGE, FROM LEFT: Portrait of O. Currier McEwen. McEwen (left) as a member of the U.S. Army Medical Corps during World War II.
 OPPOSITE PAGE, FROM LEFT: Cover of McEwen's *Siberian Iris* (1981). Dean McEwen's statement from the 1949 *Medical Violet*.

O. CURRIER MCEWEN

“When the laboratories of teaching and research will be housed in worthy and adequate buildings, when the student body will have proper living and recreational quarters with dining and reading rooms, and when the medical library will have grown, (our Center) will have become a mecca for all past and present students.”

—DONAL SHEEHAN, IN THE 1943 MEDICAL VIOLET



IN the December 1943 issue of the Medical Violet, I expressed hope that, “when the laboratories of teaching and research will be housed in worthy and adequate buildings, when the student body will have proper living and recreational quarters with dining and reading rooms, and when the medical library will have grown (our Center), will have become a mecca for all past and present students.”

As I return to writing once more the Dean’s message to the graduating class, it is good to find that these dreams are becoming a reality. We are established in our new quarters just over a year and find them functionally excellent, if sometimes a little distracting because of the exciting sweep and bustling activity of the East River that pulls our gaze to the windows and our minds from its work.

As I write, in my ears, and sometimes I think into my skull, clash the hammer strokes of the pile drivers as they lay the foundations for the new Hall of Residence. In the front of the building there appeared on Alumni Day a bulldozer which is tearing the earth greedily to prepare us for new lecture halls and Alumni Hall. We did not hope in vain—12 years ago.

And so may your hopes of today also come true. And may you go into your special fields of medicine with the good wishes and the true friendship of all your teachers and in the light of understanding which your school has given to you.

Sincerely yours,
DONAL SHEEHAN
Dean

DONAL

Donal Sheehan (1908–1964)
Professor of Anatomy (1937–63) Acting Dean (1943–46),
and Dean (1955–60), New York University College of Medicine

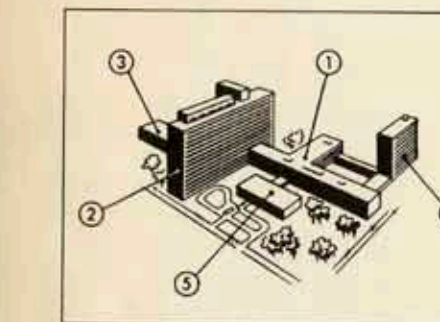
SHEEHAN

Sheehan and Taylor wrote “The Mission of a Medical School” in 1945, which was based in part on Jose Ortega y Gasset’s “Mission of a University.” This vision of a future NYU medical school called for “worthy and adequate buildings,” as well as “a program of graduate education,” “expansion of the activities of the university,” “close proximity to Bellevue Hospital,” “flexibility and individuality in learning,” and “confidence in research.” The document became the basis for a long-range plan and helped build the NYU Langone Medical Center of today.

Obstetrics and Gynecology



The University section of the Medical Center as it will appear from the air is shown in the above photograph of the architect’s model. In the background appears the Franklin D. Roosevelt (East River) Drive; the large street in the foreground represents First Avenue. To the far left may be seen a part of 31st Street, and in the right foreground is 30th Street. These four streets mark the boundaries of the University section.



To the left is a key showing the principal units.

1. Main Building, to house laboratories, classrooms, and library for the New York University College of Medicine and Post-Graduate Medical School
2. University Hospital
3. Institute of Physical Medicine and Rehabilitation and University Clinic
4. Hall of Residence
5. Alumni Hall Auditorium

The Mission of a Medical School

PROSPECTUS OF NEW YORK UNIVERSITY
COLLEGE OF MEDICINE AND UNIVERSITY HOSPITAL
PREPARED BY THE FACULTY OF MEDICINE
NEW YORK UNIVERSITY

Second Edition (Revised)



NEW YORK UNIVERSITY PRESS, NEW YORK, N.Y.

1950

HOWARD

Howard C. Taylor, Jr. (1900–1985)
Professor of Obstetrics and Gynecology (1935–46),
New York University College of Medicine

C. TAYLOR, JR

OPPOSITE PAGE: Donal Sheehan, pictured in the 1956 *Bellevue Violet*.
THIS PAGE, FROM LEFT: Howard C. Taylor, Jr., pictured in the 1945 *Bellevue Violet*. “The Mission of a Medical School” (1950) laid out a plan for a new NYU medical center.

Booklist
Chicago Ill
JAN 1 1954

Smith, Homer William. *From fish to philosopher.* 1953. 264p. illus. Little, \$4.
Evolutionary development is shown through the kidney function and its adaptation to diverse habitations. The author uses research and a specialized knowledge of physiology and writes as a scientist with an original point of view and a clarity and ease that make fascinating though not popularized reading. Technical notes and a bibliography are appended.
575.6 Evolution || Kidneys || Consciousness 53-7332

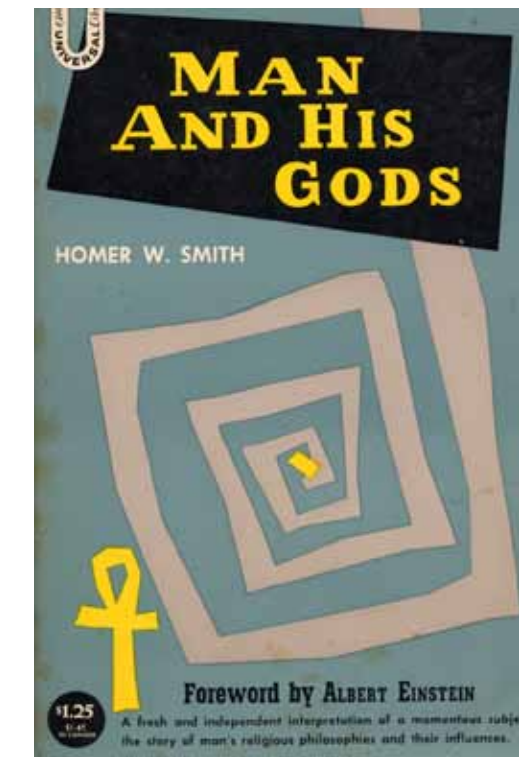
How Fitting
"Man of That Kidney"
JAN 3 1954

How Fitting "Man of That Kidney"!
From Fish to Philosopher, by Homer W. Smith. Little, Brown & Co., \$4.
Man's origin has always been a subject of great interest to man, as evidenced by the number of books on evolution published each year. Although the ratio of speculation to fact is high in this field, new points of view as well as new facts are always worthy of attention. Dr. Homer W. Smith's latest book, on the evolutionary development of the kidney and its relationship to the development of man, offers no new facts but its novel approach is fresh and stimulating.
Dr. Smith, a man of considerable literary ability...

Press
Cleveland Ohio
JAN 3 1954

Scientist Says Man Evolved From Worm
In Homer W. Smith's *FROM FISH TO PHILOSOPHER* (Little, Brown, \$4) there is a description of the probable ancestors of man, a worm-like creature.
This creature did not exist, and Smith's hypothesis may be no more correct than the reconstruction of our first happy ancestors, Pliocene Man. Yet it is ingenious and probably, to a scientist, soul satisfying.
Smith belongs to that group of scientists for whom George Gaylord Simpson is often a spokesman. He quotes Simpson at some length, and Simpson returns the favor via a jacket blurb for the book. They believe that man was certainly not the goal of evolution, which had no goal. He was not planned in an operation wholly planless. . . . "His rise was neither insignificant nor inevitable. . . ."
—By MAXWELL RIDDLE

While admittedly writing from a restricted point of view, Dr. Smith has tried to keep technical discussion at a minimum and relate the kidney to the more general aspects of evolution at all times. Nevertheless, it is inevitable from the nature of the material that physiological technicalities constitute a considerable portion of the book. Because of this the book will be easier reading for physicians and physiologists than for the general public.
GEORGE M. PIKE, M. D.

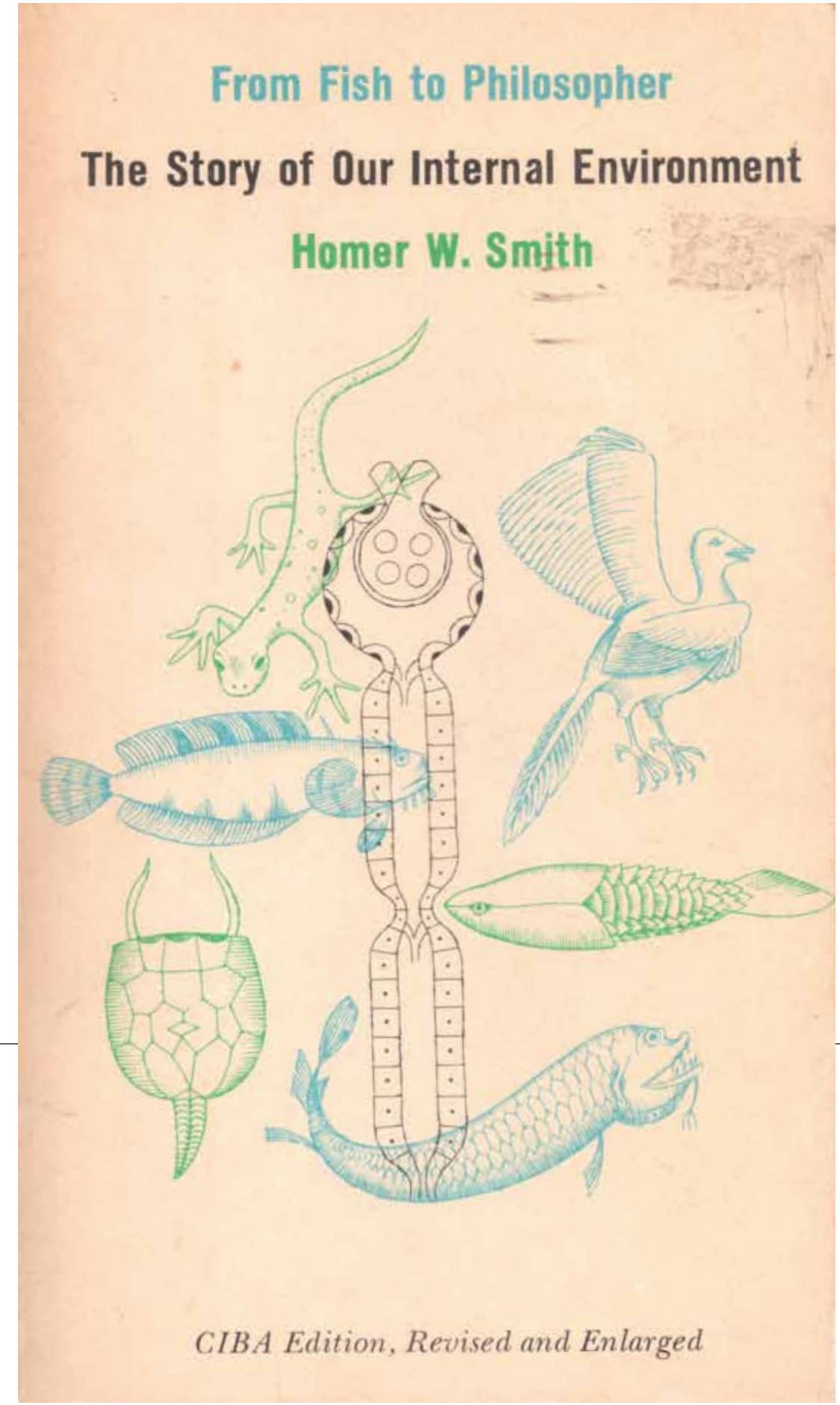


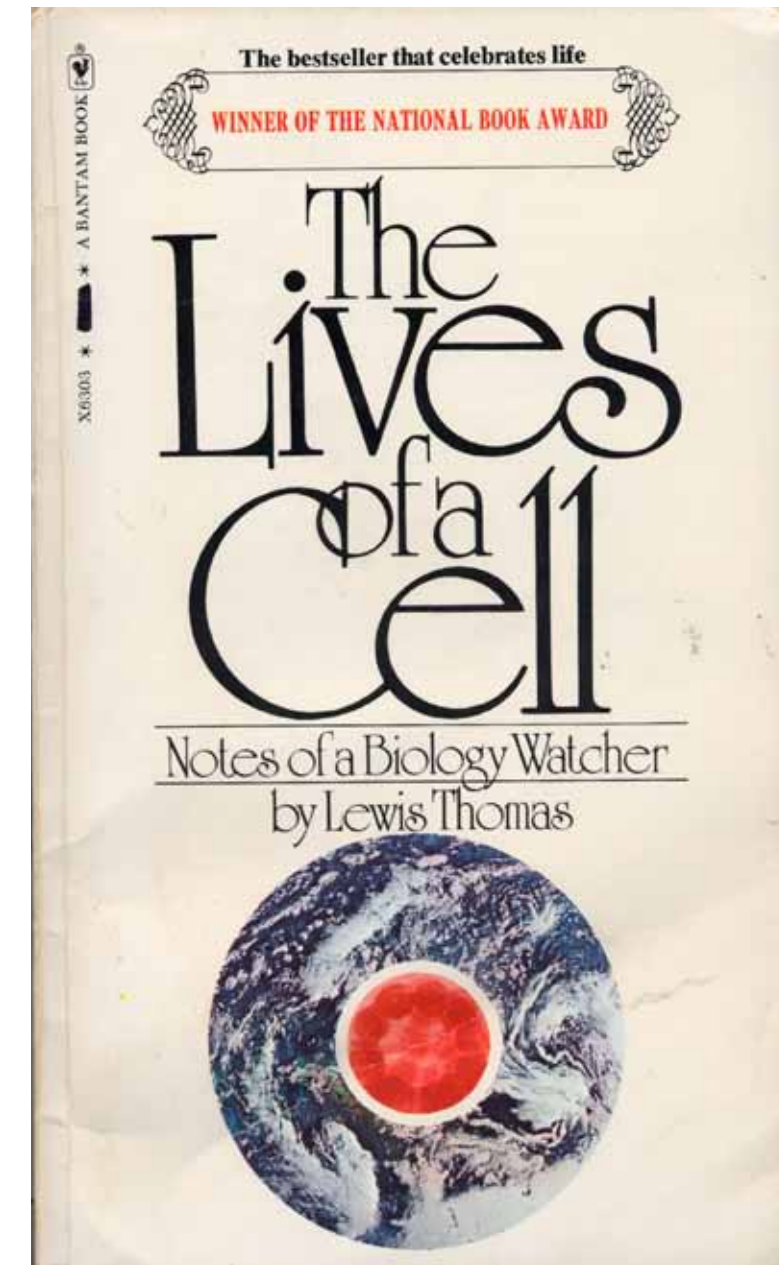
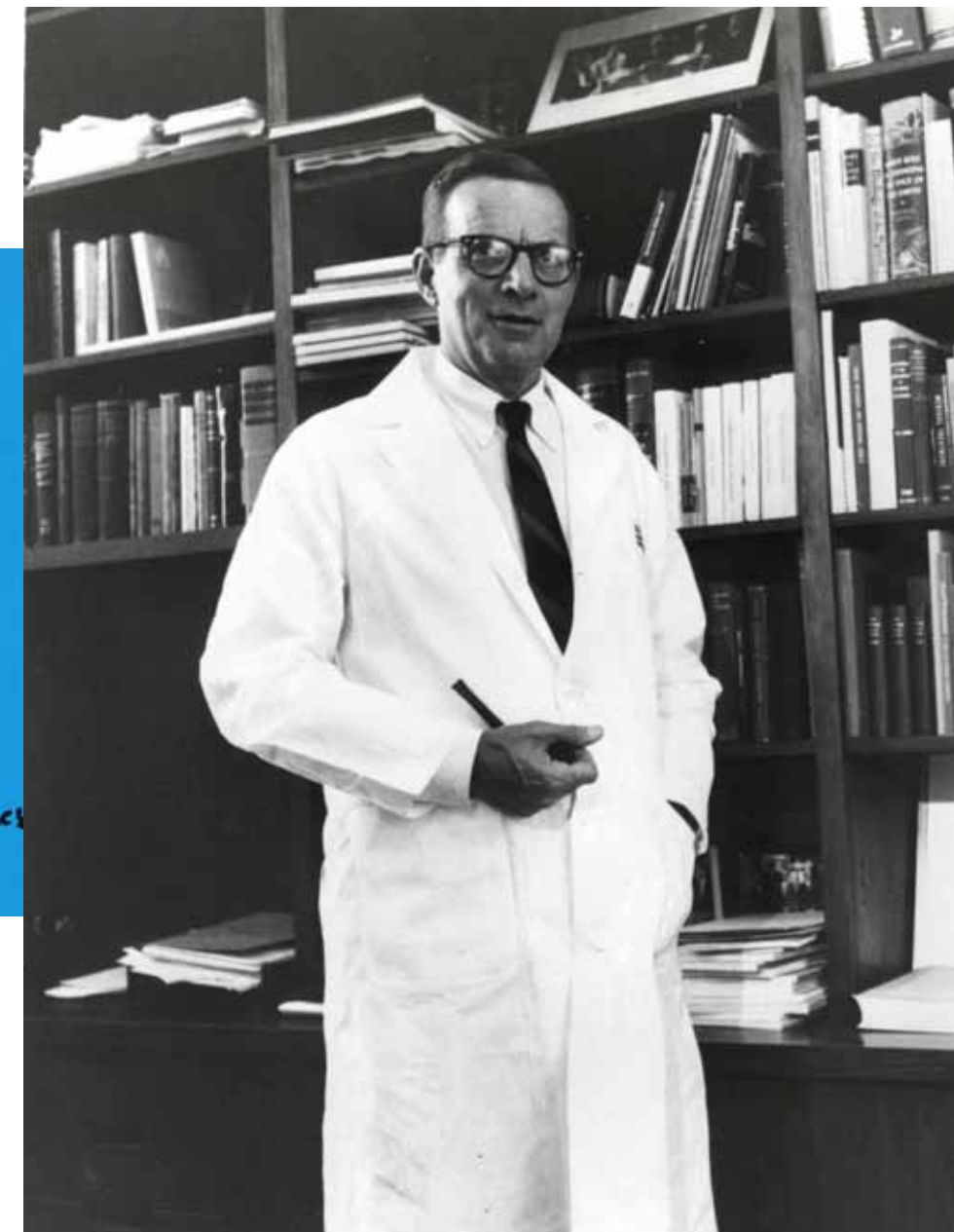
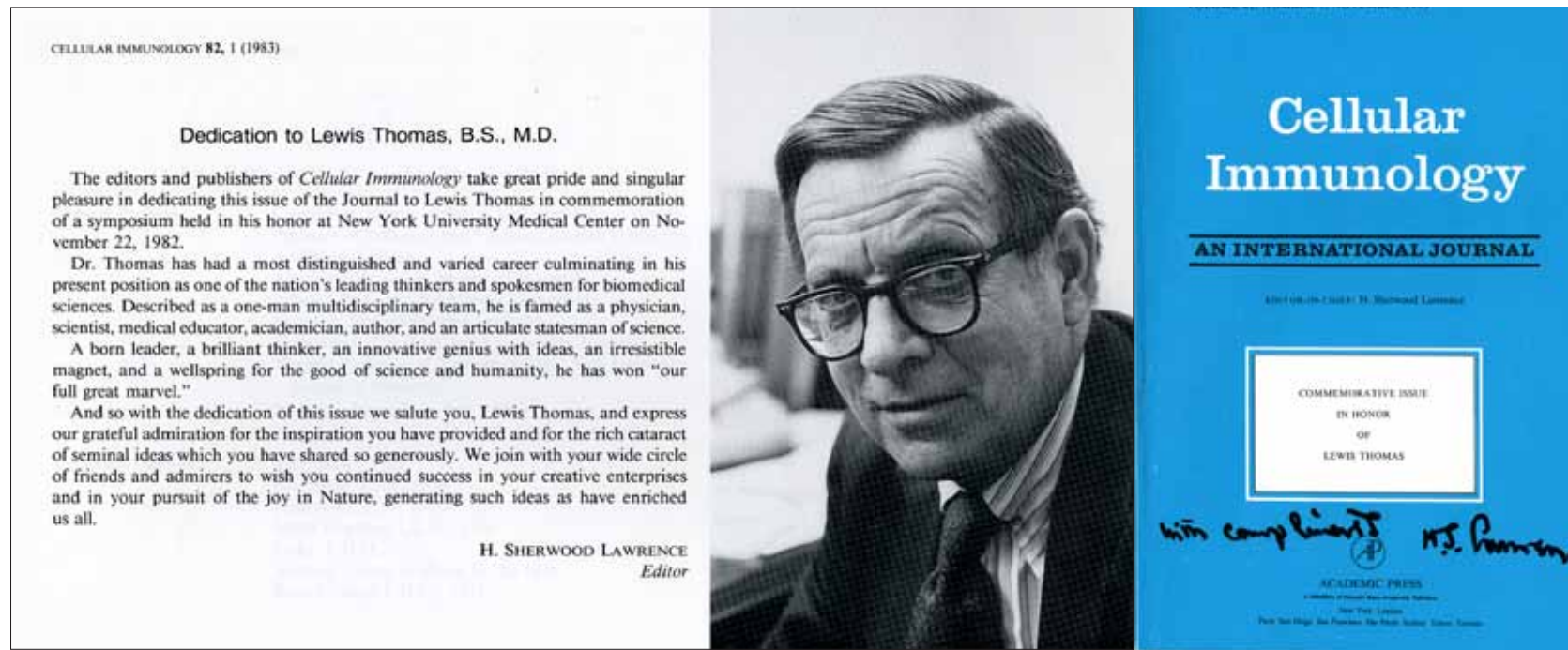
OPPOSITE PAGE, FROM LEFT: Smith's scrapbook, with a clipping about *From Fish to Philosopher*. Portrait of Homer William Smith. James A. Shannon (alumnus, class of 1929), Homer W. Smith (center) and Robert Berliner in 1960 at the National Institutes of Health. **THIS PAGE, FROM LEFT:** *Man and His Gods*, by Homer William Smith, 1956. Albert Einstein wrote the foreword, in which he says, "The work is a broadly conceived attempt to portray man's fear-induced animistic and mythic ideas with all their far-flung transformations and interrelations. It relates the impact of these phantasmagorias on human destiny and the causal relationships by which they have become crystallized into organized religion. This is a biologist speaking, whose scientific training has disciplined him in a grim objectivity rarely found in the pure historian. This objectivity has not, however, hindered him from emphasizing the boundless suffering which, in its end results, this mythic thought has brought upon man." The cover of Smith's popular book about science and morality, *From Fish to Philosopher* (1953).

HOMER WILLIAM SMITH

An expert on everything to do with the kidney, Smith's elegant experiments in the 1930s proved beyond any doubt that it operated according to physical principles, both as a filter and a secretory organ, eliminating the last vestige of vitalism in physiology. He introduced the use of small polysaccharide inulin to measure glomerular filtration rates, and his book *The Kidney: Structure and Function in Health and Disease* (1951) was the definitive work on the topic. Smith also explored the relationship between medical science and morality through his essays and books, including *From Fish to Philosopher* (1953), and *Man and His Gods* (1952), for which Albert Einstein wrote the foreword.

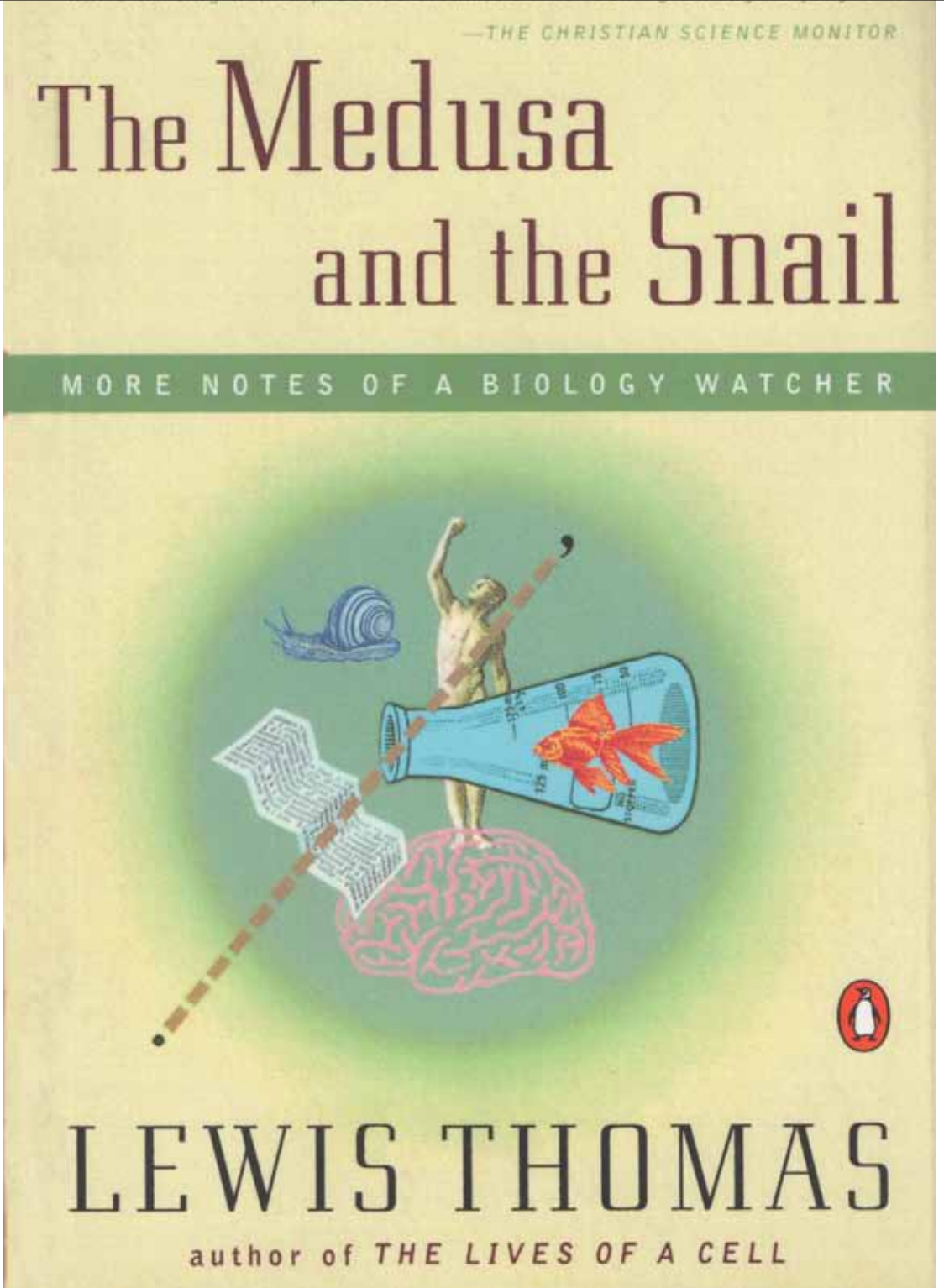
Homer William Smith (1895–1962)
Professor of Physiology (1925–61),
New York University School of Medicine





A gifted teacher, poet, and essayist, Thomas explored the relationship among science, the arts, and the world through the popular press and books, including *Lives of a Cell* (1974), for which he won a National Book Award. He was an early champion of ecology and nuclear disarmament and often wrote about the cultural repercussions of scientific developments. His autobiography, *The Youngest Science: Notes of a Medicine Watcher*, is a record of a century of medicine and the changes which occurred in it.

Thomas was a member of the NYU faculty for 15 years, serving as chairman of the Department of Pathology from 1954 to 1958 and of the Department of Medicine until 1966. He then became dean of NYU School of Medicine, serving until 1969, creating its Honors Program and promoting interdisciplinary and collaborative research. He left in 1969 to become dean of Yale Medical School and subsequently president of Memorial Sloan-Kettering Institute. Thomas was elected to the American Academy of Arts and Sciences in 1961 and the National Academy of Sciences in 1972.



“We leave traces of ourselves wherever we go, on whatever we touch.” —LEWIS THOMAS

THIS PAGE, FROM LEFT: November 1983 issue of *Cellular Immunology* in honor of Lewis Thomas, with a Dedication written by H. Sherwood Lawrence. Portrait of Lewis Thomas. OPPOSITE PAGE, FROM LEFT: *Lewis Thomas; Lives of a Cell* (1974), a collection of his bimonthly essays, “Notes of a Biology Watcher,” for the *New England Journal of Medicine*. It became a best seller and won a National Book Award. A second collection of Thomas’s “Notes of a Biology Watcher” was published in 1979 as *The Medusa and the Snail*.

Lewis Thomas (1913–1993)
 Chairman (1954–58), Department of Pathology; Chairman (1958–66), Department of Medicine; and Dean (1966–69), New York University School of Medicine

LEWIS THOMAS

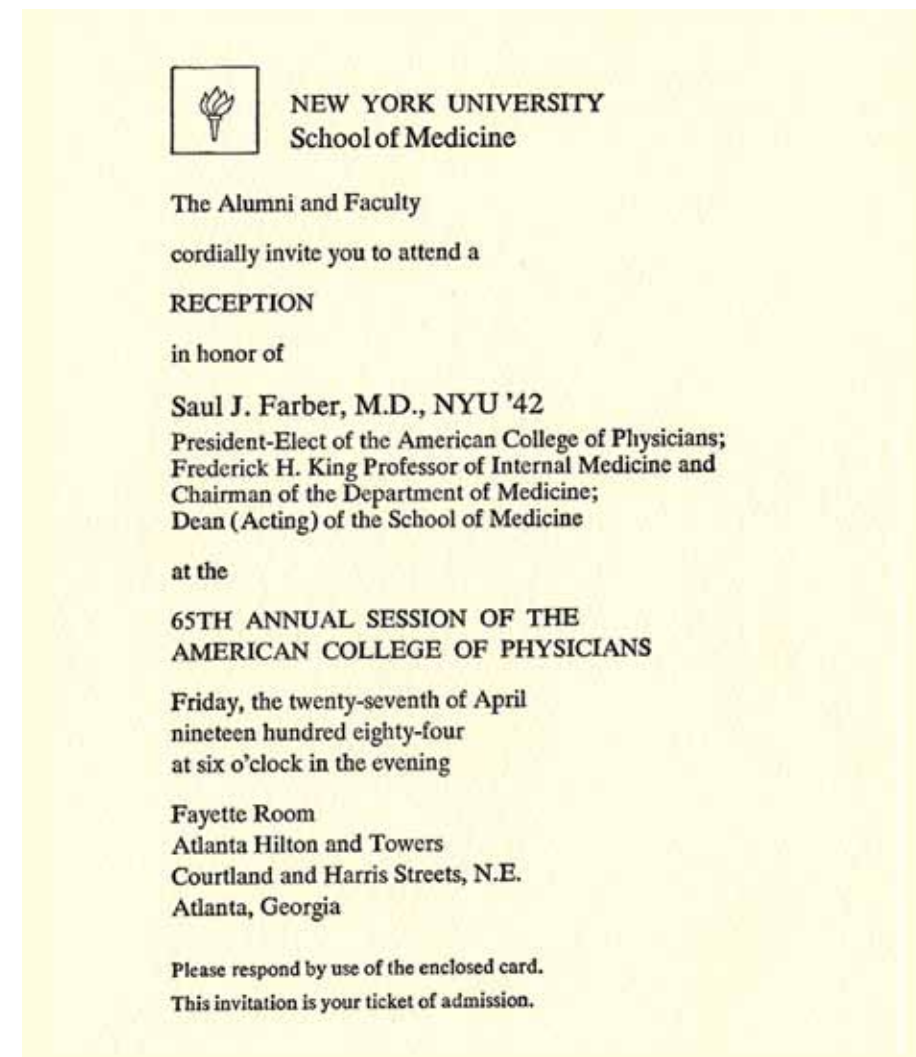
A 1942 alumnus of NYU College of Medicine, Farber made important contributions to renal physiology. He was chairman of the Department of Medicine for 34 years, director of medicine at Bellevue Hospital for 32 years, acting dean of NYU Medical Center three times for a total of ten years, and the Medical Center's dean and provost for eleven years. The Association of American Medical Colleges said Farber "personified the highest ideal of academic medicine" when presenting him with its Abraham Flexner Award in 1995. He served as president of the American College of Physicians and chairman of the American Board of Internal Medicine.

On September 11, 2001, at the age of 83, Farber was one of the first to arrive at Bellevue's ambulance bay to see if he could help. Medical Center trustee Edgar Bronfman, Jr. called Farber "a village doctor in the greatest city in the world" when he established a \$2 million endowment for a dean's chair to be named in Farber's honor.



Saul J. Farber (1918–2005)

Alumnus, Class of 1942, New York University College of Medicine; Professor (1949–66) and Chairman (1966–2000), Department of Medicine, New York University College of Medicine; Acting Dean (1963–66 and 1979–81), Acting Dean and Provost (1982–87), Dean (1987–98), New York University School of Medicine; and Provost (1987–98), NYU Medical Center.



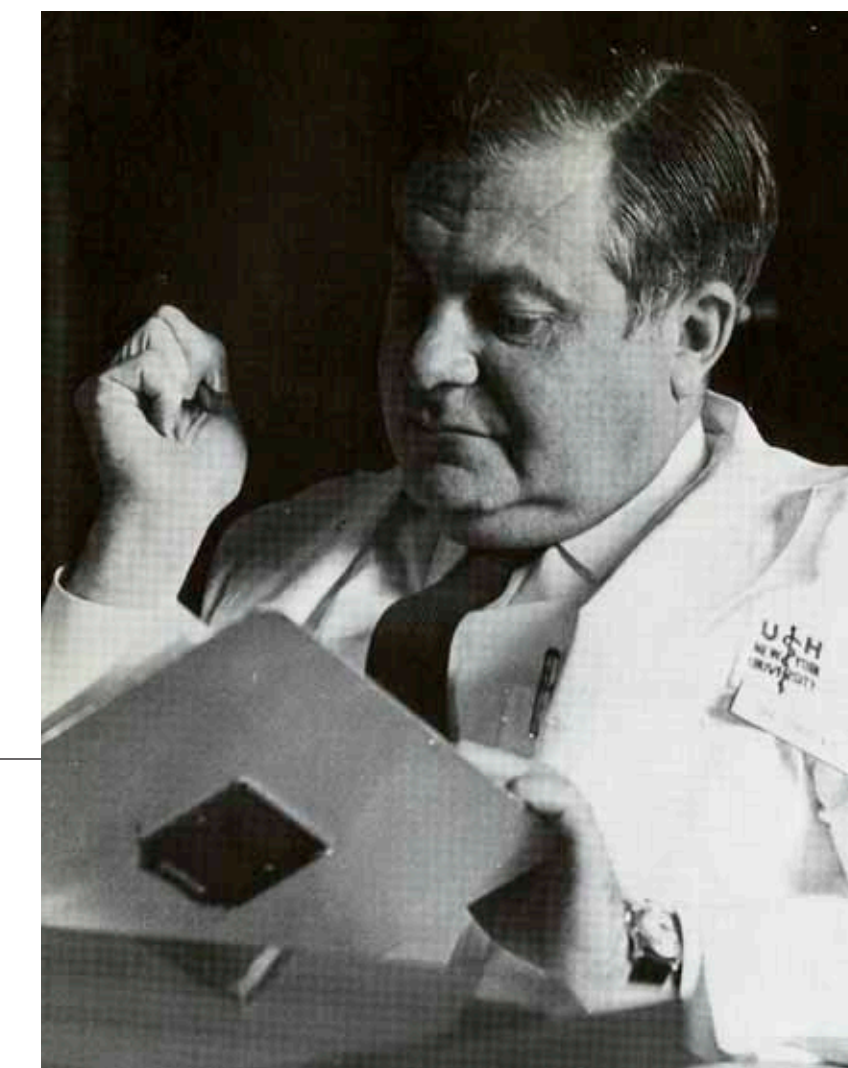
SAUL J.
FARBER



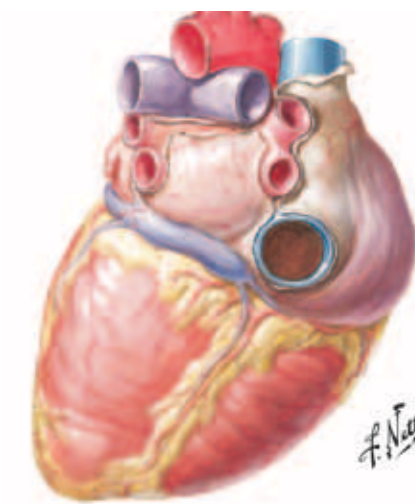
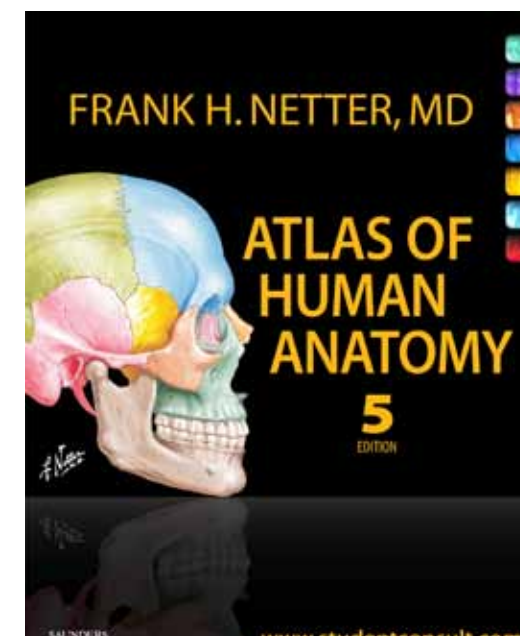
The decade of the 80's into which your class enters as M.D.s will continue to bring changes in medical research, education, and care that will result in great advances and challenges. The continuing revolution in biomedical research and the development of our new technology promises to give us tools that will markedly alter our capabilities to prevent diseases and treat, with the hope of curing, many of the ills of our fellow humans.

The challenge that faces us is to simultaneously maintain our love of people and our love of learning. The physician cannot be or remain the pure scientist or technician. Medicine is a learned profession whose members are dedicated to serve, to learn, and to produce new knowledge. These three pillars support our foundation to which each generation of physicians has added a solid structure of advances all for the benefit of humanity. You, I am confident, will add your structure — one that will stand out as a model for the love of learning and the love of people.

Saul J. Farber, M.D.
Acting Dean
Professor and Chairman, Department of Medicine



OPPOSITE PAGE, FROM LEFT: Portrait of Saul J. Farber. Invitation to an event honoring Farber at the 65th Annual Session of the American College of Physicians. THIS PAGE, FROM LEFT: Farber in the lab in 1954. Dean Farber's statement welcoming new graduates to the practice of medicine, from *Medical Violet*, 1980. Farber in the 1969 *Medical Violet*.



The pre-eminent medical illustrator of the 20th century, whose contributions advanced the study of human anatomy, Netter was a commercial artist in the 1920s before enrolling in medical school at his parents' request. He worked in advertising as a medical illustrator to earn his way through school and later to supplement his income as a physician during the Great Depression. As an army officer in World War II, he illustrated manuals on first aid for combat troops, sanitation in the field, and survival in the tropics.

Netter began a lifelong relationship with the pharmaceutical company CIBA in the 1930s, creating a series of educational illustrations on new drugs (including Novocain), which were distributed to physicians, and later collected in eight volumes as the *CIBA Collection of Medical Illustrations*. Netter's *Atlas of Human Anatomy* (first published in 1989) became a staple of medical education and has been translated into many languages and published in many editions, including an interactive format.

OPPOSITE PAGE: Netter's painting of the reunion of his 1931 graduating class.
THIS PAGE, FROM LEFT: Cover and illustration from Netter's *Interactive Atlas of Human Anatomy*, Fifth Edition, 2010. Portrait of Frank H. Netter. Netter's painting *Ambulance*.

FRANK H.

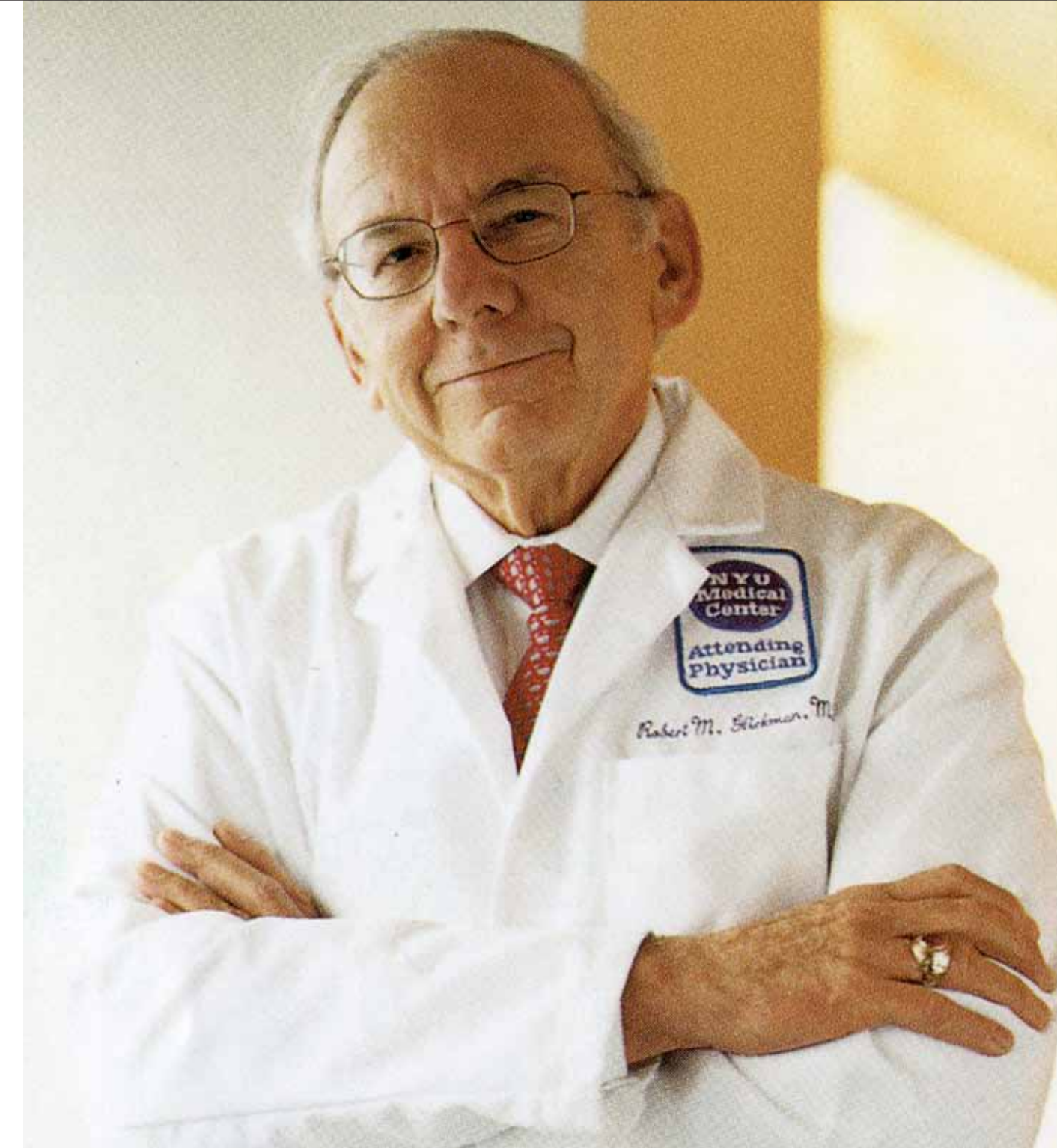
NETTER

Frank H. Netter (1906–1991)
Alumnus, Class of 1931, New York University School of Medicine



As the 14th dean of NYU School of Medicine, Glickman brought a renewed sense of purpose and energy to the Medical Center's role as a leading research institution, as the home to outstanding physicians and providers of clinical care, and as the training ground for medical students. During his tenure, new departments in cardiothoracic surgery, emergency medicine, and child and adolescent psychiatry were established; 18 new department chairs were recruited; and multiple departments were strengthened by bringing aboard some of the nation's leading scientists and physicians with national and international reputations in such key fields as medicine, cancer, cardiology, imaging, and radiation oncology. Glickman also oversaw the expansion of the clinical and research facilities, through such major endeavors as the full merger with the Hospital for Joint Diseases and the creation of the Smilow Research Center and the Clinical Cancer Center.

A highly respected gastroenterologist by training and practice, Glickman held numerous leadership positions in professional associations, including serving as the president of the Association of American Physicians, and was elected to the Institute of Medicine in 1995.



OPPOSITE PAGE: Glickman (left) is joined by NYU President John Sexton in honoring Dr. Seth Orlov, the newly appointed chair of the Ronald O. Perleman Department of Dermatology, at the annual Dean's Honors Day in 2006.
THIS PAGE, FROM LEFT: Portrait of Robert M. Glickman. Glickman (center) at the groundbreaking of the Smilow Research Center, flanked by NYU President John Sexton, NYU Board of Trustees Chairman Martin Lipton, Joan and Joel Smilow, and NYU Medical Center Chairman Kenneth Langone, 2002.

Robert M. Glickman (b. 1939)
 Robert M. and Mary H. Glickman Professor of Medicine and Gastroenterology and Dean (1998–2007),
 New York University School of Medicine

ROBERT M. GLICKMAN



RESEARCHERS

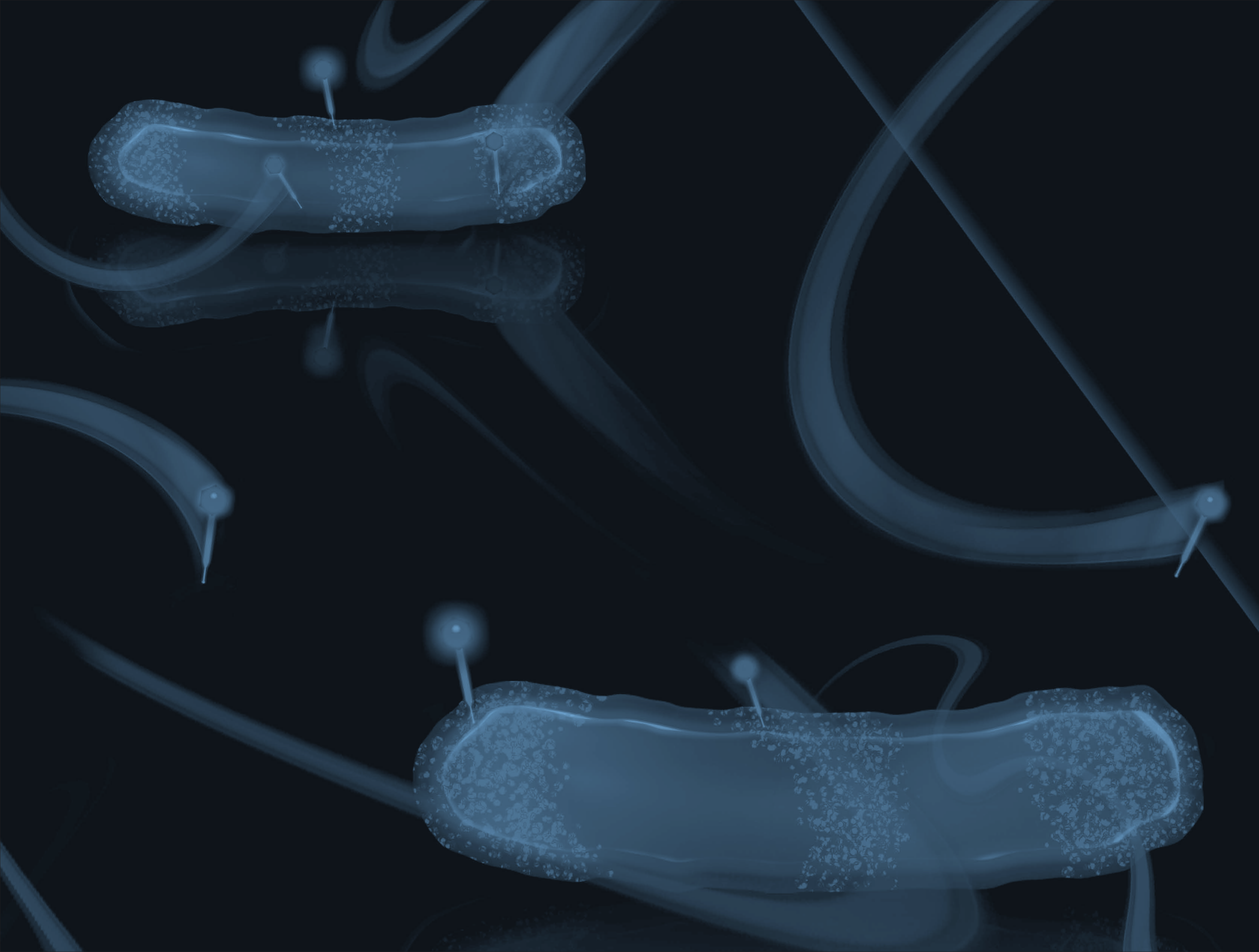
RESEARCHERS | Breaking New Ground in Medical Research

CHERRIES

Many of the most important medical discoveries of the 20th century were made by physician-scientists who studied or taught at NYU's medical school. From the near eradication of a crippling global scourge like polio, to the manipulation of neurotransmitters at the cellular level to alleviate depression and mental illness, NYU medical school researchers have helped to create better medicine and better lives for millions of people.

R E S E A R C H E R

(noun) one who investigates systematically and critically in order to discover and interpret new knowledge.



A L U M N I Since its founding in 1841, NYU School of Medicine has bestowed more than 25,000 medical degrees. Not only has the breadth and depth of our medical education imparted these alumni the scientific skills to pursue advanced research, but we've always cultivated in them the passion and sense of wonder intrinsic to the demands of rigorous research. Many of our alumni went on to prominent research careers in the basic and clinical sciences. Some stayed at NYU after graduating, while many others took their service to far corners of the world. With a sense of inquisitiveness and commitment to advancing science, our alumni have made their mark on science.

OPPOSITE PAGE: Depiction of fluorescent viral particles diffusing on the surface of host cells on their way to finding a target receptor.

In glass and in life
Investigations are rife.

This year has been great
For TF we can state,
Has all critics tamed,
At least as of late.

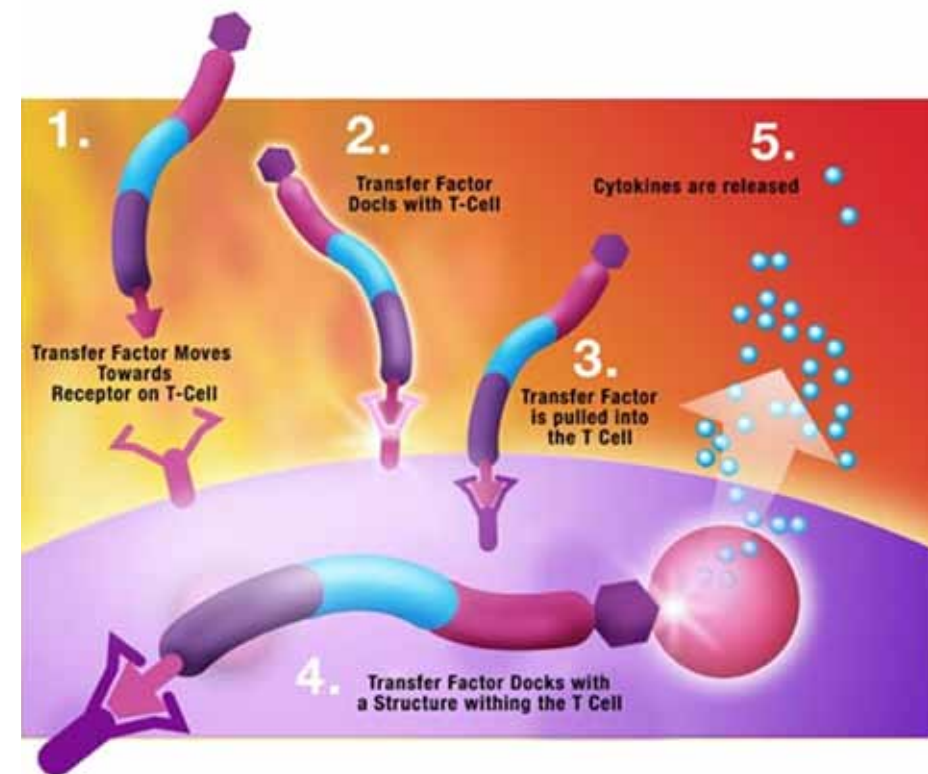
Lawrence has shown
It was specific in man.

Demonstrate that they can
Cause specific inhibition
Of cells wandering condition.

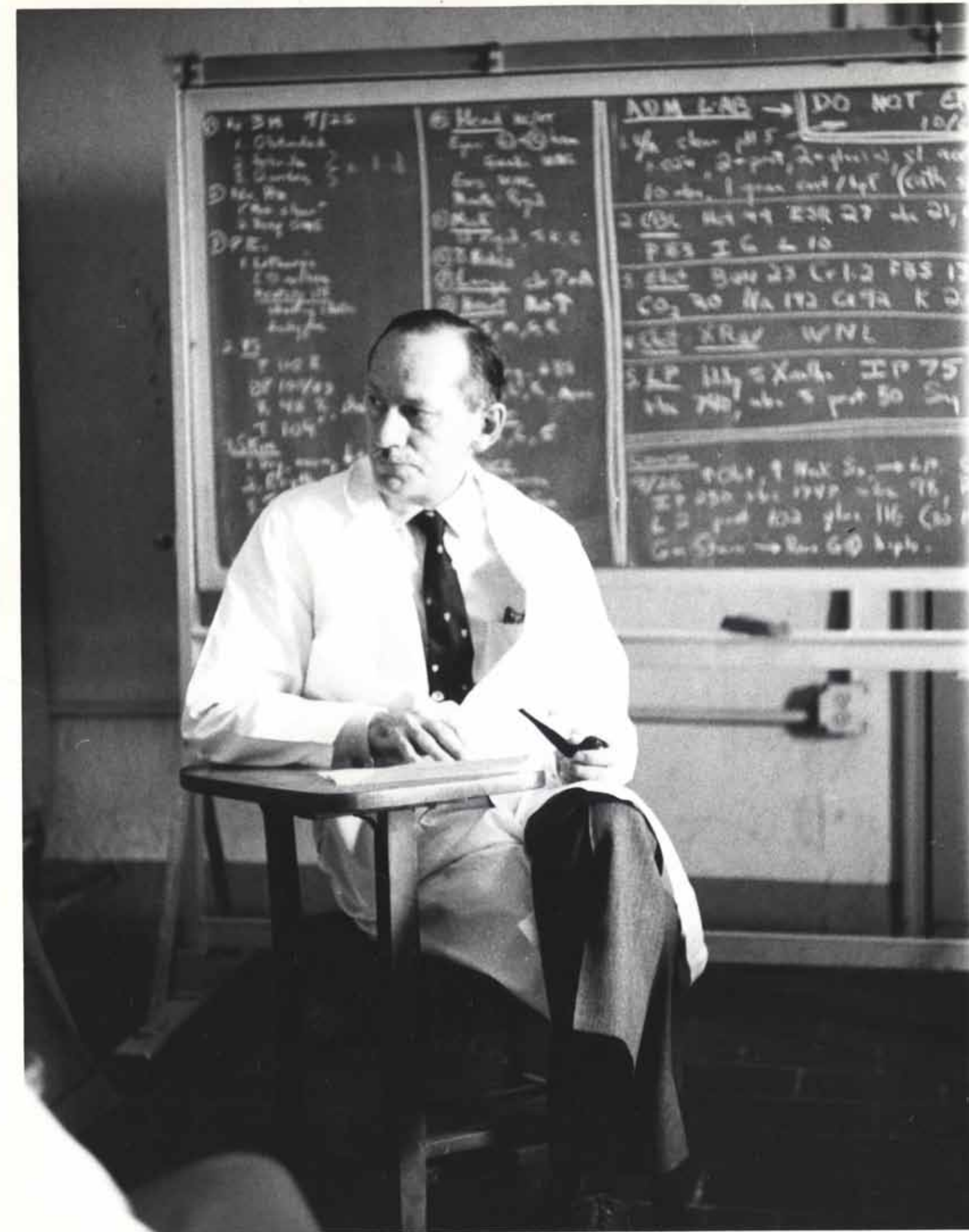
To this one might say
"Why isn't that nice"
But for immunological skeptics
It works even in mice.

A good year for TF,
And for you too, Jerry
We hope that your birthday
Proved to be merry.

POEM BY LEWIS THOMAS WRITTEN IN HONOR
OF "JERRY" LAWRENCE'S BIRTHDAY IN 1979



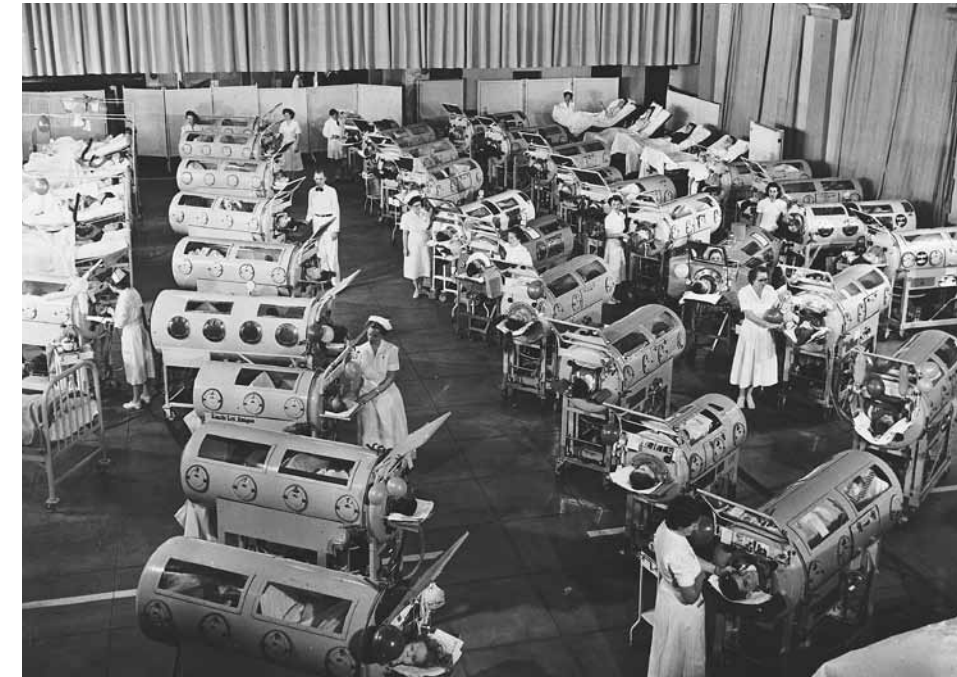
A pioneering immunologist, Lawrence is best known for his discovery, in 1949, of a substance known as the "transfer factor," a product of T-lymphocytes, which when transferred from immune to non-immune animals could enhance the body's defenses against a wide variety of infectious agents. He also identified a link between the way cells respond immunologically to microbes like the bacterium that causes tuberculosis, and conducted research on the immune responses involved in the rejection of transplanted organs. Lawrence was director of NYU's Cancer Center from 1974 to 1979, and director of its AIDS Research Center from 1989 to 1994.



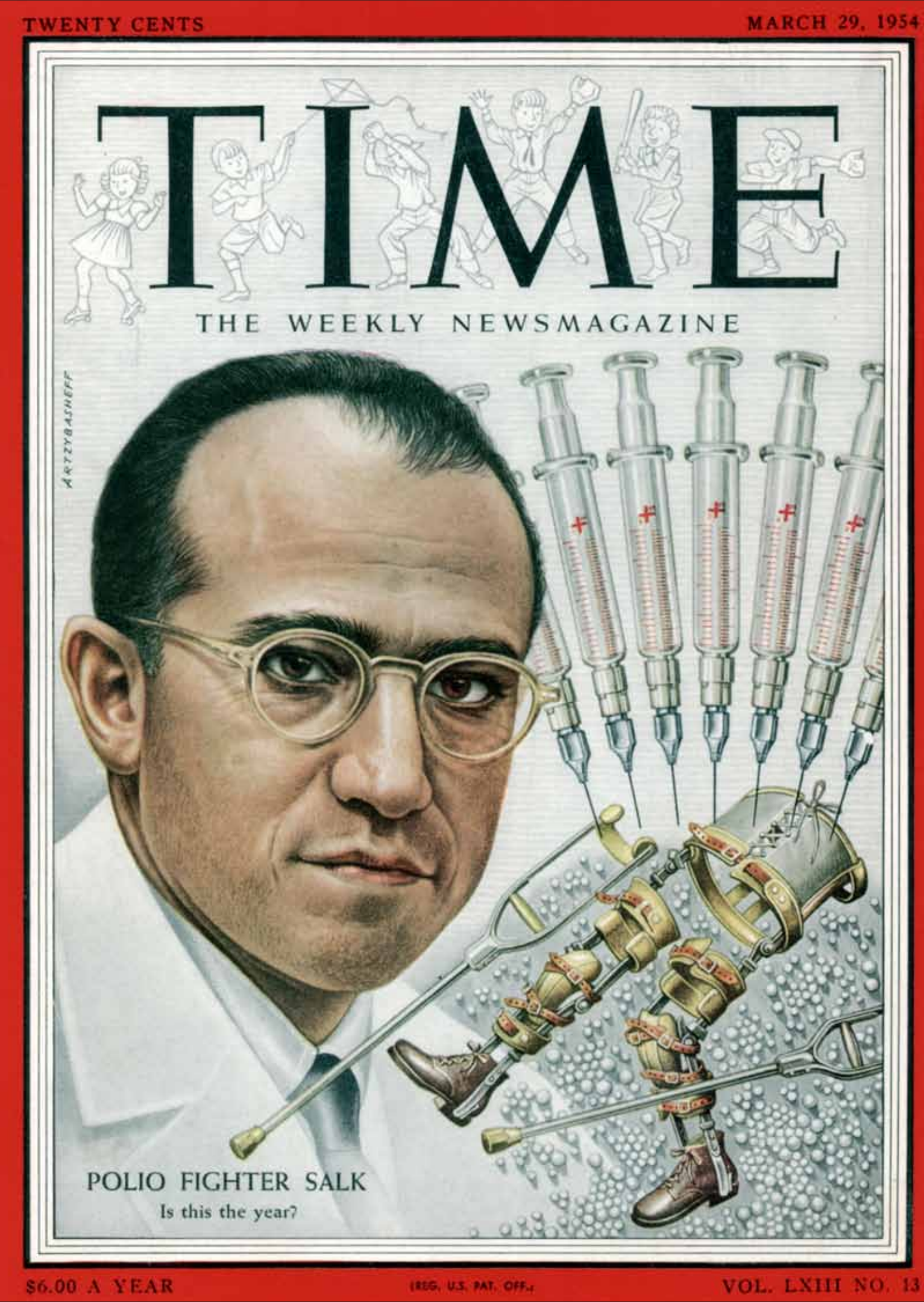
OPPOSITE PAGE: Transfer factors are natural, microscopic molecules that reside in the bodies of all animals. They are messengers, passing immunity information about the presence of an immune threat—whether external or internal—and how to properly respond, from immune cell to immune cell. **THIS PAGE, FROM LEFT:** Lawrence in the classroom. Lawrence with a patient.

H. SHERWOOD LAWRENCE

H. Sherwood Lawrence (1916–2004)
Alumnus, Class of 1943, New York University College of Medicine; Professor of Immunology (1949–59), New York University College of Medicine; Head of Infectious Diseases and Immunology (1959–2000), Jeffrey Bergstein Professor of Medicine (1979–2000), New York University School of Medicine; Co-director of Medical Services (1964–2000), Bellevue and NYU Hospitals



THIS PAGE, FROM LEFT: Salk testing his vaccine for polio on a young girl in 1953. Iron lungs filled hospital wards in the United States during the height of the polio outbreaks of the 1940s and 1950s. Newspapers around the world carried headlines about Salk's vaccine in 1955. OPPOSITE PAGE, FROM LEFT: Jonas Salk on the cover of *Time* magazine, March 29, 1954. Schoolchildren lined up for their immunizations in 1956.



A 1939 alumnus of NYU College of Medicine, Salk joined the faculty of the University of Pittsburgh School of Medicine in 1947, and in 1948 undertook a study on polio funded by the March of Dimes. At the time polio was considered the most serious public health problem of the post-war United States. In 1952 nearly 58,000 cases were reported, resulting in 3,145 deaths and 21,269 victims—most of them children—left with mild to disabling paralysis. Salk developed the first effective vaccine against polio in 1953, and it was released in 1955, making front-page headlines around the world and helping to stop a crippling worldwide epidemic.

Salk founded the Jonas Salk Institute for Biological Studies at University of California, LaJolla, in 1963, and wrote several books about science for a popular audience. In 1956 he received the Lasker Award and, in 1977, the Presidential Medal of Freedom. Later in life Salk worked to find a vaccine for another deadly epidemic, AIDS.

“Because of Doctor Jonas E. Salk, our country is free from the cruel epidemics of poliomyelitis that once struck almost yearly. Because of his tireless work, untold hundreds of thousands who might have been crippled are sound in body today...”

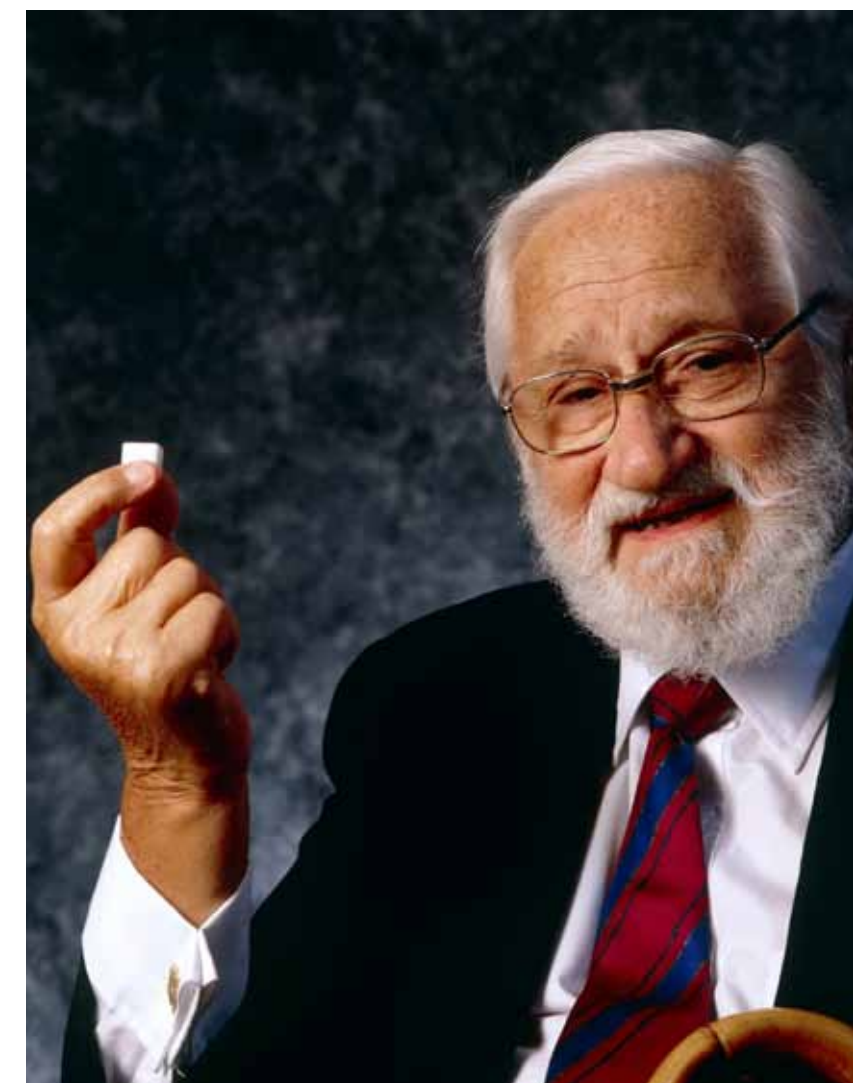
—PRESIDENTIAL MEDAL OF FREEDOM CITATION, 1977

JONAS SALK

Jonas Salk (1914–1995)
Alumnus, Class of 1939, New York University
College of Medicine



THIS PAGE, FROM LEFT: Albert B. Sabin holding an oral dose of polio vaccine in 1959. During the 1960s Sabin Sundays brought families to churches and schools across the country for Sabin's vaccine, which were administered in three weekly doses. Poliovirus Type 1 Mahoney protein capsid with receptor. OPPOSITE PAGE, FROM LEFT: Sabin served in World War II with the U.S. Army Epidemiological Board's Virus Committee. Portrait of Albert B. Sabin.

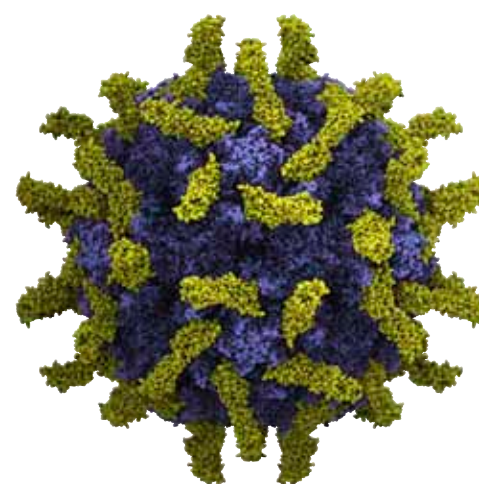


A celebrated authority on viruses and viral diseases, Albert Sabin graduated from University and Bellevue Hospital Medical College in 1931. He joined the Children's Hospital Research Foundation in Cincinnati in 1939 to pursue his search for a vaccine for polio. This search was interrupted by World War II, during which he served with the U.S. Army Epidemiological Board's Virus Committee, developing vaccines for encephalitis (sleeping sickness), sand-fly fever, and dengue fever. Returning to Cincinnati after the war, Sabin developed the first live-virus vaccine for polio, which not only prevented most of the complications of polio, as Salk's vaccine had done, but prevented the initial intestinal infection as well, breaking the chain of transmission.

Recommended by the World Health Organization for international testing in 1957, Sabin's vaccine was not approved for testing in the United States until 1960. Administered orally to millions over the next decade, Sabin's live-virus immunization vaccine effectively eliminated polio in the United States and dramatically reduced its devastating impact throughout the world. In 1972, Sabin donated the strains of the polio virus to World Health Organization to increase their availability to developing countries. Sabin received the Lasker Award in 1965, the National Medal of Science in 1970, and the Presidential Medal of Freedom in 1986.

ALBERT B.

SABIN



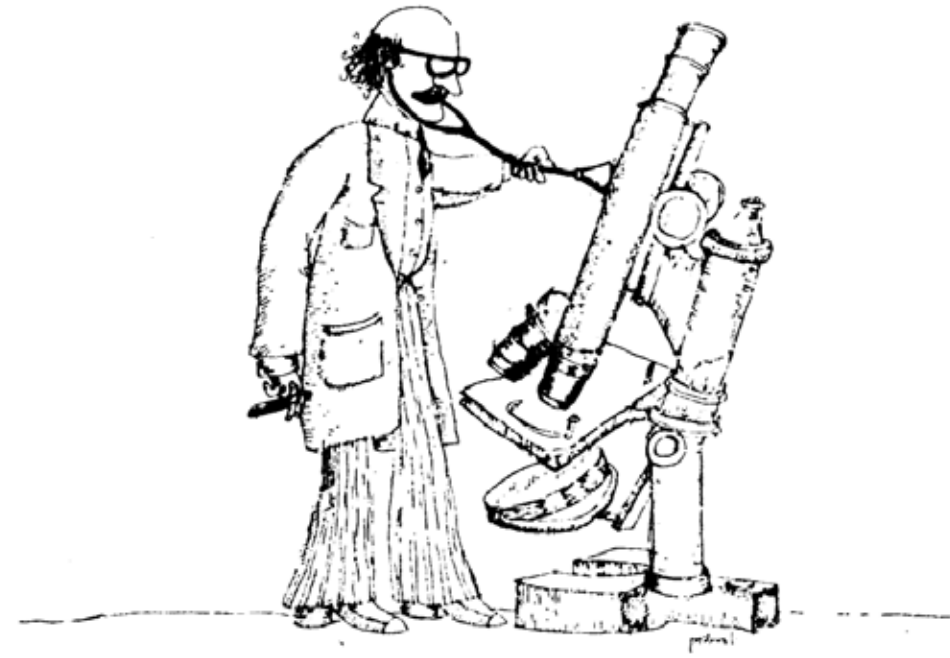
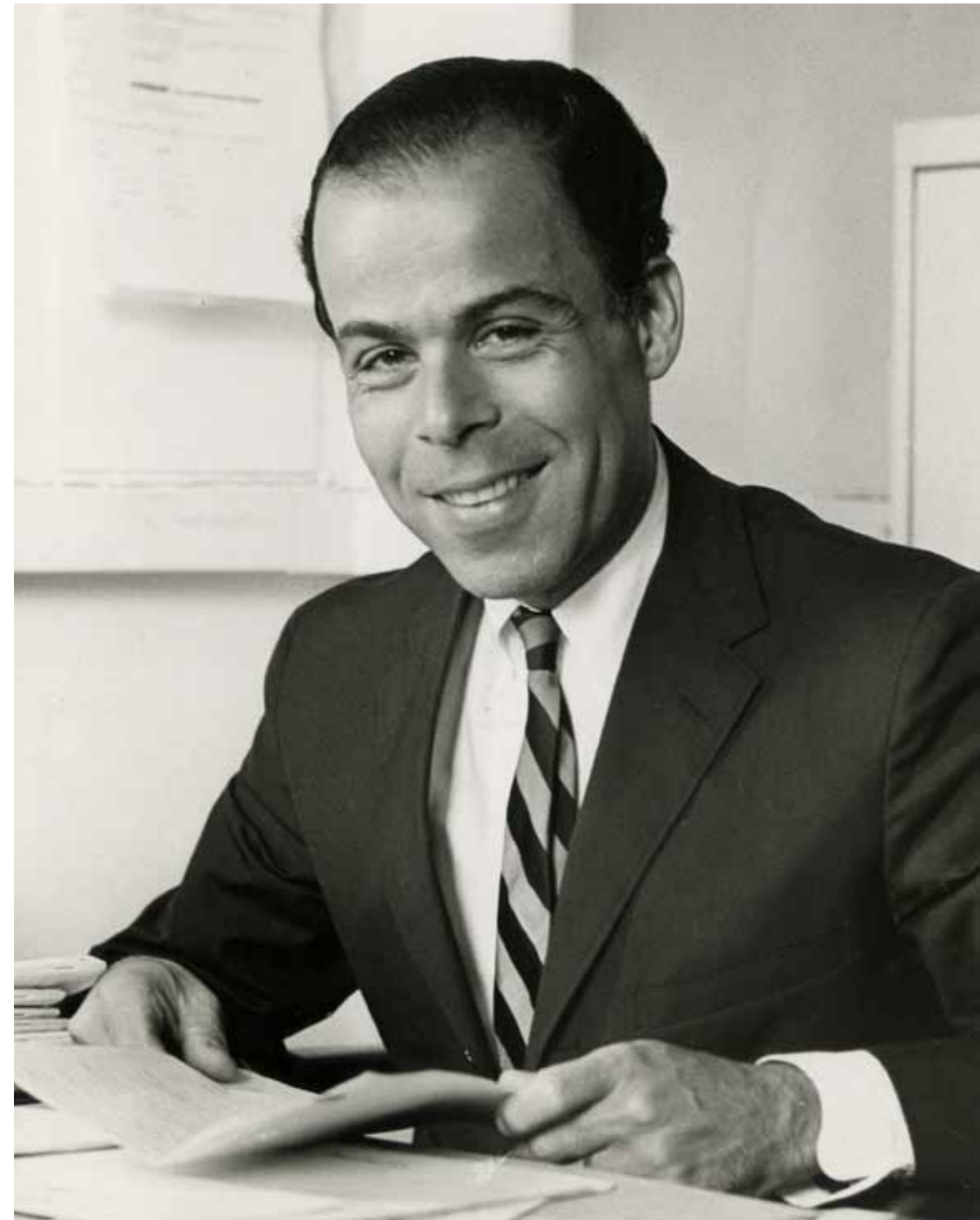


FIGURE 1 The clinical investigator—clinician or scientist?

Franklin isolated the rheumatoid factor as an antibody in 1957, while still a research associate at Rockefeller University. This led to an understanding of the mechanism of rheumatoid arthritis. He joined the NYU medical faculty the following year and did pioneering work in immunology, leading to the designation of Franklin's disease, a disorder related to the production of abnormal immunoglobulin. His work on gamma globulin, rheumatoid factor and ANA served as the background for his subsequent discovery of heavy chain disease.

In the early 1970s, working with his wife, Dr. Dorothea Zucker-Franklin, also professor of medicine at NYU, he discovered that the extracellular amyloid deposits seen in different diseases result from aggregation into fibrils of specific serum proteins and/or their degradation products. This discovery broke new ground in the study of aging processes. In 1979 he was elected to the National Academy of Sciences for "distinguished work and continuing achievements in original research."



Edward C. Franklin (1928–1982)
Alumnus, Class of 1950, New York University
College of Medicine; Professor of Medicine (1958–
82), New York University School of Medicine

Dr. Franklin Named to National Academy

Edward C. Franklin, M.D., professor of medicine, director of the Irvington House Institute and head of the rheumatic disease study group, has been elected to membership in the National Academy of Sciences. He is one of 60 new members recognized for "distinguished and continuing achievements in original research."

The election was held on April 24 at the 116th annual meeting of the Academy. Election to membership in the Academy is considered to be one of the highest honors that can be accorded an American scientist or engineer. Those elected in April bring the total to 1,284.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln which calls upon the Academy to act as an official adviser to the Federal Government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the Government, although the Academy is not a government agency.

Dr. Franklin was appointed director

of the Irvington House Institute in 1973. A member of the faculty since 1958, he was promoted to professor of medicine in 1968 and named director of the multidisciplinary Rheumatic Diseases Study Group. RDSG is an interdepartmental organization of clinical and basic scientists at the School of Medicine, established in 1932 under the leadership of Dr. Currier McEwen, who served as chairman from 1948-1967.

Members of the group maintain a program of teaching in rheumatic diseases for students, interns, residents and fellows, provide consultation and ambulatory care for patients with rheumatic diseases, and also conduct fundamental research into immunological, biochemical and pathogenetic aspects of these disorders, and participate in clinical research on the management of rheumatic diseases.

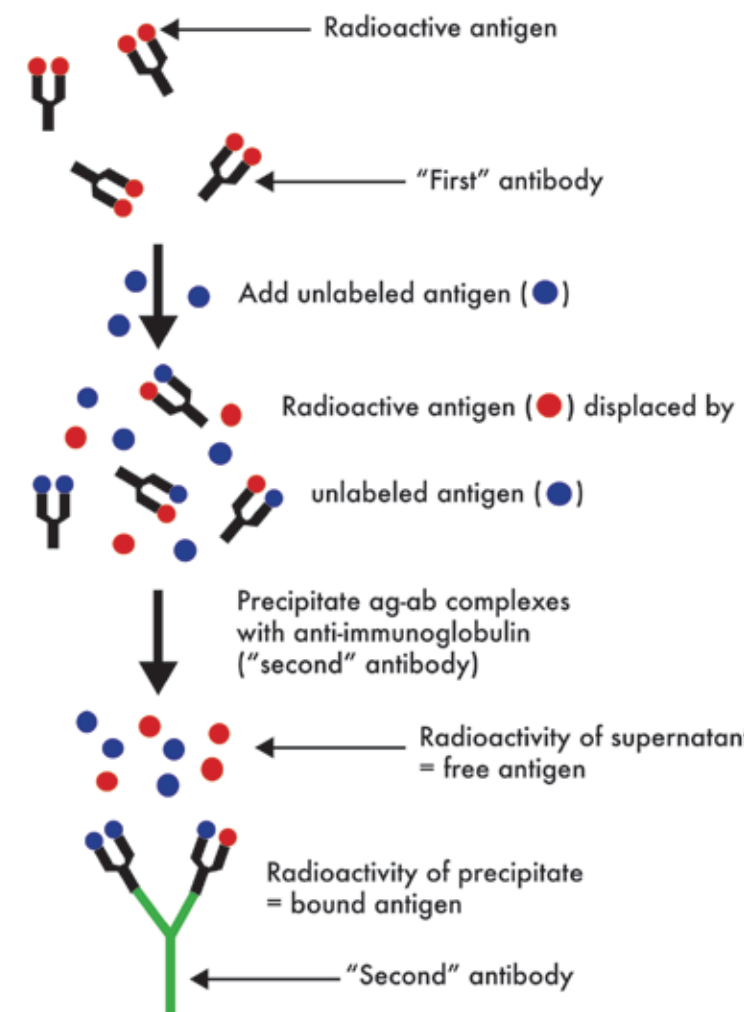
Dr. Franklin's laboratory has made significant advances in furthering our understanding of immunologic phenomena in disease and has delineated several new disease entities.

Dr. Franklin is active in both clinical and research areas. He was president in 1974 of the American Society for Clinical Investigation, one of the most coveted honors in American academic medicine.

“Most discoveries in research aren't so great that wouldn't have been found later by someone else. No matter how successful you are in research, your greater contribution, in the long run, is the influence you've had on students.”

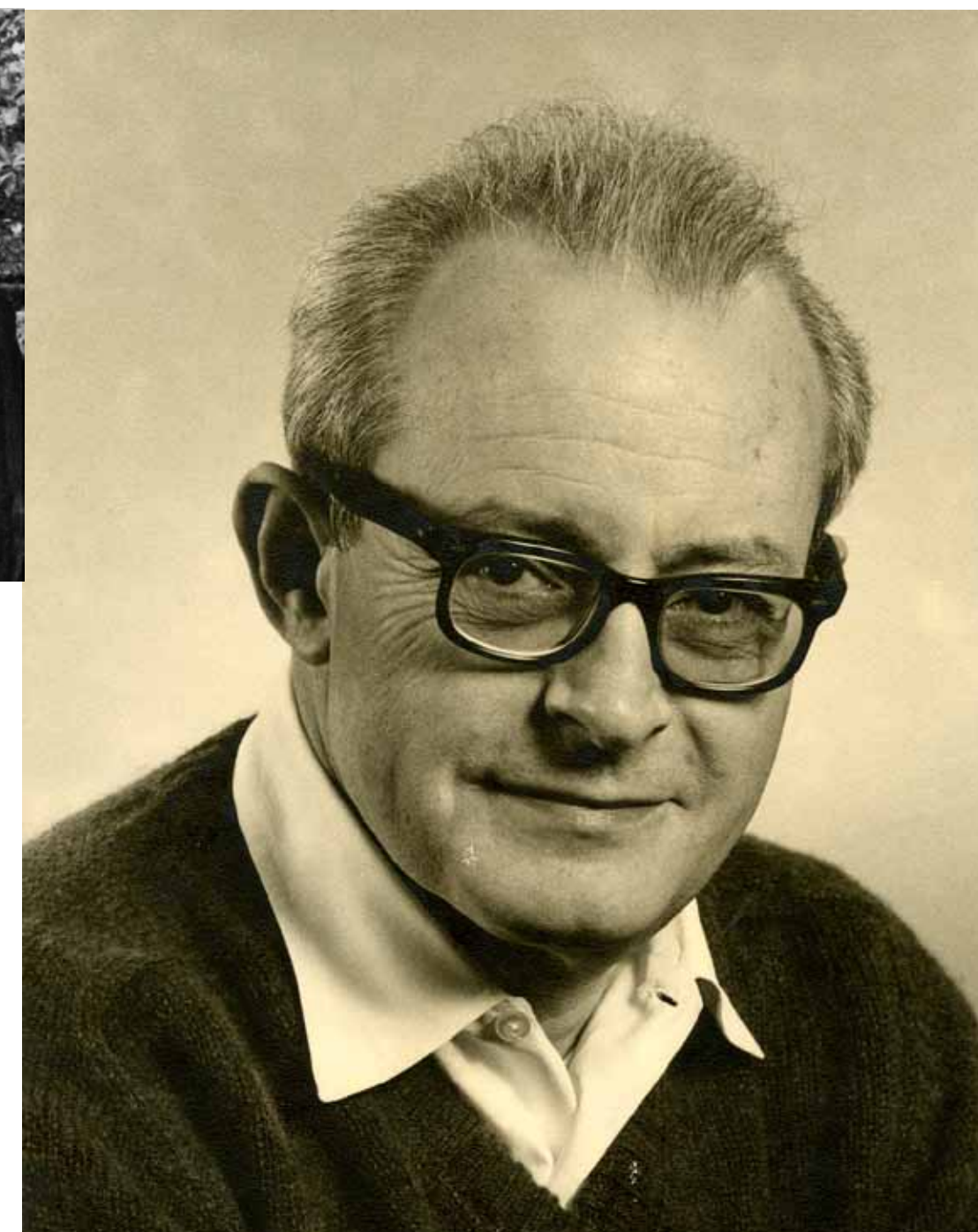
—EDWARD C. FRANKLIN

OPPOSITE PAGE, FROM LEFT: "What are the overall goals of the biomedical or clinical investigator? I believe that all of us are still primarily motivated by a spark of good, honest, adolescent idealism, namely the desire to understand and to cure disease. It is true that often we like to think of ourselves as pure scientists in an era when the contributions of molecular biology are judged supreme; but in our laboratories, isn't reality more like what is depicted in Fig. 1?" From Franklin Presidential Address to the American Society for Clinical Investigation, 1974. Portrait of Edward C. Franklin. **THIS PAGE:** News article announcing Franklin's naming to the National Academy of Medicine in 1979, published in the NYU Medical Center News.



The undisputed "father of radioimmunoassay," Berson began his work with Rosalyn Sussman Yalow in 1950 when he became a member of the Radioisotope Service at the Bronx Veterans Affairs Hospital. Together they developed the radioimmunoassay (RIA) in 1959, which is used to measure insulin and other hormones in human blood and tissue. Requiring only a tiny sample, RIA invigorated endocrinology, making possible major advances in diabetes research, diagnosis and treatment of hormonal problems related to growth, thyroid function and fertility, as well as blood screening, illegal drug testing, and detection of drug use.

When Berson died in 1972 at the age of 54, Yalow named her lab in his honor so his name would continue to appear on her published research. Yalow was awarded the Nobel Prize in Physiology or Medicine in 1977 and, during her acceptance lecture, acknowledged Berson's important contributions.



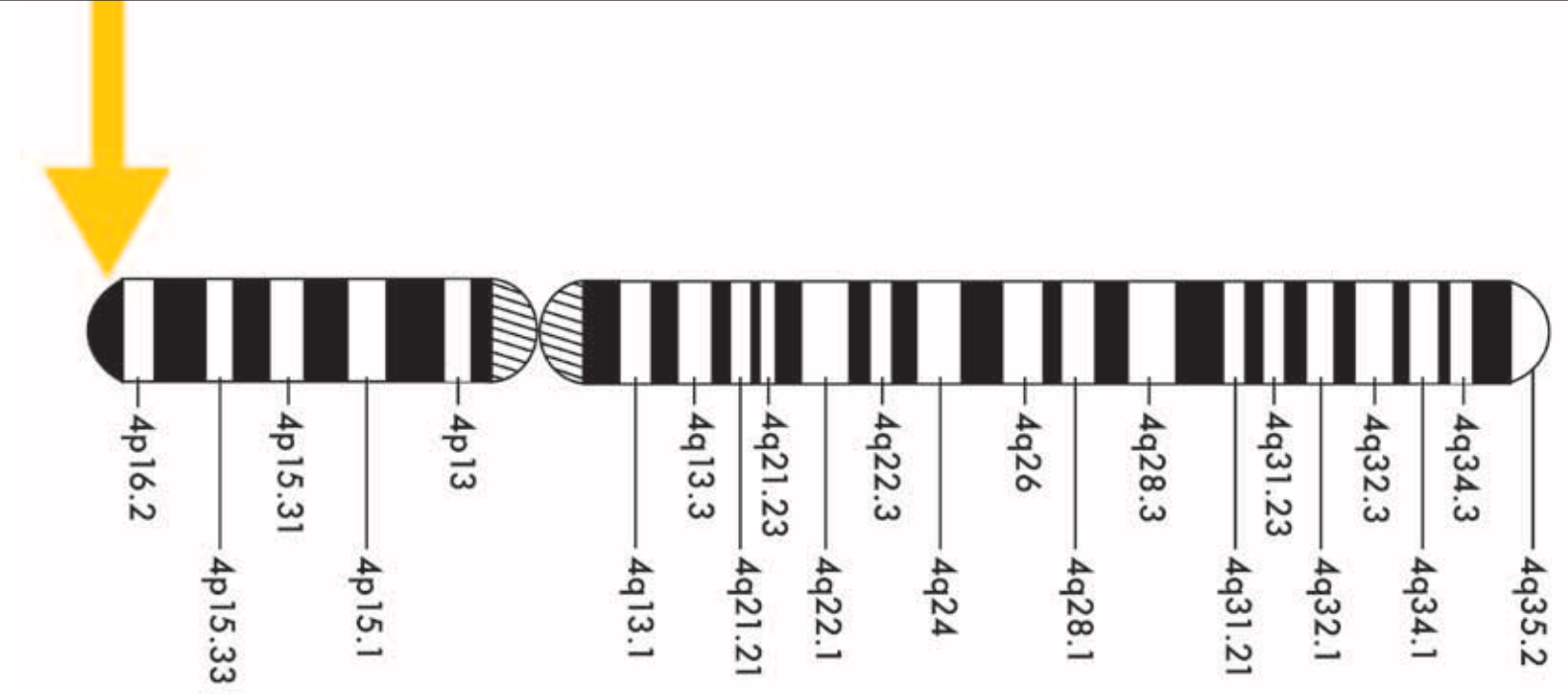
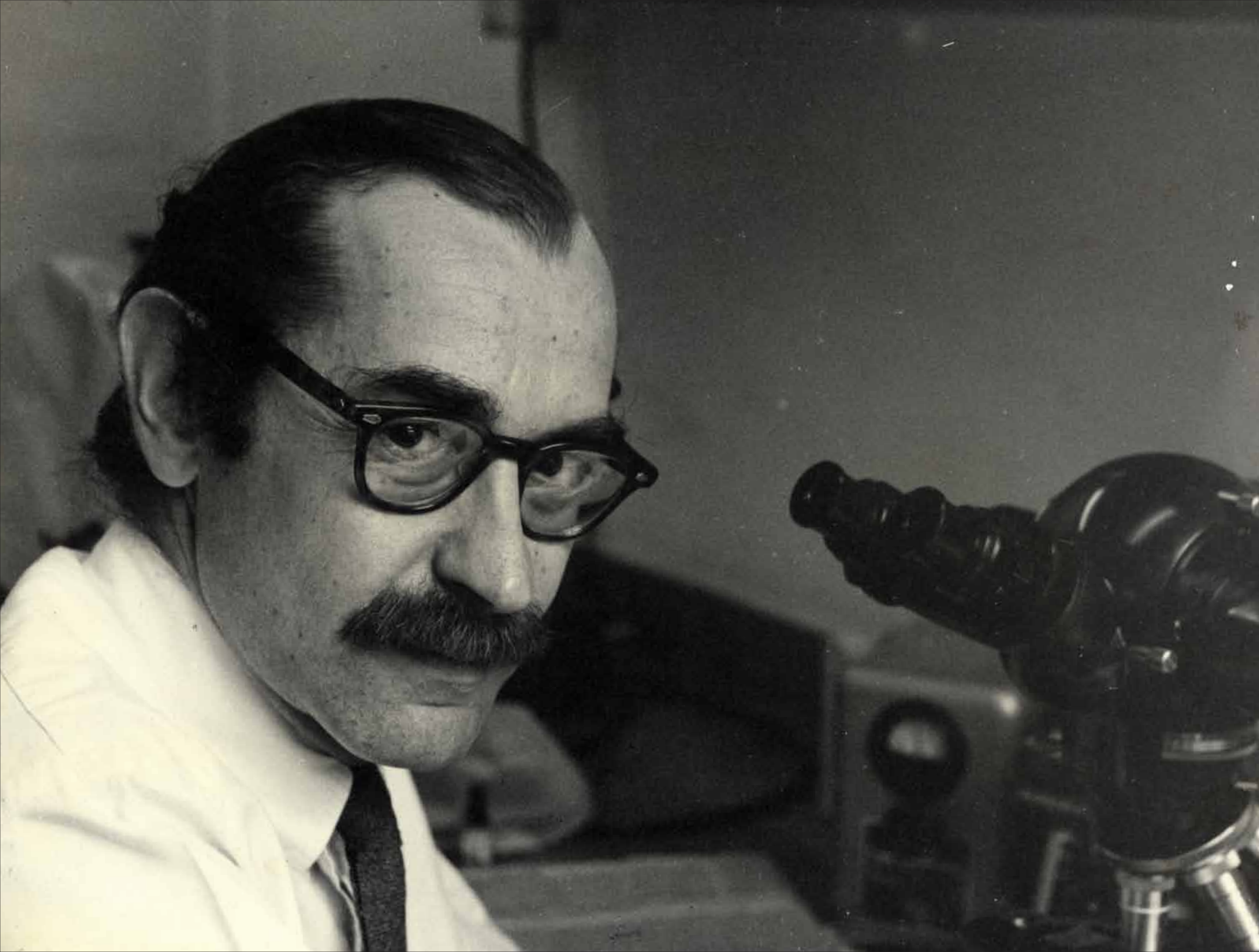
OPPOSITE PAGE, FROM LEFT: An illustration of the technique of radioimmunoassay. Berson and Yalow in Pittsburgh with a check they won from the University of Pittsburgh. THIS PAGE: Portrait of Solomon A. Berson.

SOLOMON A. BERSON

Solomon A. Berson (1918–1972)
Alumnus, Class of 1945, New York University
College of Medicine

“From 1950 until his untimely death in 1972, Dr. Solomon Berson was joined with me in this scientific adventure and together we gave birth to and nurtured through its infancy radioimmunoassay, a powerful tool for determination of virtually any substance of biologic interest. Would that he were here to share this moment.”

—ROSALYN YALOW, NOBEL LECTURE, 1977



World-renowned geneticist, pediatrician, and educator, Hirschhorn received both undergraduate and medical degrees from NYU and joined the faculty of the School of Medicine in 1958, starting a genetics clinic and a course in genetics for medical students. He discovered (independently of Dr. Ulrich Wolf) the genetic error on chromosome 4 responsible for a rare birth defect characterized by severe growth retardation, mental deficiency, facial and heart defects, and other malformations. This disorder was subsequently named Wolf-Hirschhorn syndrome.

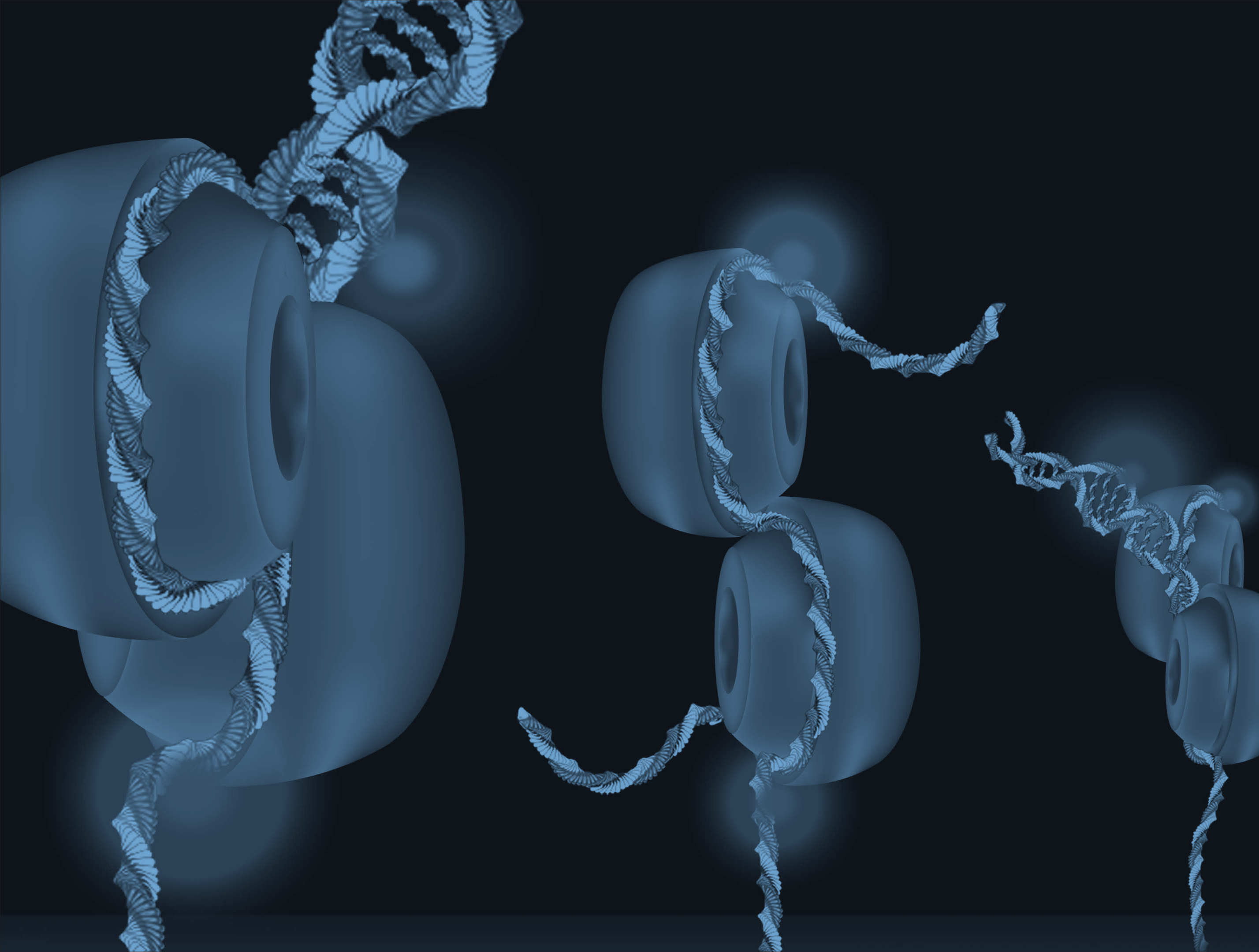
In 1966 Hirschhorn began a four-decade-long association with Mount Sinai, where he established a new medical genetics program patterned on his efforts at NYU School of Medicine. In 1969 he co-founded the first program in genetic counseling in the U.S. at Sarah Lawrence College, which has trained half of the nation's genetic counselors. Hirschhorn received the 2006 March of Dimes/Colonel Harland Sanders Award for lifetime achievement in the field of genetic sciences.



KURT HIRSCHHORN

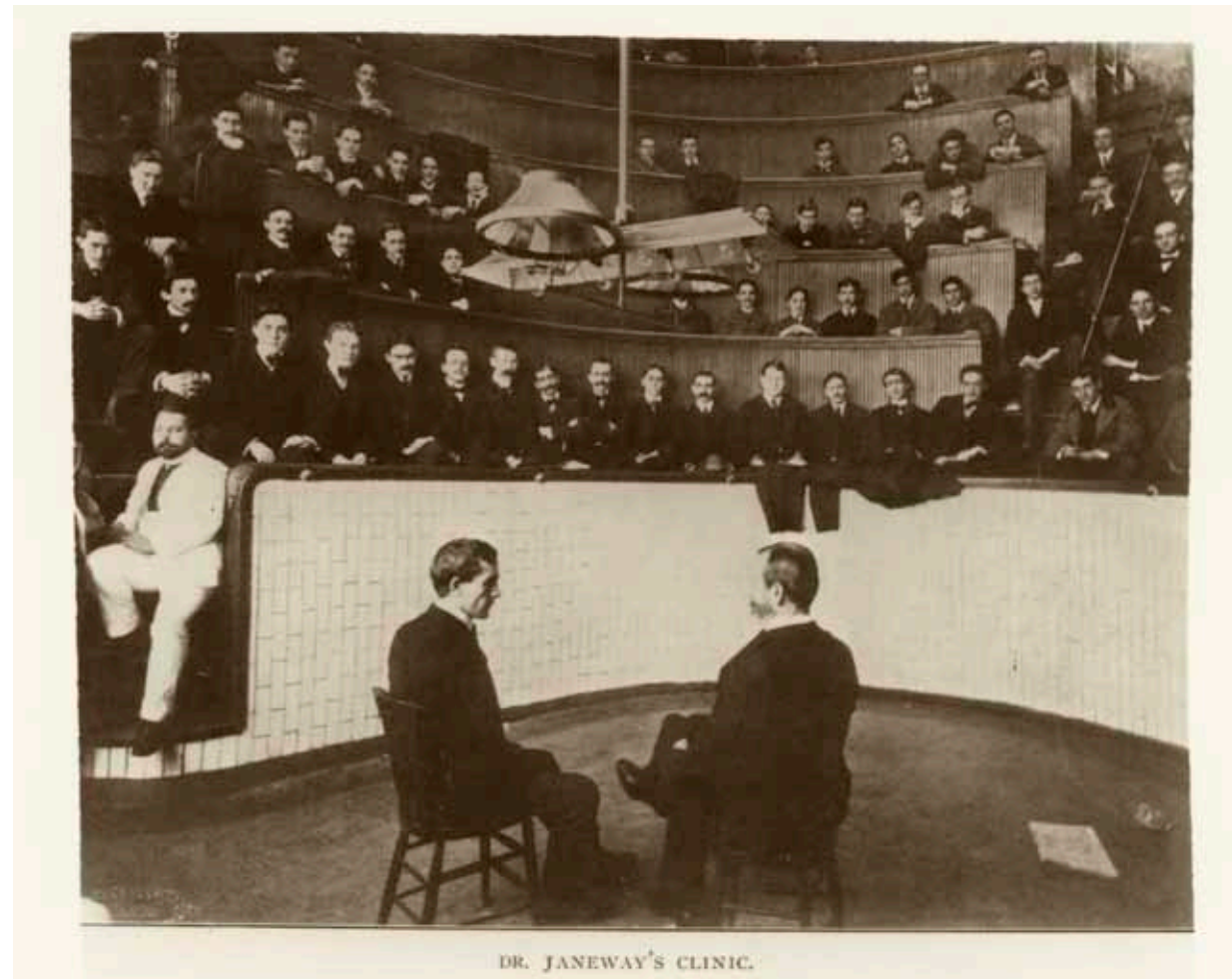
Kurt Hirschhorn (b. 1926)
 Alumnus, Class of 1954, New York University College of Medicine;
 Professor of Genetics (1958–66),
 New York University School of Medicine

OPPOSITE PAGE: Portrait of Kurt Hirschhorn circa 1960. **THIS PAGE, FROM TOP:** The WHSC1 gene is located on the short (p) arm of chromosome 4 at position 16.3. More precisely, the WHSC1 gene is located from base pair 1,842,920 to base pair 1,953,727 on chromosome 4. Hirschhorn with his wife Rochelle, an alumna of the class of 1957 and a critical co-investigator with him during his early days at NYU. Rochelle Hirschhorn spent her entire career at NYU School of Medicine, rising to professor of medicine, cell biology and pediatrics. Since 2007, she has been a professor emerita in these departments.



FACULTY As a leading research institution, NYU School of Medicine attracts some of the greatest scientific minds to the faculty. Our school has been the incubator of many biomedical discoveries and advances by those who have come to the medical center with a commitment to pushing the boundaries of science. From advances in our understanding of the pathology of disease to the creation of a new pharmacological agent for inflammatory diseases to bringing the promise of a malaria vaccine closer to reality, the efforts of our current and former faculty members are among some of the greatest examples of pioneering medical research.

OPPOSITE PAGE: Depiction of DNA repair proteins mediating formation of DNA double helix, studied using fluorescent DNA.



“He showed almost superhuman detective power in ferreting out the hidden cause of disease, combined with wonderful zeal and enthusiasm for his work....”

He represented the best type of physician and...his name should be held in grateful remembrance throughout the history of medicine in this country.”

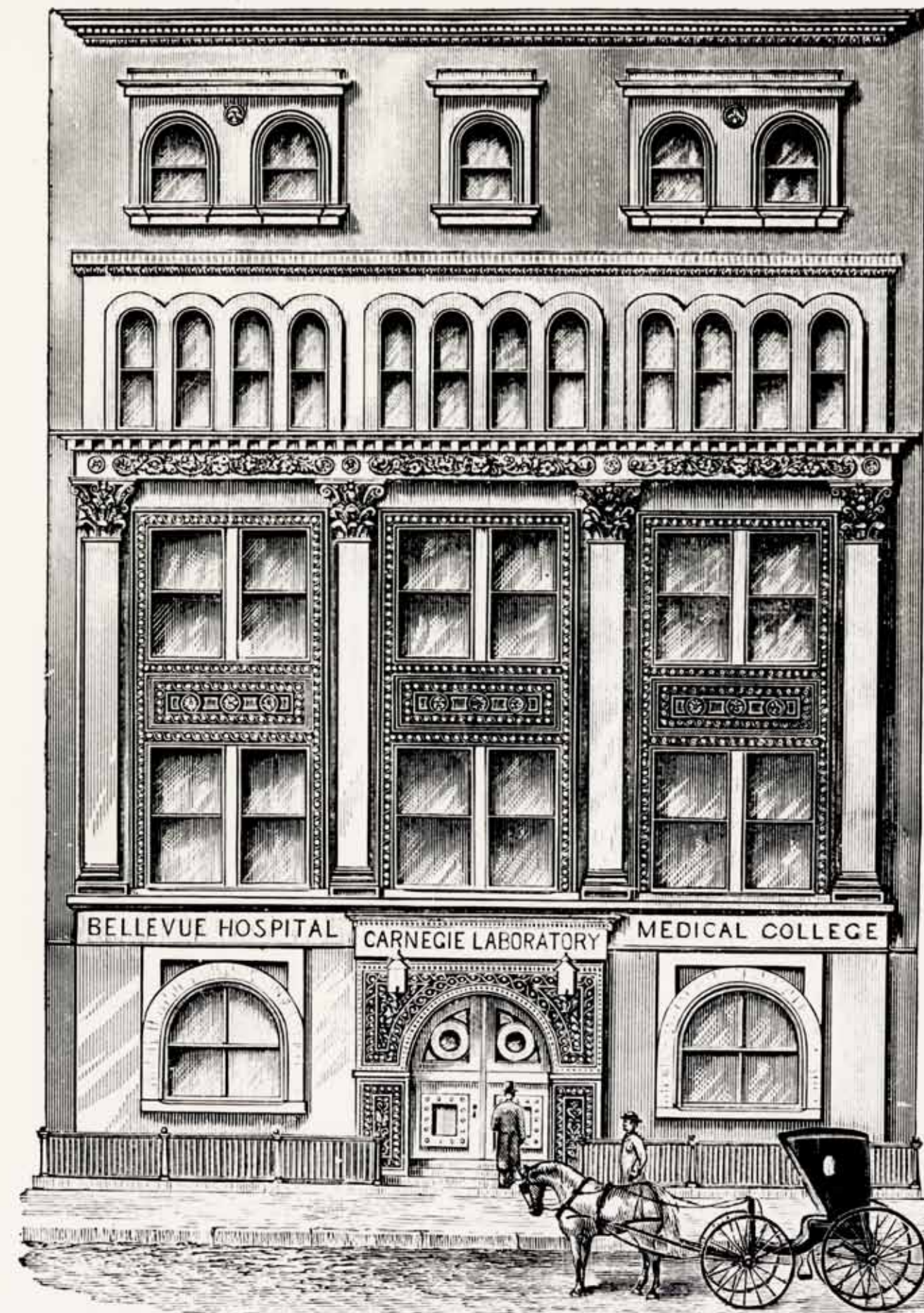
—WILLIAM H. WELCH

EDWARD G. JANEWAY

Edward G. Janeway (1841–1911)

Lecturer in Medicine (1866–72), Professor and Chairman of Pathological and Practical Anatomy (1872–98), Bellevue Hospital Medical College; Dean (1898–1905), University and Bellevue Hospital Medical College

THIS PAGE: Janeway (seated right) teaching in one of the college's amphitheatres. OPPOSITE PAGE, FROM LEFT: The Carnegie Laboratory opened in 1884 and was the first lab in America devoted to pathology and bacteriology. Portrait of Edward G. Janeway.



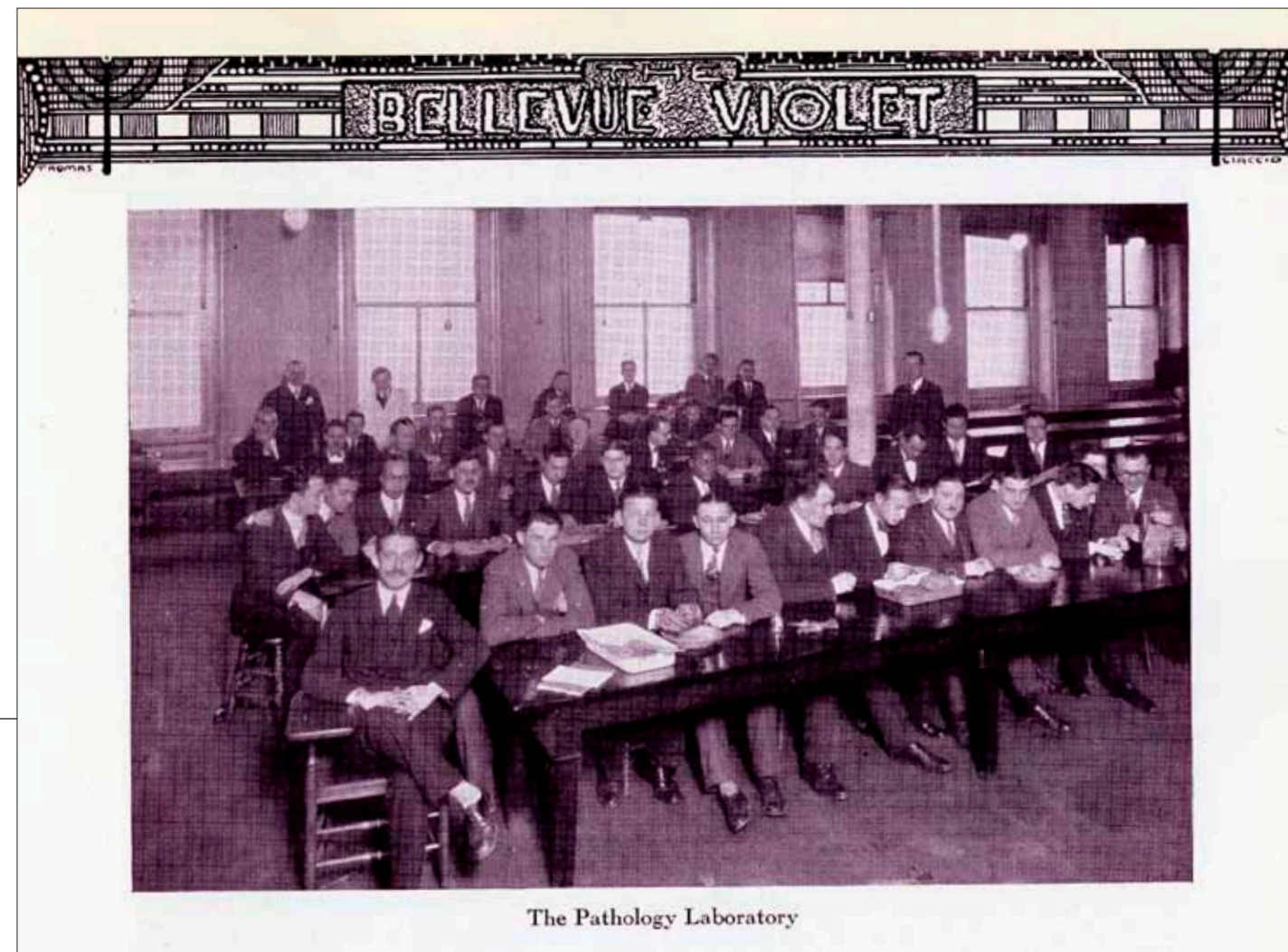
CARNEGIE LABORATORY.



Janeway championed the use of the microscope in medicine and taught “morbid” (pathological) anatomy and histology at Bellevue Hospital Medical College from 1866 until it joined with NYU in 1898. In 1884 he became co-founder and director, with William H. Welch, of the Carnegie Laboratory, the first laboratory building in the United States devoted entirely to the study and research of bacteriology, pathology, and other areas of medicine. From 1875 to 1881 he served simultaneously as health commissioner of New York City, where he advocated the use of autopsies as a public health tool.

Janeway had an interest in many areas of medicine, including cardiology. In 1899 he described unusual lesions on the hands and feet of patients with infectious endocarditis (“Janeway lesions”), defining a key symptom in the diagnosis of the disease. Among his writings is the first American description of leukemia (1876). In 1898 Janeway became the first dean of the combined University and Bellevue Hospital Medical College, a post he held until 1905.

THIS PAGE, FROM LEFT: An NYU pathology lab in 1929.
Portrait of Charles Norris. OPPOSITE PAGE: Norris in his library.



The Pathology Laboratory



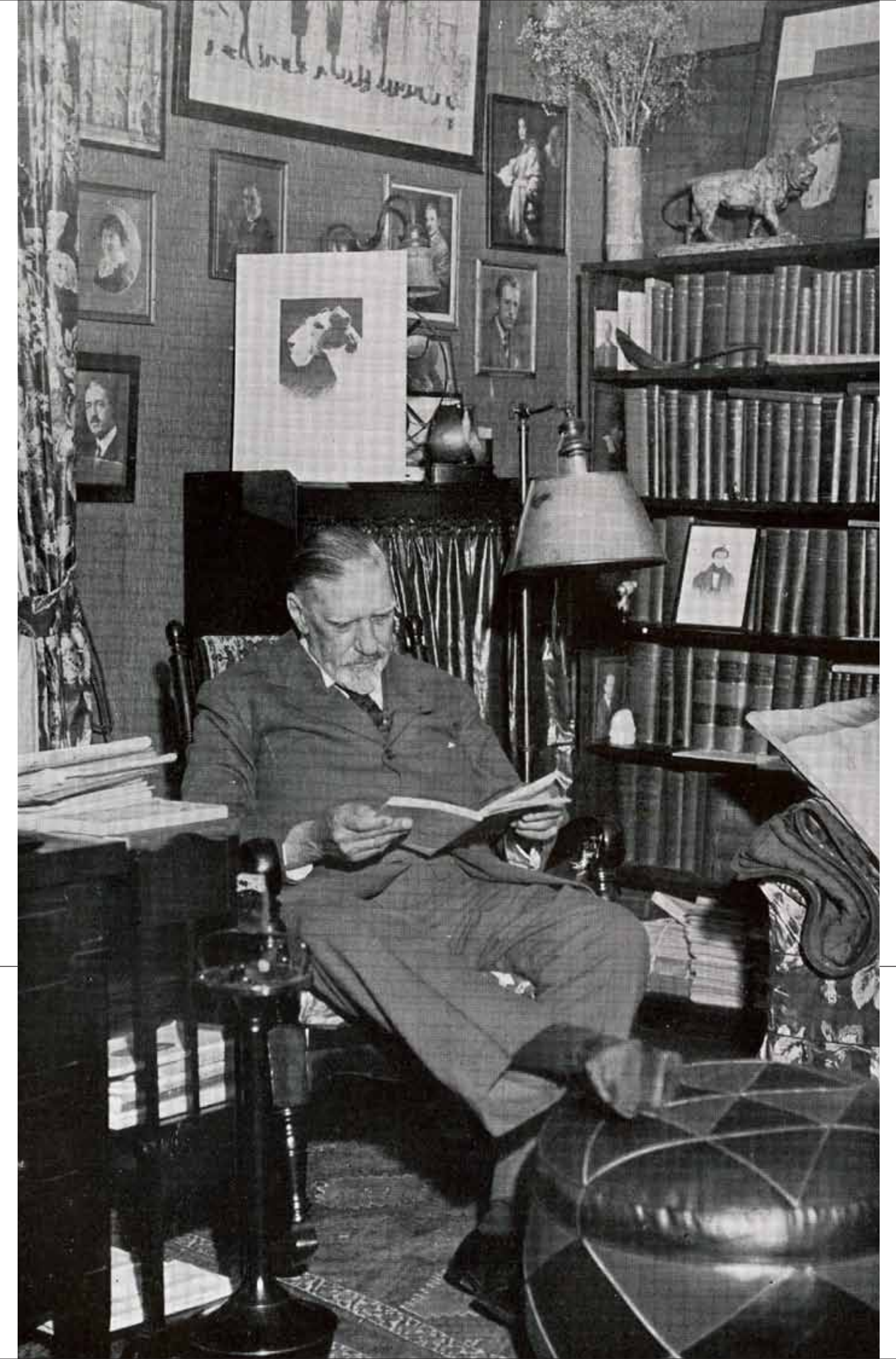
CHARLES

Charles Norris (1867–1935)
Founder and Professor, Department of Forensic Medicine,
New York University College of Medicine (1932–35);
Chief Medical Examiner (1918–35), City of New York

Norris was appointed chief medical examiner for the City of New York in 1918, the first post of its kind in the nation. He was given the power to order an autopsy when he judged it necessary, without court approval. Appalled by the lack of understanding of gunshot wounds, Norris and his assistants fired all kinds of guns into different materials from various ranges and angles, studied the gunpowder marks and shot patterns, and then applied this knowledge to cases.

Norris, who had been director of laboratories at Bellevue Hospital prior to his appointment as chief medical examiner, has been called the “father of forensic medicine.” He was the first professor appointed to NYU’s new Department of Forensic Medicine in 1932, the first such department in the United States.

NORRIS

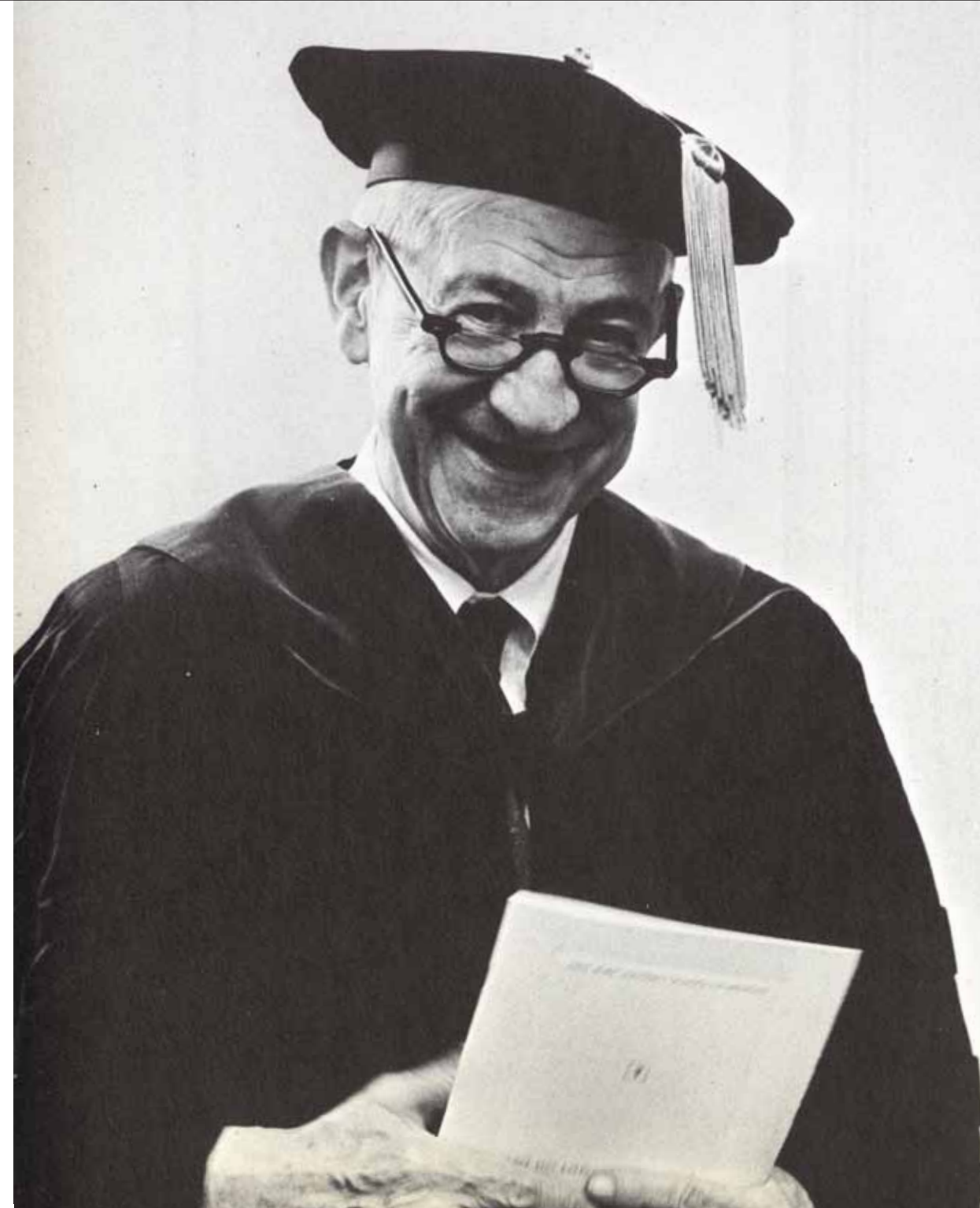




Milton Helpern (1902–1977)
 Professor of Forensic Pathology (1931–71),
 New York University School of Medicine;
 Chief Medical Examiner (1954–73),
 City of New York



Milton Helpern George Miles Ryan



Helpern received his medical degree from Cornell University in 1926 and studied pathology under Charles Norris at Bellevue Hospital. He joined the staff of the New York City Medical Examiner's Office in 1931, and achieved prominence through his incisive actions in dealing with infected drug addicts, which prevented a mysterious outbreak of tropical malaria from becoming epidemic. In 1954 Helpern became New York City's chief medical examiner and built the office into a world-renowned center for service, research, and training.

Helpern taught forensic pathology at NYU School of Medicine from 1931 until 1971 and trained many pathologists who went on to establish medical examiner offices in cities throughout the country. During his tenure, NYU's Institute of Forensic Medicine was created, and in 1977 the institute was named in his honor. He wrote *Where Death Delights*, documenting his life and work.



Dr. Milton Helpern, chief medical examiner of New York City, examines slide at his desk in this '66 photo. Helpern arrives at court in Naples, Fla., to testify in the Coppolino murder case. Milton Helpern talks with Assistant District Attorney James Mosely before Alice Crimmins trial in Queens in '68.

Helpern's Career: A Real TV Script

By LARRY COLE
 A very fitting role for Dr. Milton Helpern, whose retirement as New York City's chief medical examiner becomes effective New Year's Day, would be portraying himself in a television series based on his most interesting cases. TV producers would find ample material for intriguing scripts in the 42-year career of the man who came to be known as The Murder Doctor and was referred to as "the medical sleuth who knows more about violent death than anyone else in America."

Mannix No Match
 Helpern, whose vigor and enthusiasm belie his 71 years, has conducted some 25,000 autopsies and supervised another 100,000 or so. In the course of these examinations, his findings altered the determination of more criminal cases than TV sleuths Mannix, Columbo or Cannon ever investigated. One of the chief's favorite cases—clearly demonstrating the application of what he modestly terms "alertness, hard work and common sense"—occurred years ago when he went to a hotel in Manhattan's West 4th to investigate the death of a woman whose body was found lying face up in her bed, the apparent victim of an overdose of pills from a phial on the night table. Helpern, however, noted two details that transformed a seemingly accidental death into a homicide. He observed lipstick smudges on a pillow next to the body and some tiny hemorrhages in the whites of the eyes. From these clues, Helpern deduced that she had been smothered, a crime to which her estranged husband subsequently confessed. "If the body had been lying face down, or if I examined it after it had been moved, the hemorrhages would have been a normal post-mortem effect," Helpern explained. "But face up, it suggested smothering, and the lipstick imprint strengthened that suggestion." Helpern cites this case as a perfect

example of the value of on-site examination. Though rejecting the notion that he is a medical Sherlock Holmes Helpern labels his deductions quite elementary. In 1941, for example, he was called to Pennsylvania by a defense attorney named Robert Meyner (later the governor of New Jersey) in behalf of a young man accused of shooting his father to death. The defendant pleaded self defense contending that his father had shot at him with a shotgun. An autopsy by a local doctor, however, resulted in a ruling the dead man had been shot in the back, a finding that greatly damaged the claim of self defense. Helpern, called into the case because of his growing reputation as a medical sleuth, examined the dead man's clothing. He quickly determined that the fatal bullets had penetrated all layers of clothing covering the victim's chest and only one layer in the back. The defendant was acquitted. Another example of Helpern's powers of elementary deduction was seen in a case in which a ship's radio operator was charged with beating and throwing overboard a woman whose heavily bruised body was recovered from the sea. Helpern noted that the bruises were

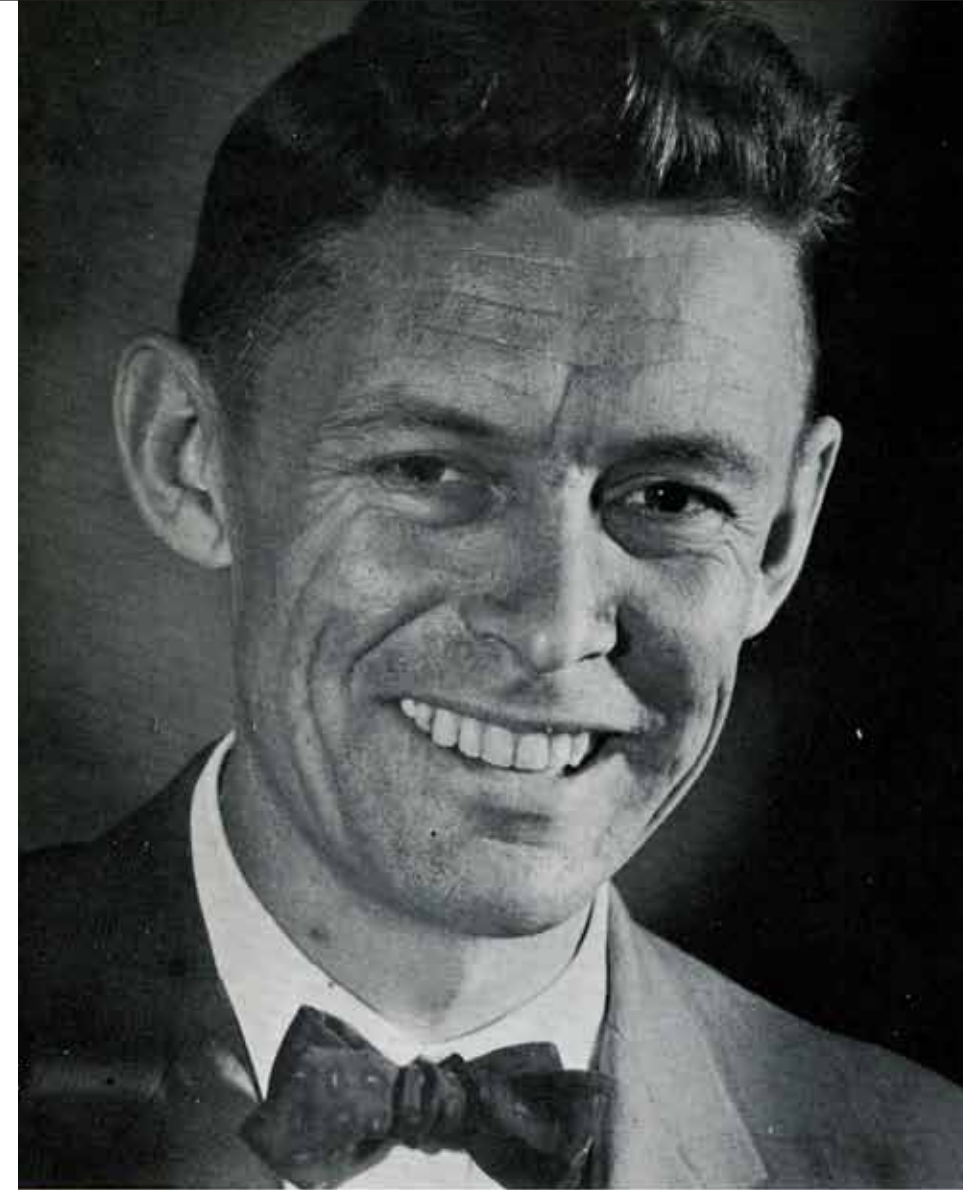


Retirement at the age of 71 won't stop Helpern's contributions to the Milton Helpern Library-Museum of Legal Medicine which was established in 1912 in honor of his 60th birthday.

(Continued on page M 8, col. 1)

OPPOSITE PAGE, FROM LEFT: Bellevue surgeon's cap, from Helpern's collection. Portrait of Milton Helpern. THIS PAGE, FROM LEFT: Helpern pictured in the 1960 *Medical Violet*. Article from the *New York Daily News* about Helpern's career, published on the eve of his retirement as chief medical examiner, December 30, 1973.

MILTON HELPERN



The last four years have seen a good many changes in Pathology, chief among them being the loss of Dr. Thomas to Medicine and the untimely death of Dr. John Hall. However, the department has been strengthened by the addition of Drs. Benacerraf, Bigelow, Brunner (for a time), Goldberg, Green, Ovary, Shinowara and Thorbecke to the staff. Fibrinoid and atherosclerosis have made way for carbon clearance and PCA. The departmental training program, combining residency training in pathology at Bellevue with research training in the medical school has attracted a number of recent alumni. There is much enthusiasm for the facilities which will be provided in the new University Hospital Department of Pathology, which will undoubtedly contribute a great deal to the effectiveness of undergraduate teaching.

Chandler A. Stetson, Jr., M.D.

DR. CHANDLER A. STETSON, JR., CHAIRMAN

PATHOLOGY



DR. HOWARD GREEN



DR. BARUJ BENACERRAF



DR. BURTON GOLDBERG

THIS PAGE: Stetson's statement as Department of Pathology chairman, *Medical Violet*, 1960. OPPOSITE PAGE, FROM LEFT: Portrait of Chandler A. Stetson. Pathology lab at the School of Medicine in the 1950s.

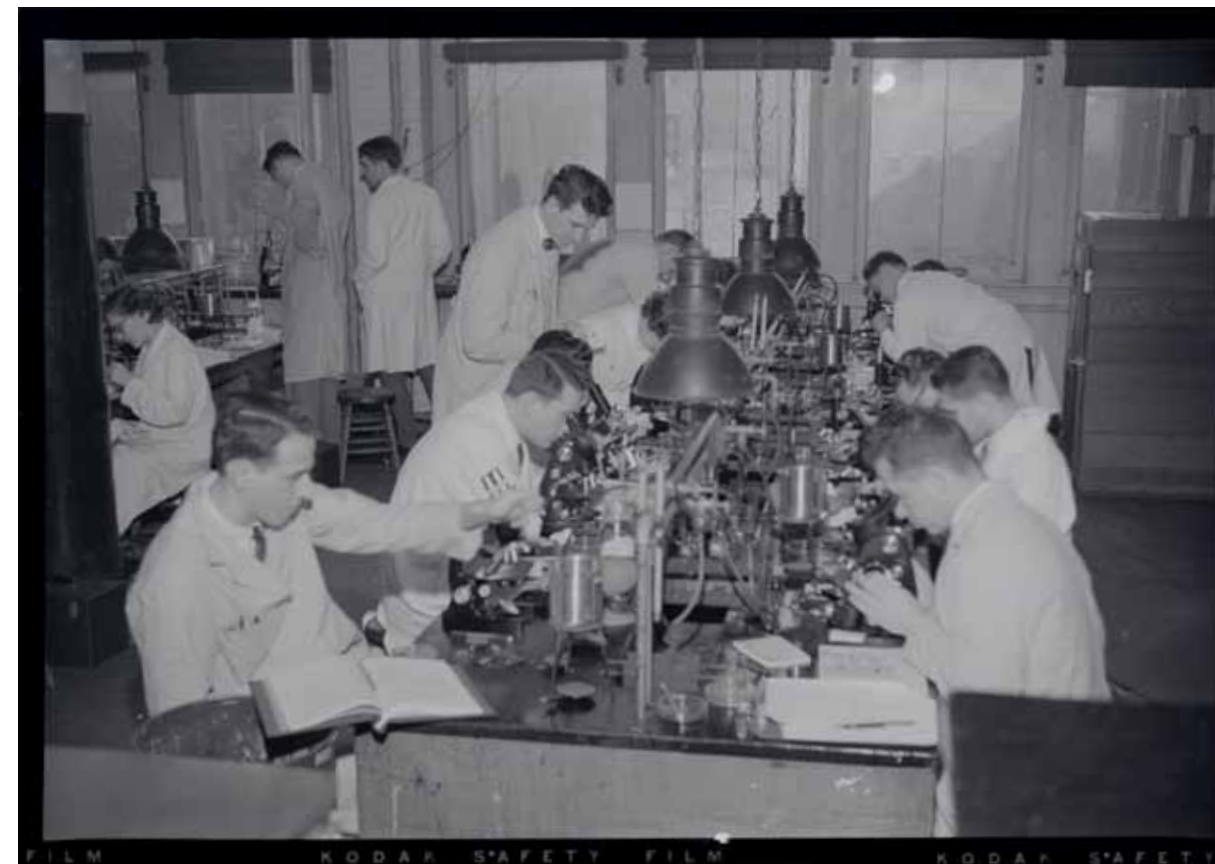
“We’re going to give you the best pathology course in the country.”

—CHANDLER A. STETSON



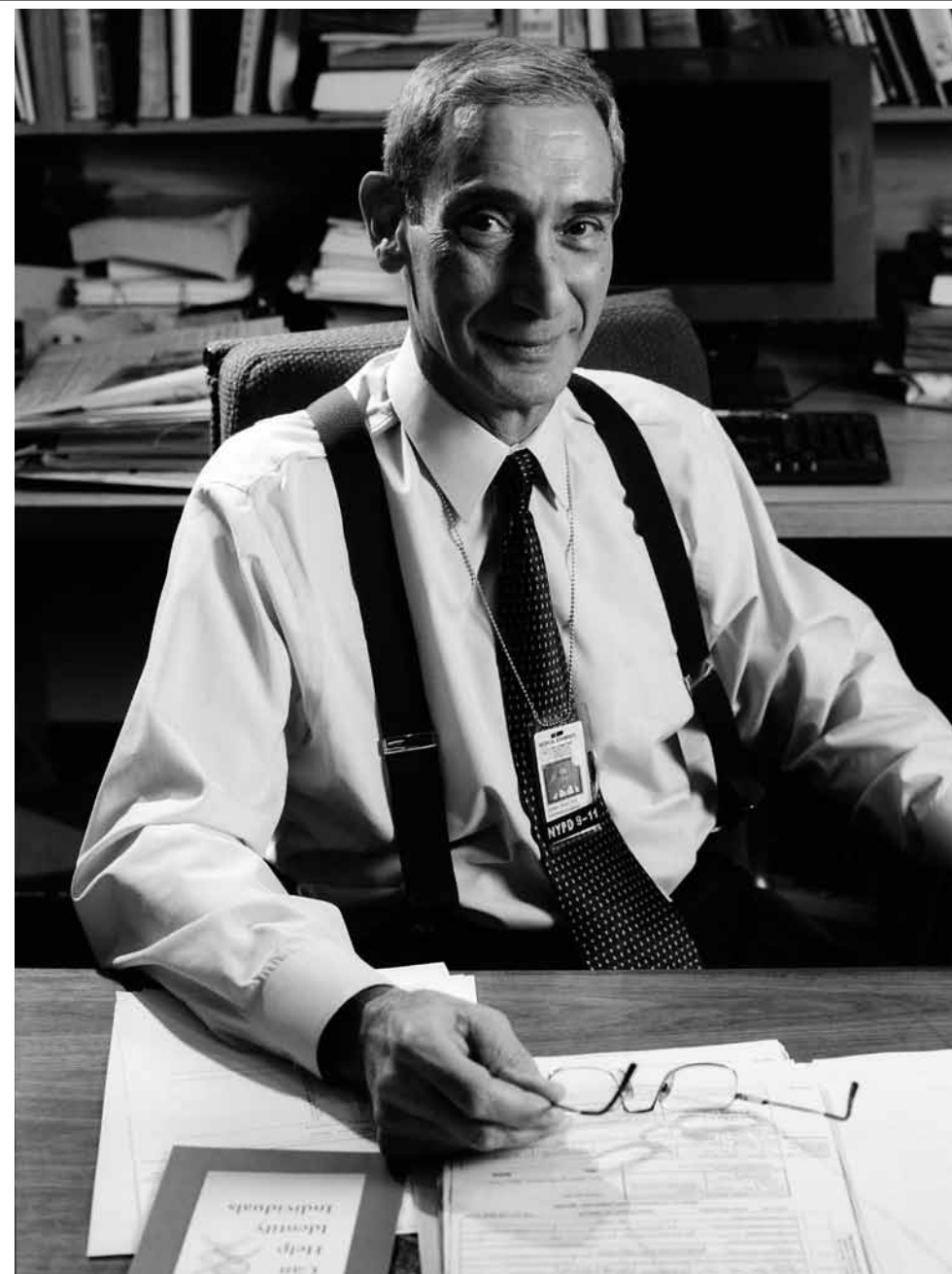
Stetson served as chairman of the Department of Pathology from 1958 to 1972, following faculty appointments at Johns Hopkins, the Rockefeller Institute, and the University of Minnesota. His research focused on endotoxin and the Shwartzman reaction, sickle cell anemia, autoimmunity, and transplantation.

As chairman of pathology at NYU, Stetson helped the department grow, augmenting its research orientation and recruiting additional distinguished faculty. Stetson was the first director of NYU School of Medicine's Honors Program. In 1972 he was recruited by the University of Florida to become dean of its medical school, and later he became its vice president for health affairs.



CHANDLER A. STETSON

Chandler A. Stetson (1921–1977)
Chairman (1958–72), Department of Pathology, New York University School of Medicine



Hirsch was appointed chief medical examiner for the City of New York in 1989, and has trained many medical examiners for New York and elsewhere, in addition to supervising one of the busiest medical examiner's offices in the nation.

Following the terrorist attack on the World Trade Center on September 11, 2001, Hirsch was charged with caring for and identifying the remains of the thousands of people who perished at Ground Zero. A parking lot near Bellevue Hospital was given over to tents housing temporary morgues and refrigerated trucks holding remains of the victims. Many medical students, staff, and faculty volunteered in assisting in the task of dealing with the dead and their grieving families. Ten years after the attacks, the process of identifying remains was still continuing, and Hirsch has been widely praised for his sensitivity in handling the human remains still to be identified.

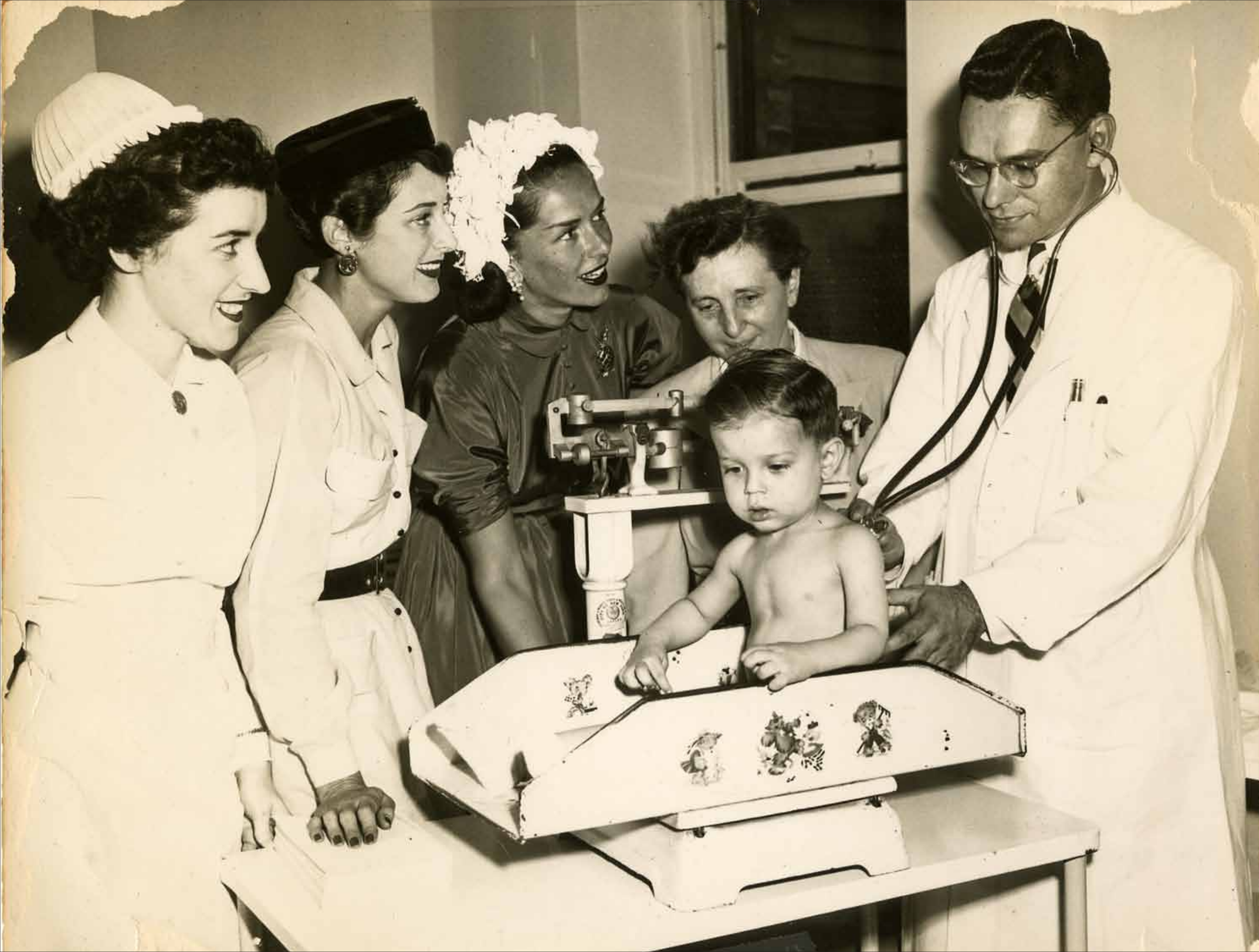


THIS PAGE, FROM LEFT: Portrait of Charles S. Hirsch. A memorial chapel in the temporary morgue, which still housed remains of September 11 victims in 2006. Medical examiner's temporary morgue at Bellevue Hospital after September 11, photographed in 2006. OPPOSITE PAGE: New York City morgue, 2009.

CHARLES S.

HIRSCH

Charles S. Hirsch (b. 1937)
Professor of Pathology (1989–present), Professor and Chairman (1989–present), Department of Forensic Medicine, New York University School of Medicine; Chief Medical Examiner (1989–present), City of New York



Krugman spent his career studying infectious diseases in children and seeking ways to combat them. In 1960 he showed that children could be protected from measles by a live attenuated virus, virtually eradicating that common childhood disease in the United States. In 1969 he confirmed the effectiveness of the first vaccine for rubella, virtually ending the threat of brain-damaged and severely physically disabled babies born to women who contracted the disease while pregnant.

Krugman was the first to distinguish hepatitis A from hepatitis B, and made great strides in describing their different characteristics and behaviors. His work laid the basis for the development of the first vaccine against hepatitis B in 1980. His book, *Infectious Diseases of Children*, first published in 1958, reached its 11th edition. Krugman was awarded the Albert Lasker Public Service Award in 1983, for "his courageous leadership in conceiving, developing and testing vaccines against various viral diseases, especially hepatitis B, with vast impact on world health."



Saul Krugman (1911-1995)
Professor and Chairman
(1960-74), Department of
Pediatrics, New York University
School of Medicine



SAUL KRUGMAN

**1983 Albert Lasker
Public Service Award**
Presented by the
**ALBERT AND MARY LASKER
FOUNDATION**
to
Saul Krugman, M.D.
Professor of Pediatrics
New York University School of Medicine
New York, New York

For his critically important studies of hepatitis, rubella and measles, culminating in the development of the hepatitis B vaccine.

In the early 1950's, Dr. Krugman and his associates set out to combat infectious diseases in children. In 1960, he showed that children could be protected against measles by using a live attenuated virus vaccine. In 1969, he confirmed the effectiveness of the first vaccine against rubella.

Rubella, which formerly caused brain damage and severe physical disabilities among tens of thousands of babies born to women who contracted the disease while pregnant, is now virtually unknown in the U.S. Today measles is a medical rarity in the U.S., where 95 percent of our children are vaccinated against it.

Dr. Krugman's most far-reaching achievement concerns viral hepatitis. In a long and elegant sequence of studies beginning in the mid-1950's he proved that "infectious" (type A) hepatitis, transmitted by the fecal-oral route, and the more serious "serum" (type B) hepatitis, transmitted by blood, body secretions, and sexual contact, were caused by two immunologically distinct viruses.

Dr. Krugman also discovered that heat-treated serum from a chronic carrier of hepatitis B could elicit protective antibodies in a susceptible person without causing the disease. This brilliantly simple discovery paved the way for the development of various hepatitis B vaccines now licensed for worldwide use. Over 100 million people throughout the world are chronic carriers of hepatitis B and as a consequence, can themselves develop cancer of the liver and other dangerous illnesses.

To Dr. Krugman, for his courageous leadership in conceiving, developing and testing vaccines against various viral diseases, especially hepatitis B, with vast impact on world health, this 1983 Albert Lasker Public Service Award is given.

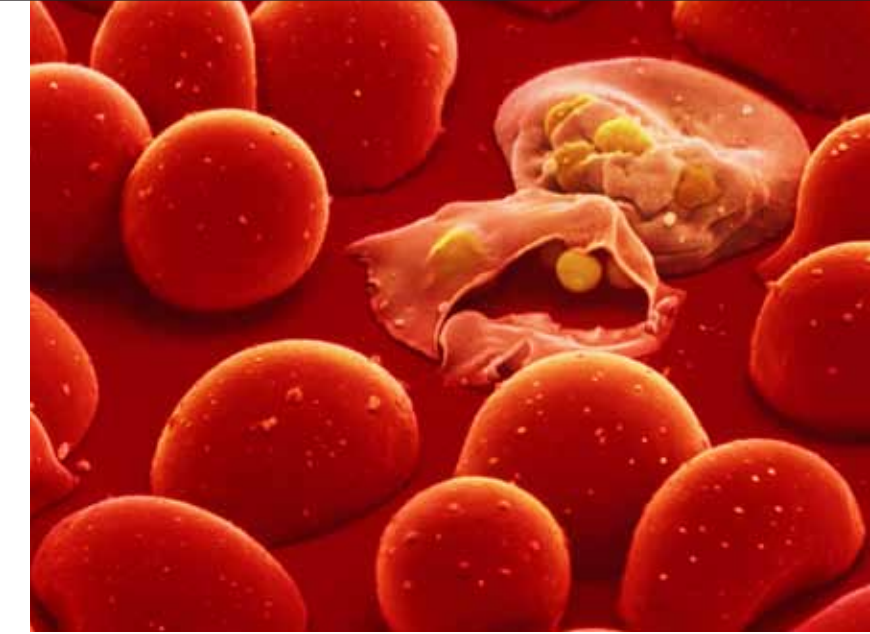
ALBERT AND MARY LASKER FOUNDATION

Michael D. DeBakey
Chairman
Medical Research Awards Jury

Mary Lasker
Mrs. Albert D. Lasker
President

November 18, 1983

OPPOSITE PAGE: Krugman with a young boy, his family and nurses. THIS PAGE, FROM TOP: Two images of Krugman in the South Pacific during World War II. Saul Krugman in 1954. Krugman's 1983 Albert Lasker Public Service Award.



THIS PAGE, FROM LEFT: Dean Grossman with honorees from Dean's Honors Day 2009: Ruth S. Nussenzweig, MD, PhD, and Victor Nussenzweig, MD, PhD, honored as Master Researchers; Gerald Weissmann, MD, recognized as Master Educator and Mentor; and Martin L. Kahn, MD, named Master Clinician. Pau-Elrlich-und Ludwig-Darm-staedter-Preis awarded to Ruth Nussenzweig in 1985. Lifetime Achievement Award granted to Victor Nussenzweig by BioMalPar in 2006. OPPOSITE PAGE, FROM TOP: Malaria parasites have infected two red blood cells and caused one of them to burst. Victor and Ruth S. Nussenzweig in 2010.

The Nussenzweigs first collaborated on research while in medical school at the University of São Paulo in Brazil. Together, during their third year in medical school, they discovered a way to kill *Trypanosoma cruzi*, the parasite which causes Chagas disease and often infects blood meant for transfusions. Both joined the faculty at NYU medical school in 1965. In 1967, Ruth Nussenzweig found that one could inactivate the malaria parasite at the stage in its life cycle before it enters the human liver by irradiating it and showed that the irradiated parasites were capable of inducing protective immunity. Since then, they have dedicated their work to the development of vaccines against malaria, some of which are now in clinical trials.

Notable awards include the Paul Ehrlich and Ludwig Darmstaedter Prize awarded to Ruth Nussenzweig in 1985 and the Lifetime Achievement Award granted to Victor Nussenzweig by BioMalPar in 2006.

RUTH S.

Ruth S. Nussenzweig (b. 1928)
C.V. Starr Professor of Medical and Molecular Parasitology, New York University School of Medicine

VICTOR NUSSENZWEIG

Victor Nussenzweig (b. 1928)
Hermann M. Biggs Professor of Preventive Medicine, New York University School of Medicine



A distinguished teacher, Tillett's most important research contribution was his discovery in 1933, while at Johns Hopkins, of the bacterial protein fibrinolysin (now known as streptokinase), which is involved in blood clotting. The drug developed from his research found initial clinical application in treating hemothorax and tuberculous meningitis. After Tillett joined NYU in 1937, he continued to explore the enzyme's unique thrombolytic applications, leading to its current successful clinical application in the treatment of coronary thrombosis.

Tillett also made a number of important contributions related to studies of penicillin therapy of pneumococcal lobar pneumonia from 1942 to 1945. He served as chairman of NYU College of Medicine's Department of Medicine from 1938 until his retirement in 1958. He received the Albert Lasker Award in 1949.



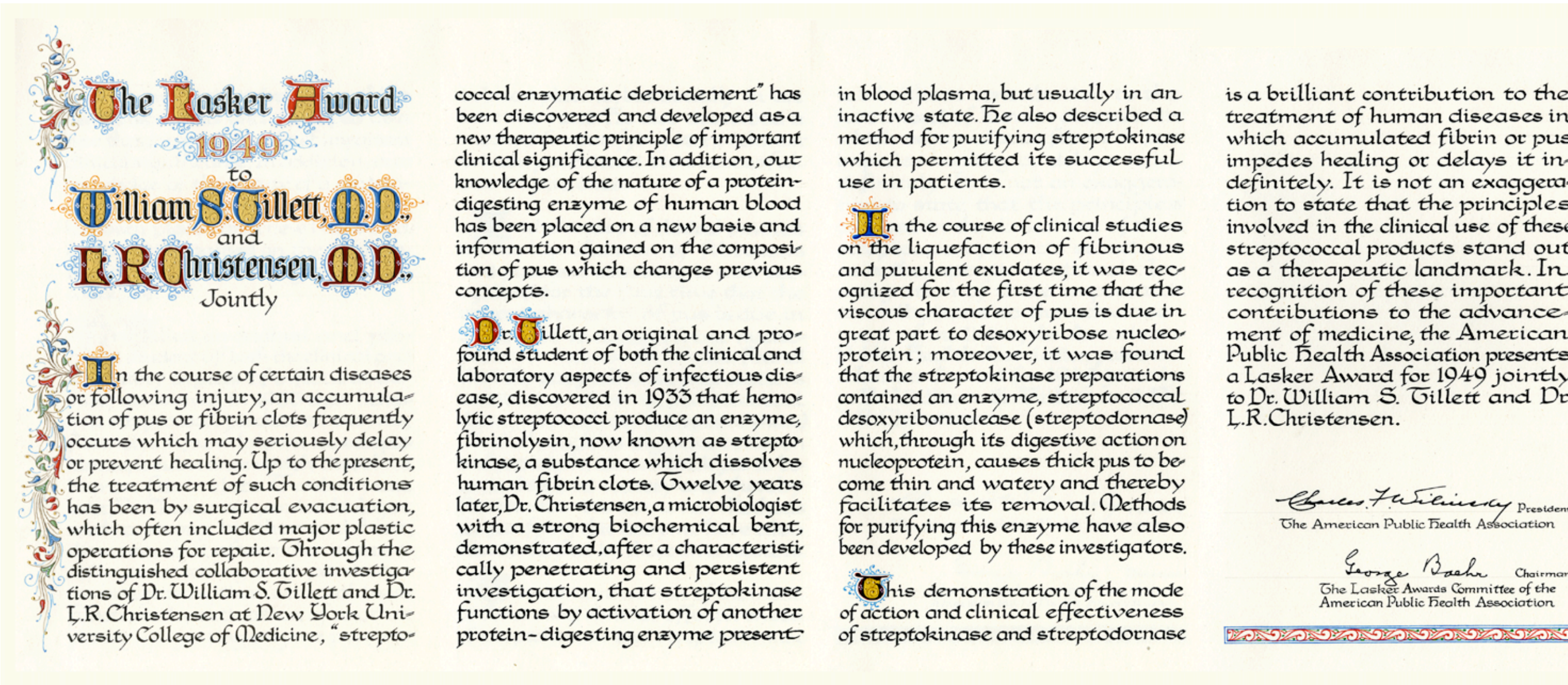
THIS PAGE, FROM LEFT: Portrait of William Smith Tillett. A bottle of streptokinase from the 1930s. OPPOSITE PAGE: The citation for Tillett's 1949 Lasker Award for his discovery in 1933 of the enzyme fibrinolysin, now known as streptokinase, a substance which dissolves human fibrin clots.

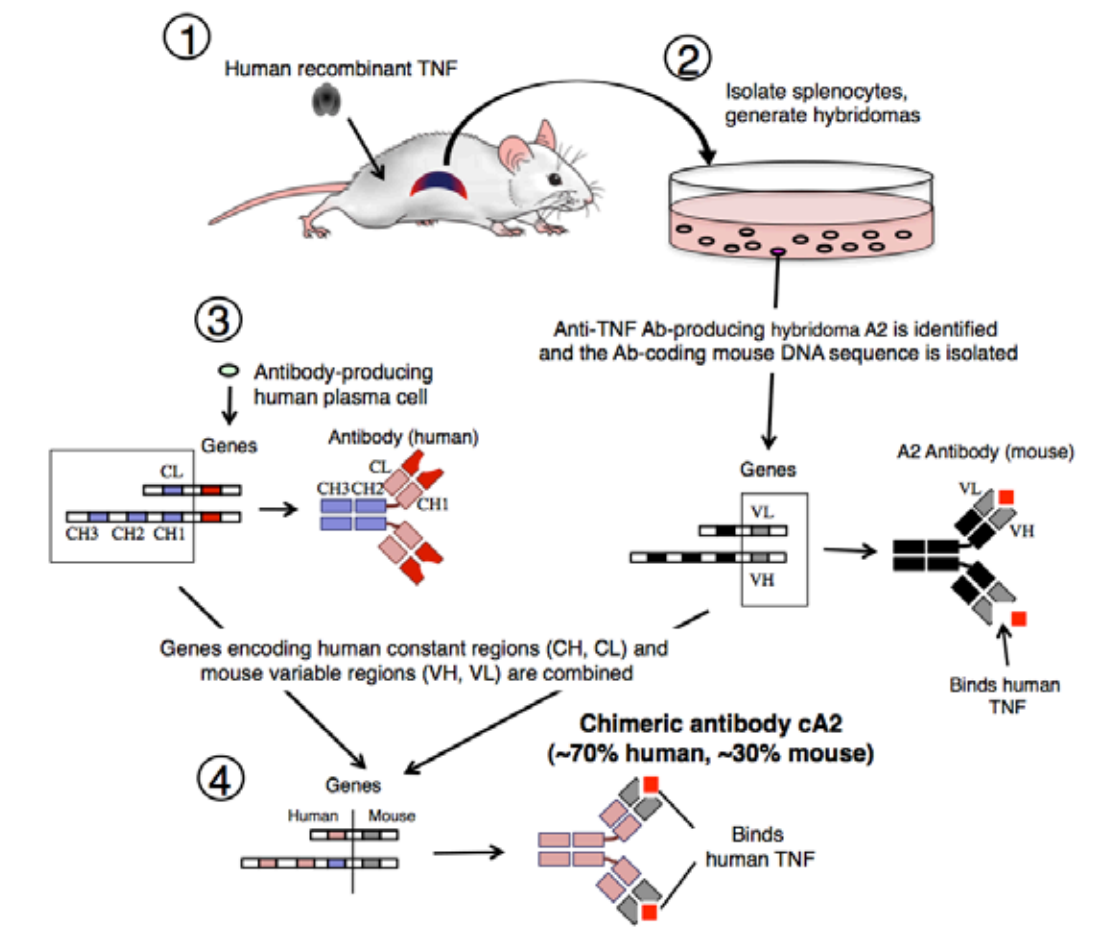
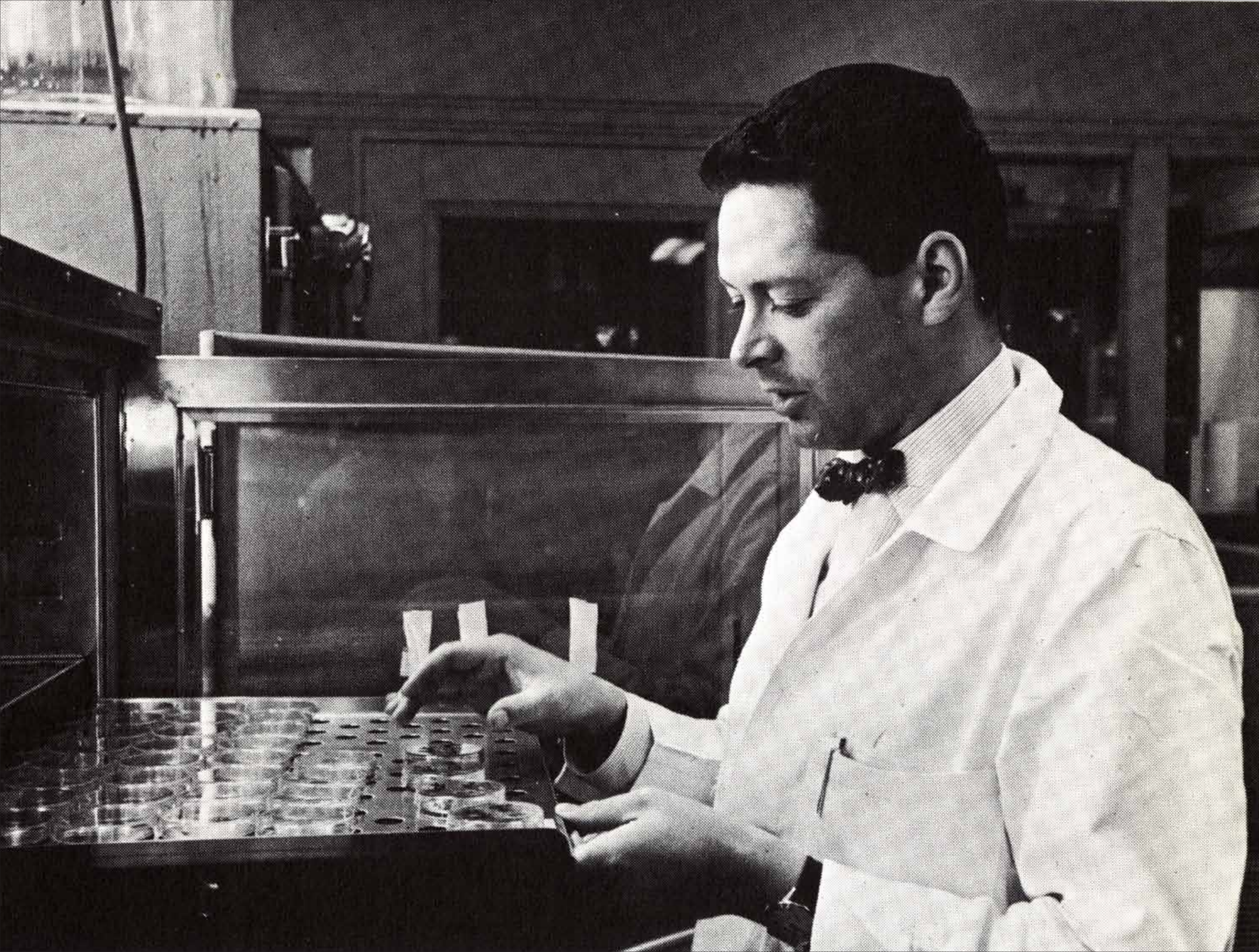


WILLIAM SMITH TILLETT

William Smith Tillett (1892-1974)

Professor and Chairman, Department of Bacteriology (1937-38) and Chairman (1938-58), Department of Medicine, New York University College of Medicine



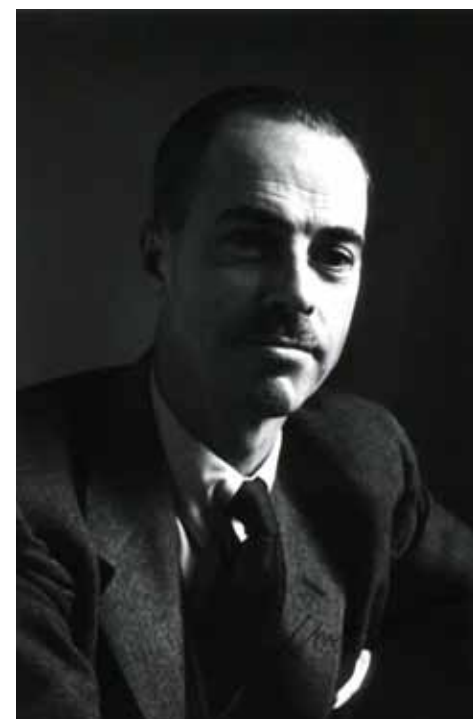


OPPOSITE PAGE: Vilcek in the 1969 *Medical Violet*. THIS PAGE, FROM LEFT: Illustration of the process Vilcek used for the generation of the monoclonal antibody cA2 (later renamed "Remicade"). Portrait of Jan T. Vilcek.

Jan T. Vilcek (b. 1933)
 Professor of Microbiology, New York University School of Medicine

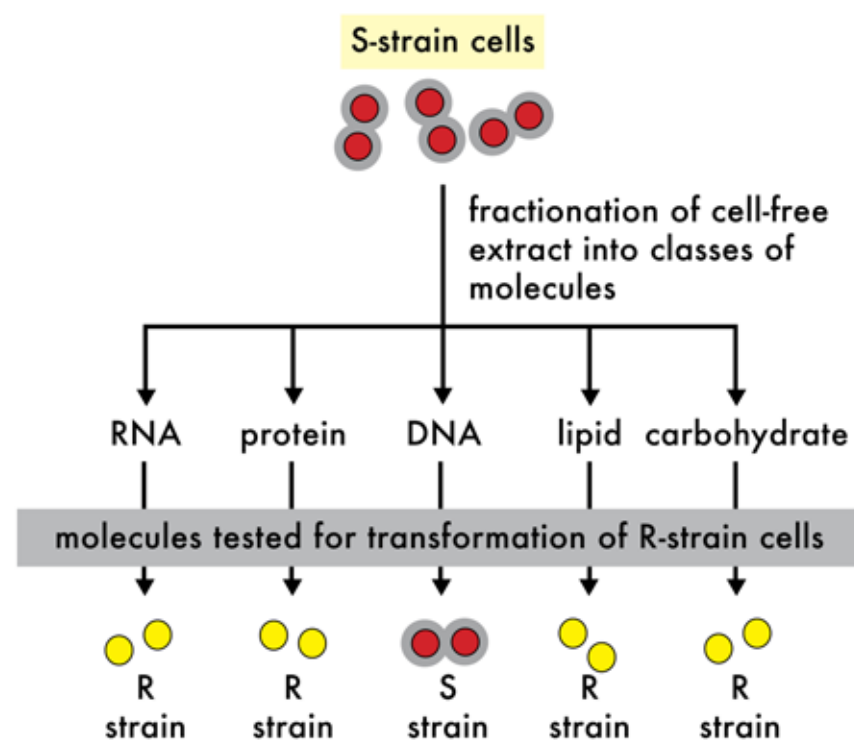
JAN T. VILCEK

Vilcek's studies of soluble mediators (cytokines) that regulate the immune system, including interferon and tumor necrosis factor (TNF), led to the creation in 1989, with colleague Junming Le, of a monoclonal antibody against TNF alpha, a powerful promoter of inflammation. Collaborating with the biotechnology company Centocor, Vilcek and Le helped to develop the biologic drug known commercially as Remicade. Remicade is a potent anti-inflammatory agent used in the treatment of rheumatoid arthritis, Crohn's disease, ulcerative colitis, psoriasis and other inflammatory diseases. The success of Remicade encouraged the development of numerous other anti-TNF agents. In 2005, Vilcek made a donation of \$105 million to NYU School of Medicine, believed to be the largest philanthropic gift ever made by an active faculty member to an academic medical center, and in 2010, he and his wife, Marica, gave an additional gift of \$21 million.

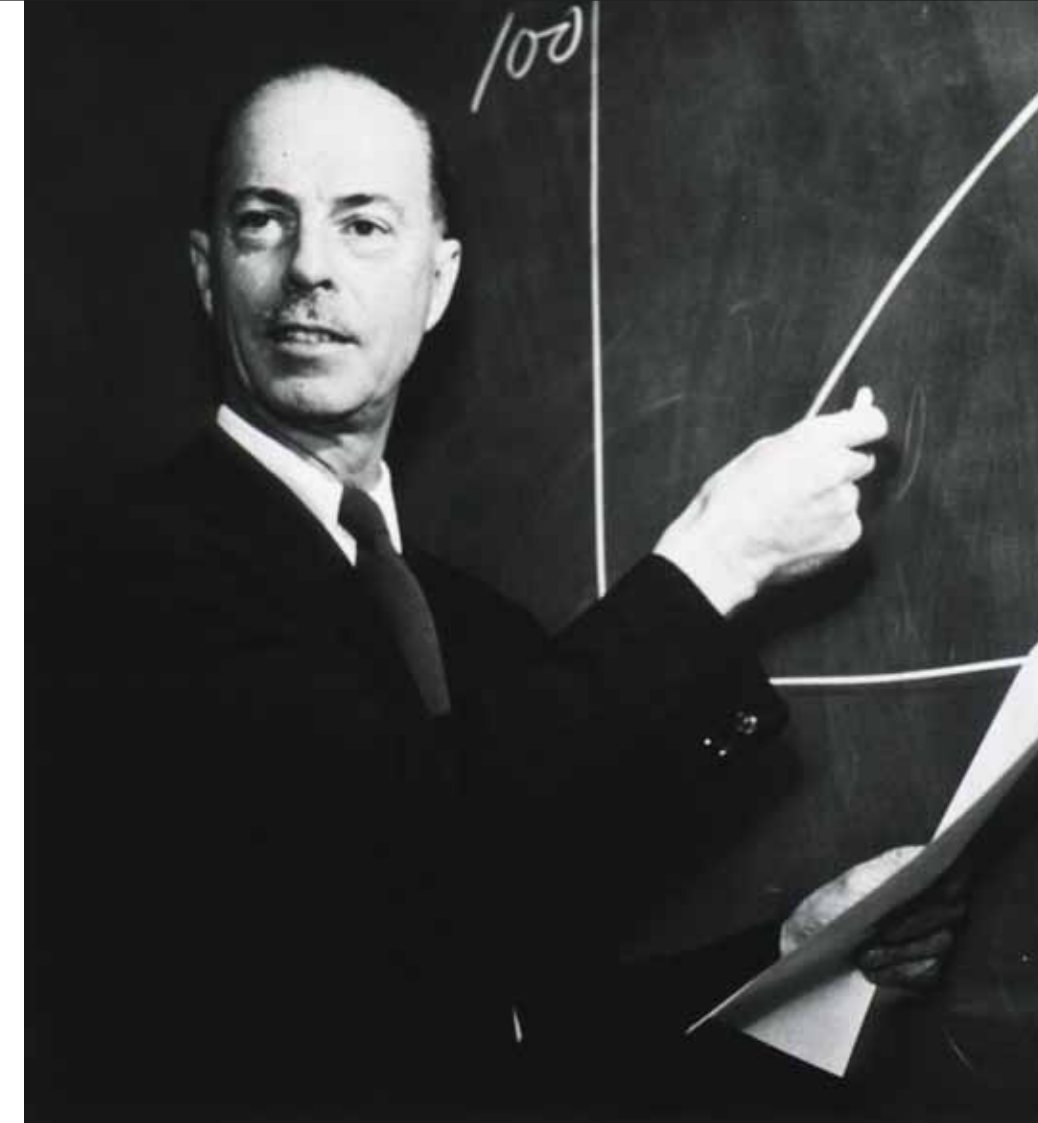


Together with Oswald Avery and Maelyn McCarty, MacLeod made one of the most important discoveries of the century, demonstrating in 1944 that DNA is the active component responsible for genetic transformation—and in retrospect, the physical basis of the gene. They extracted nucleoid purified DNA, proteins, and other materials from S bacteria. When they mixed R bacteria with these different materials, they found that only those mixed with DNA were transformed into S bacteria.

Although there was considerable reluctance to accept the conclusion that DNA was the genetic material at the time, scientists looking back on the Avery-MacLeod-McCarty experiment have cited it as the beginning of molecular genetics. The team was nominated several times for the Nobel Prize. While chairman of NYU College of Medicine's Department of Microbiology from 1941 to 1956, MacLeod was instrumental in creating the M.D./Ph.D. program. In 1961, MacLeod was asked by President John F. Kennedy to be chairman of the Life Sciences Panel of his Science Advisory Committee and in 1963, he was appointed the first deputy director of the Office of Science and Technology (OST), a post he held until returning to NYU in 1966.



CONCLUSION: The molecule that carries the heritable information is DNA.



OPPOSITE PAGE, FROM LEFT: Portrait of Colin Munro MacLeod circa 1940. An illustration of the Avery-MacLeod-McCarty experiment, which demonstrated that DNA is the active component responsible for genetic transformation. THIS PAGE, FROM LEFT: MacLeod in the classroom. MacLeod's statement as the Microbiology Department chair, from the 1953 *Bellevue Violet*.

Microbiology

Colin M. MacLeod, M.D.

THE commonest misconception about the nature of education is to be found in the false emphasis placed on teaching as contrasted with learning. The teacher, in actuality and despite his protestations, achieves not much more than the creation of an environment. If he emphasizes didactics he has created an insalubrious climate. If, on the other hand, he is humble enough to realize that his true function lies in guiding the student in the active process of learning, possibly even inspiring one or two of them now and then, he is accomplishing his role in society. The preposterous metaphor of the teacher as the noble sculptor who molds the raw clay that is the student unfortunately has persisted too long in the credo of professional educators. Far from being nobly molded, the student all too often suffers the indignity of being dressed in hand-me-downs which neither fit nor wear well.



The best tradition in American medical education has emphasized the process of learning. For example, the introduction of clinical clerkships in which the student himself studies disease in the living subject and does not derive his information solely in half-digested form from lectures and textbooks was a tremendous advance and has had a profound influence throughout the rest of the medical curriculum and also on branches of education unrelated to medicine. Application of this principle, however, is far from full realization in medical education and it is one of the important duties of teachers to see that it is more generally and intelligently cultivated.

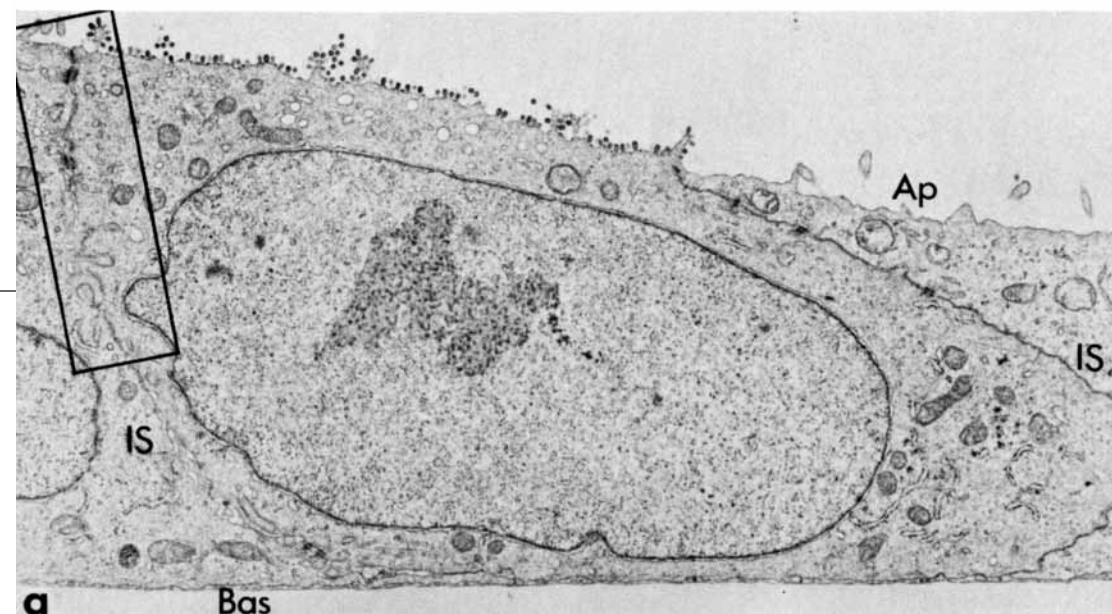
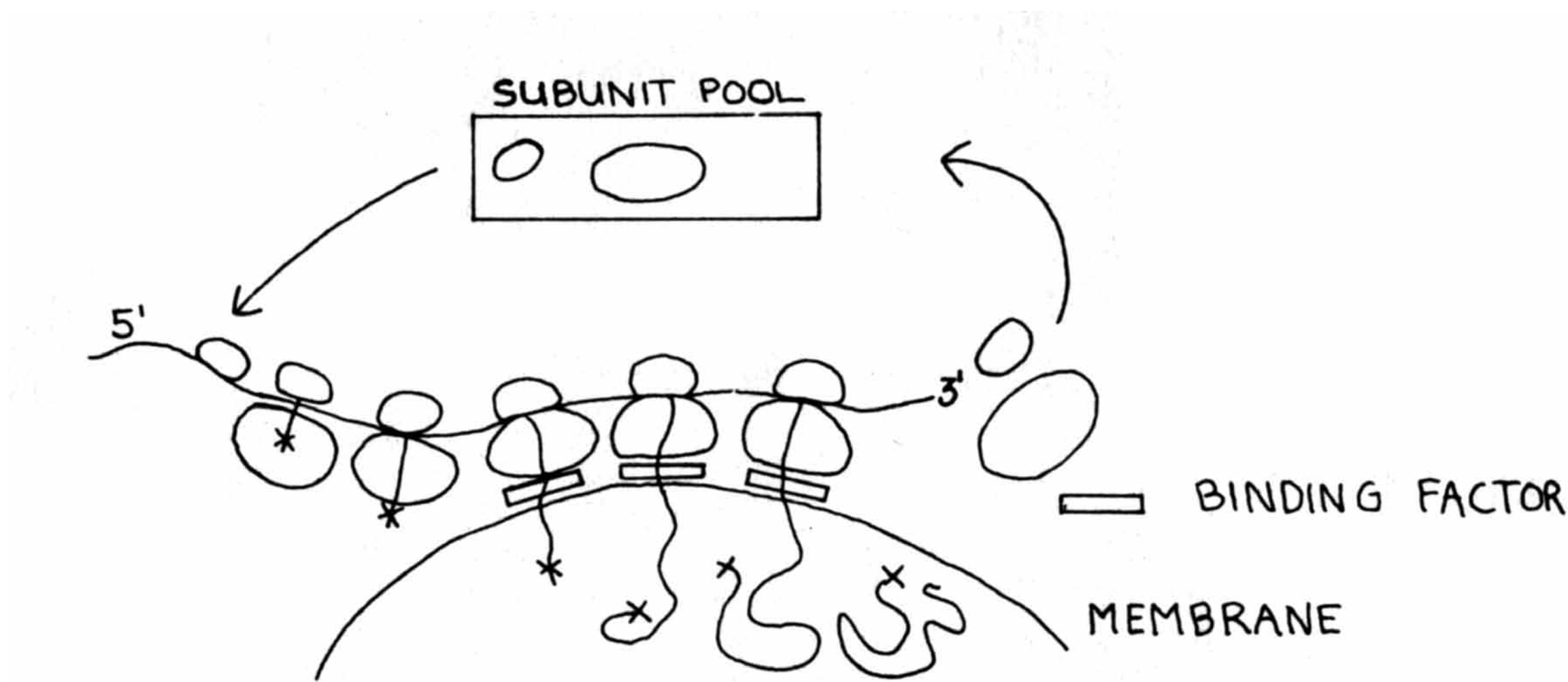
Clockwise: Drs. MacLeod, Adams, Pappenheimer, Roe, Forkas, Rowen, Krauss, Garmise, Bernheimer, Christensen. Rear: Drs. Barksdale, Welsh.



The customary objections to this method of education are that it throws too much responsibility on the student and that it is inefficient in comparison to the didactic method. There is constant pressure to increase the number of didactic sessions so that more complete coverage of essential topics can be achieved, or so that the information the student has acquired can be correlated and integrated for him, and various other equally tiresome proposals. The proper aim is not to stuff the student's mind with facts that never become a part of his experience but rather to give him the opportunity to learn basic biological principles, to develop a thoughtful approach to medical problems, to make his own correlations, and to instill in him or strengthen the desire to continue to learn.

COLIN MUNRO MACLEOD

Colin Munro MacLeod (1909–1972)
Chairman (1941–56), Department of Microbiology,
New York University College of Medicine;
Professor of Medicine (1960–70), New York
University School of Medicine



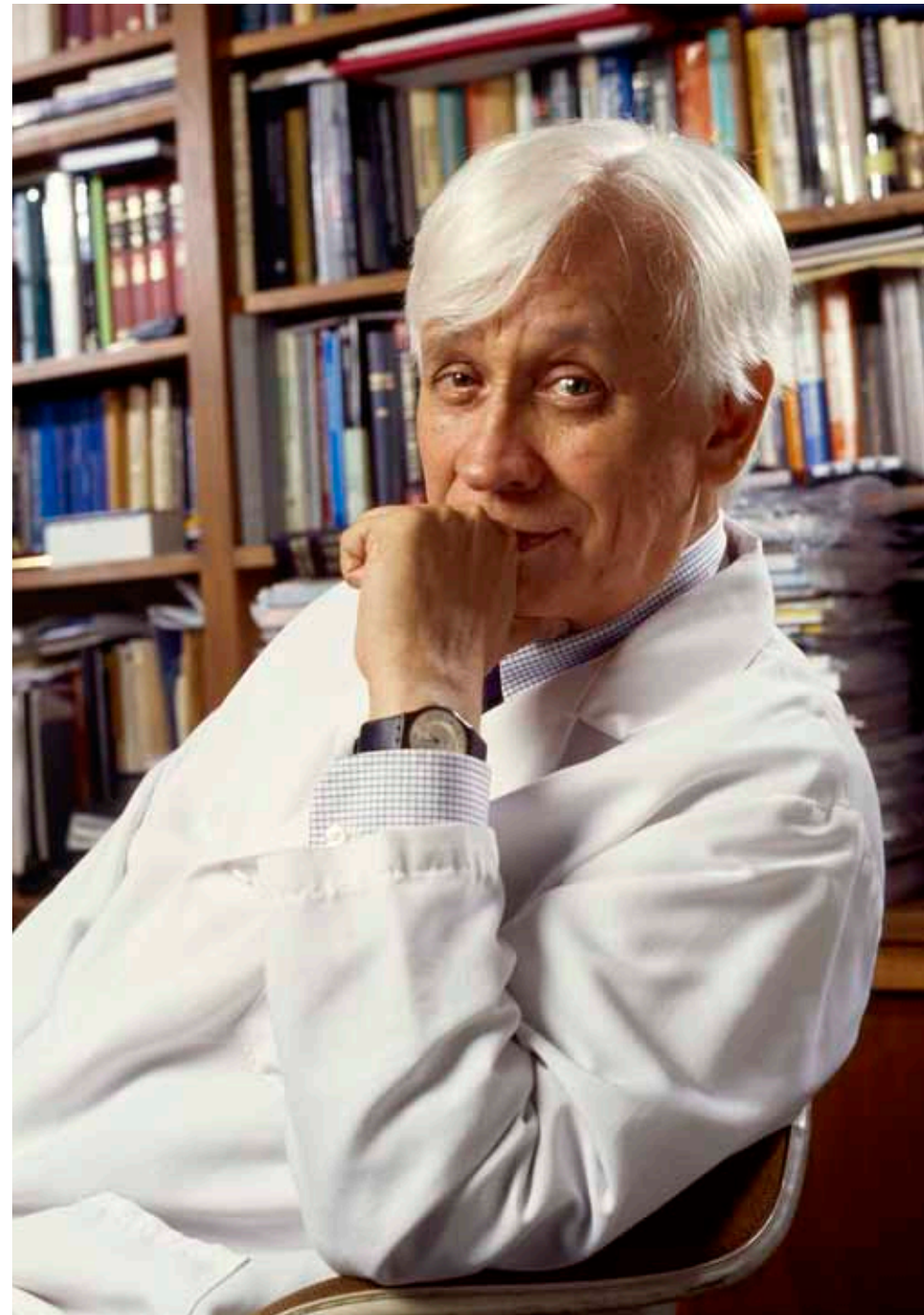
OPPOSITE PAGE, FROM LEFT:
Portrait of David D. Sabatini. The first
formulation of the signal hypothesis
with Günter Blobel in 1971. Influenza
virus bud only from the apical surface of
infected polarized epithelial cells.

Sabatini has made major contributions to cell biology, beginning with the introduction of glutaraldehyde as a fixative for electron microscopy, which revolutionized the field and allowed the discovery of new subcellular structures. He was a pioneer in the field of protein traffic and in 1966 discovered the co-translational vectorial discharge of polypeptides into the lumen of the endoplasmic reticulum. In 1971, together with Günter Blobel, he formulated the signal hypothesis. At NYU School of Medicine, Sabatini's laboratory introduced the now widely adopted MDCK cell system for the study of epithelial cell polarity and, subsequently, his group reported the discovery of the asymmetrical budding of specific envelope viruses from the different surfaces of polarized epithelial cells, which provided a model system from which to study plasma membrane biogenesis.

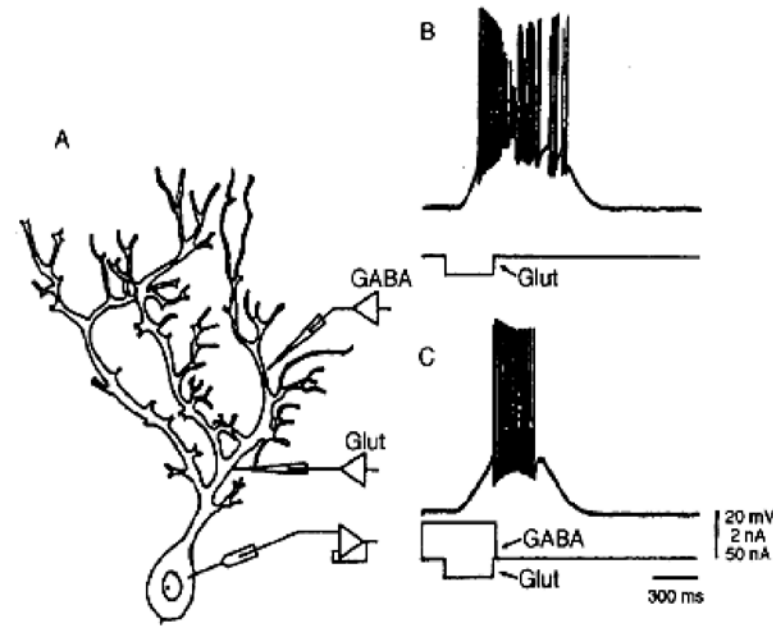
Sabatini is a member of the American Academy of Arts and Sciences (1980), the National Academy of Sciences (1985), the American Philosophical Society (2000), and the Institute of Medicine (2000). He received the Grand Médaille d'Or from the French Academy of Sciences in 2003 and was made Chevalier of the Legion of Honor in 2006. Sabatini was named department chairman in 1972, and served in that position until 2011.

DAVID D. SABATINI

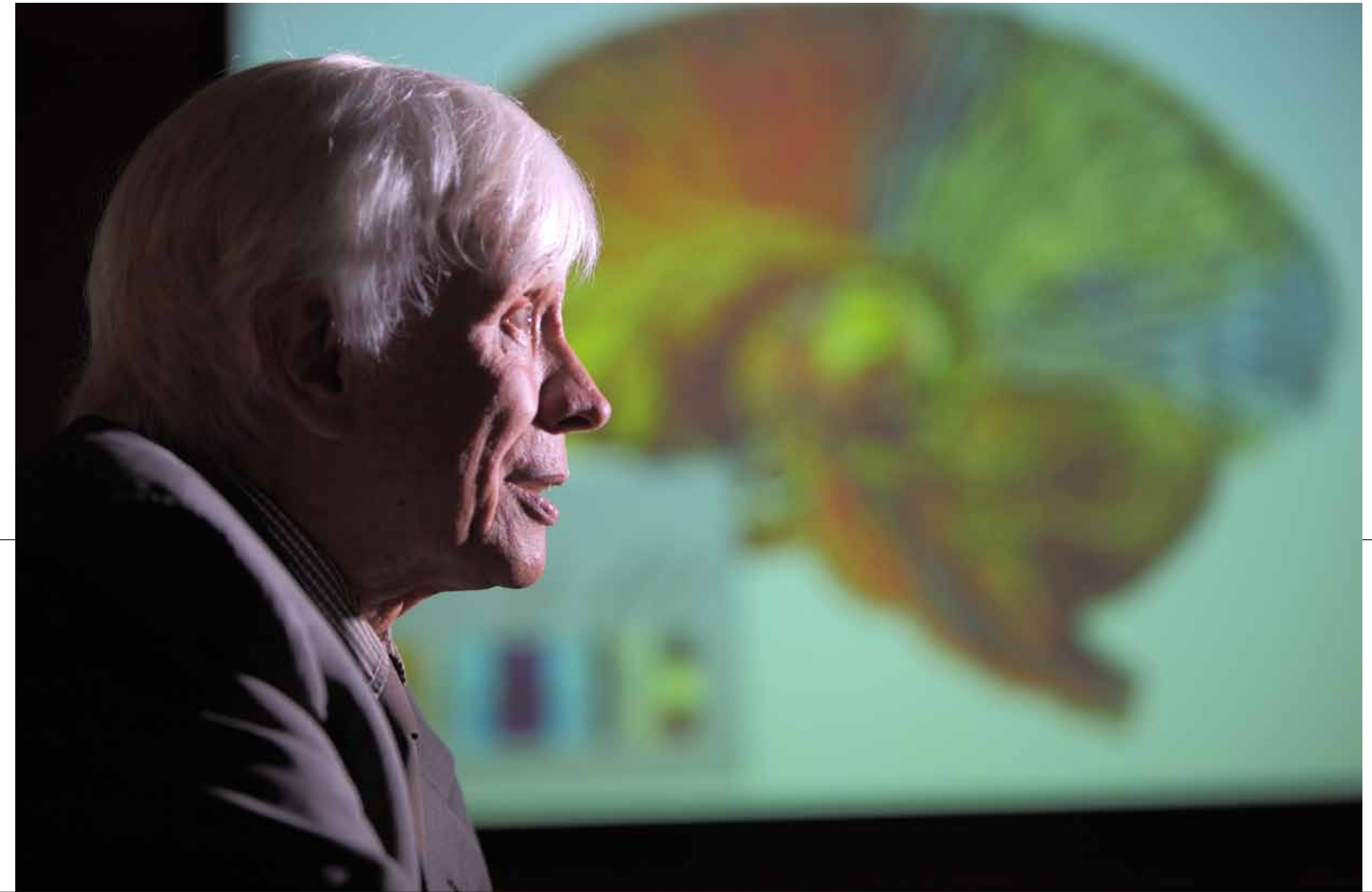
David D. Sabatini (b. 1931)
Frederick L. Ehrman Professor and Chairman,
Department of Cell Biology, New York
University School of Medicine



Llinás has served as the chairman of the Department of Physiology and Neuroscience since 1976 and has been the Thomas and Suzanne Murphy Professor of Neuroscience since 1985. He received his medical degree from the Universidad Javeriana (Bogota, Colombia) and his Ph.D. in neurophysiology from the Australian National University (Canberra, Australia). Llinás's research encompasses many aspects of neuroscience and global brain function. He is especially known for his work on the physiology of the cerebellum, the thalamus, thalamocortical dysrhythmia, as well as for his pioneering work on the inferior olive, on the squid giant synapse and on human magnetoencephalography (MEG). Llinás has written that the brain evolved mainly as a motor-driven intentionality system with ever increasing predictive ability to gauge the consequences of its behavior.



OPPOSITE PAGE, FROM LEFT: Portrait of Rodolfo R. Llinás. Intracellular recording from Purkinje-cell soma (A) showing the effects of dendritic iontophoresis of glutamate (B) to produce fast Na spikes and slower Ca spikes. Ca spikes are reduced by dendritic application of GABA (C). THIS PAGE: Rodolfo R. Llinás in 2011.



Rodolfo R. Llinás (b. 1934)
Thomas and Suzanne Murphy Professor of
Neuroscience and Chairman, Department of
Physiology and Neuroscience, New York
University School of Medicine

RODOLFO R. LLINÁS



NOBEL LAUREATES

The Nobel Prizes, first awarded in 1901, were established by Alfred Nobel to honor those who “shall have conferred the greatest benefit on mankind.” One prize was dedicated to the “person who shall have made the most important discovery within the domain of physiology or medicine.” NYU School of Medicine is proud to have among our alumni and former faculty four recipients of the Nobel Prize in Physiology or Medicine: Baruj Benacerraf (1980) for “discoveries concerning genetically determined structures on the cell surface that regulate immunological reactions,” Otto Loewi (1936) for “discoveries relating to chemical transmission of nerve impulses,” Severo Ochoa (1959) for “discovery of the mechanisms in the biological synthesis of ribonucleic acid and deoxyribonucleic acid,” and Eric Kandel (2000) for “discoveries concerning signal transduction in the nervous system.”

OPPOSITE PAGE: Illustration from the first Nobel Prize Award Ceremony in 1901.

“You have been responsible for turning what at first appeared as an esoteric area of basic research on inbred mice into a major biological system of the greatest significance for the understanding of cell recognition, immune responses and graft rejection. We have the rare esthetic pleasure of seeing a series of fundamental discoveries, coupled with immediate applications in clinical medicine.”

—NOBEL PRIZE PRESENTATION SPEECH BY PROFESSOR GEORG KLEIN, KAROLINSKA MEDICO-CHIRURGICAL INSTITUTE, 1980



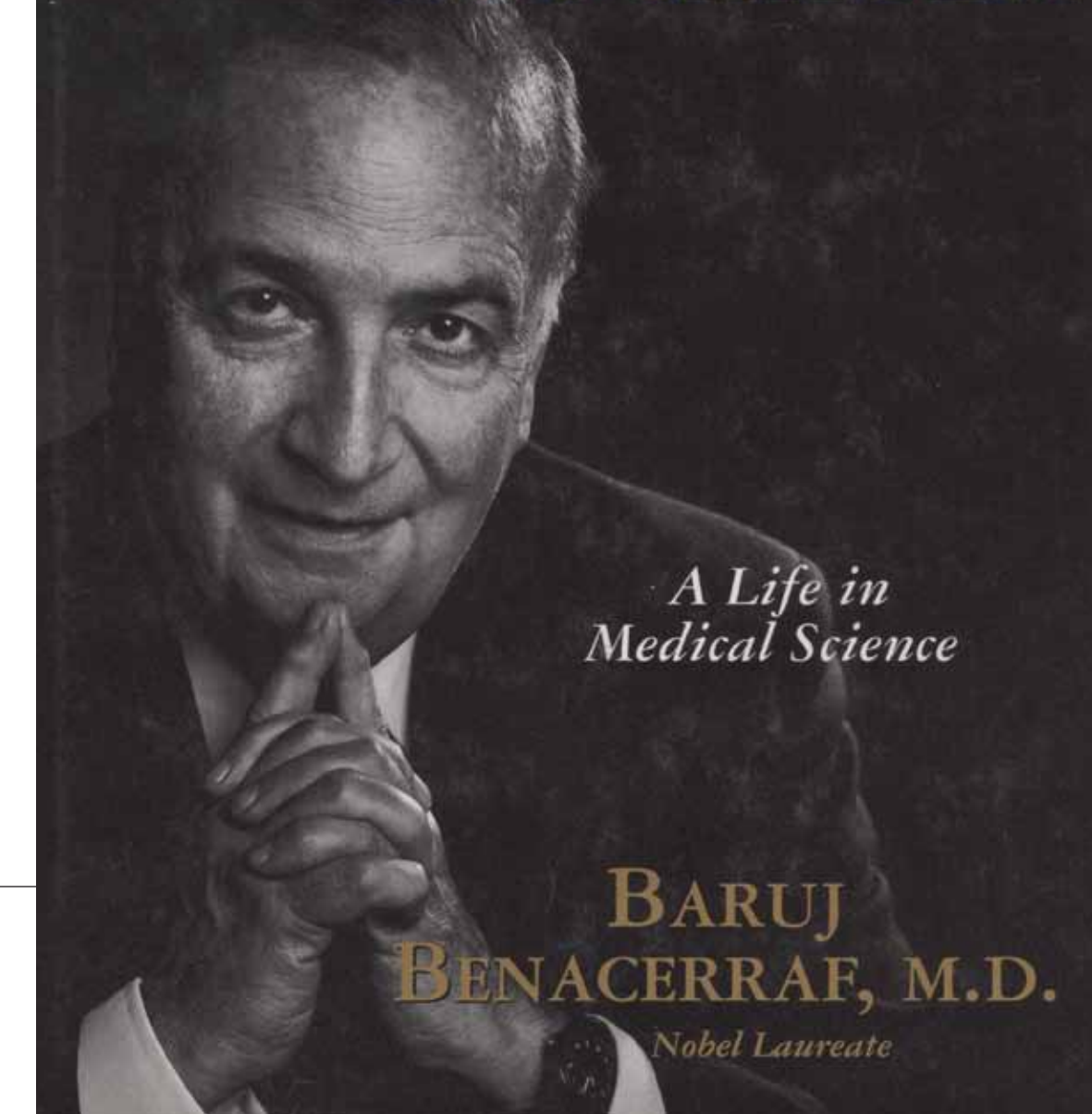
Benacerraf began his studies of allergies in 1948 at Columbia University and in Paris, and joined NYU in 1956. While on the faculty, Benacerraf conducted groundbreaking research on the genetic regulation of the immune system and served as an exceptional mentor to many notable immunologists. He discovered the IR (immune response) genes that govern transplant rejection. He subsequently became director of the Laboratory of Immunology of the National Institute of Allergy and Infectious Diseases in 1968, and in 1970 became chair of pathology at Harvard. While at Harvard, Benacerraf did the work that led to the award of the Nobel Prize.

Benacerraf received the Nobel Prize in Physiology or Medicine in 1980, shared with Jean Dausset and George Snell for their independent discoveries concerning genetically determined structures on the cell surface that regulate immunological reactions. Benacerraf showed that genetic factors intimately related to the genes that determine an individual's unique constitution of H antigens actually regulate the interaction among the various cells belonging to the immunological system and are thereby important to the strength of an immunological reaction. Benacerraf received the National Medal of Science in 1990.

BARUJ BENACERRAF

Baruj Benacerraf (1920–2011)
Professor of Pathology (1956–68), New York University School of Medicine

FROM CARACAS TO STOCKHOLM



OPPOSITE PAGE, FROM LEFT: The Nobel Prize medal. Benacerraf (left), in Stockholm, receives his Nobel Prize from Sweden's King Carl XVI, in 1980. THIS PAGE: Baruj Benacerraf pictured on the cover of his autobiography, *From Caracas to Stockholm: A Life in Medical Science* (1998).

“While the idea that nerve stimulation could be brought about by the release of certain substances was not entirely new, it is nevertheless thanks to Loewi that the idea was brought from the realm of unproven hypotheses on to the firm ground of certain experience.

You, Professor Loewi, first succeeded in establishing proof of the chemical transmission of nerve action and in determining the nature of the effective substance.... The importance of any discovery, however, does not only lie in the fact that it brings clarity and understanding to a number of observations not previously understood; it also poses quite new problems and leads research into new channels. The intensive work which is at present being carried out in different laboratories on questions connected with these observations proves convincingly what a stimulating effect the fresh ideas connected with the transmission of nerve stimuli have already had.”

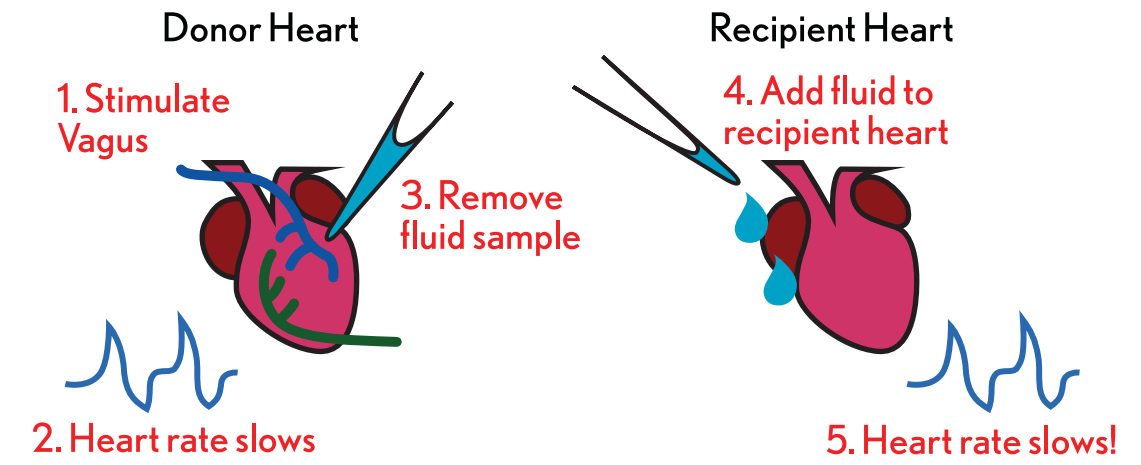
—NOBEL PRIZE PRESENTATION SPEECH BY PROFESSOR G. LILJESTRAND, MEMBER OF THE STAFF OF PROFESSORS OF THE ROYAL CAROLINE INSTITUTE, 1936

OTTO

LOEWI

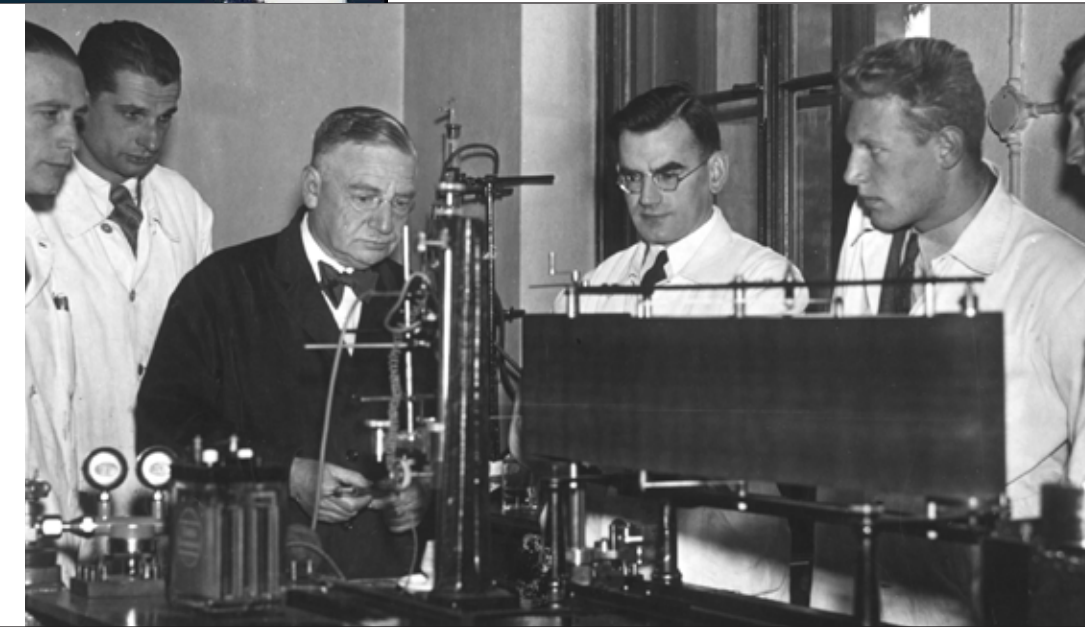
Otto Loewi (1873–1961)
 Professor of Pharmacology
 (1940–61), New York University
 School of Medicine

THIS PAGE: Otto Loewi at NYU in 1954. OPPOSITE PAGE, FROM TOP: In his most famous experiment (1921), Loewi took fluid from one frog heart and applied it to another, slowing the second heart and showing that synaptic signaling used chemical messengers. Loewi in Woods Hole, Massachusetts 1955. Loewi with students in the lab in Austria in 1935.



Often referred to as the “father of neuroscience,” Loewi was a professor of pharmacology at the University of Graz, where he studied the sympathetic nerve system and conducted the famous experiment that established proof of the chemical transmission of nerve action. Loewi described the experiment as literally coming to him in dreams on two successive nights, and rushing to his lab at three in the morning lest he forget the dream a second time. He took fluid from one frog heart and applied it to another, slowing the second heart and demonstrating that synaptic signaling used chemical messengers. For this discovery and proof, Loewi was awarded the Nobel Prize in Physiology or Medicine in 1936, shared with Sir Henry Dale.

Two years later when the Nazis invaded Austria, Loewi, who was Jewish, was imprisoned, and was only released three months later on the condition that he turn over all his worldly goods to the Nazis. He and his wife used his Nobel cash award to bribe their way out of the country. After brief stays in London, Brussels, and Oxford, Loewi came to New York in 1940 and joined the faculty of NYU School of Medicine. He continued his research and teaching at NYU until his death in 1961.





THIS PAGE,
FROM TOP:
Ochoa teaching
at NYU. U.S. Postal
Service stamp
issued in 2011
in honor of Ochoa.
OPPOSITE PAGE,
FROM LEFT:
Portrait of Severo
Ochoa. Ochoa's
Nobel Prize
celebrated
in the 1960
Medical Violet.

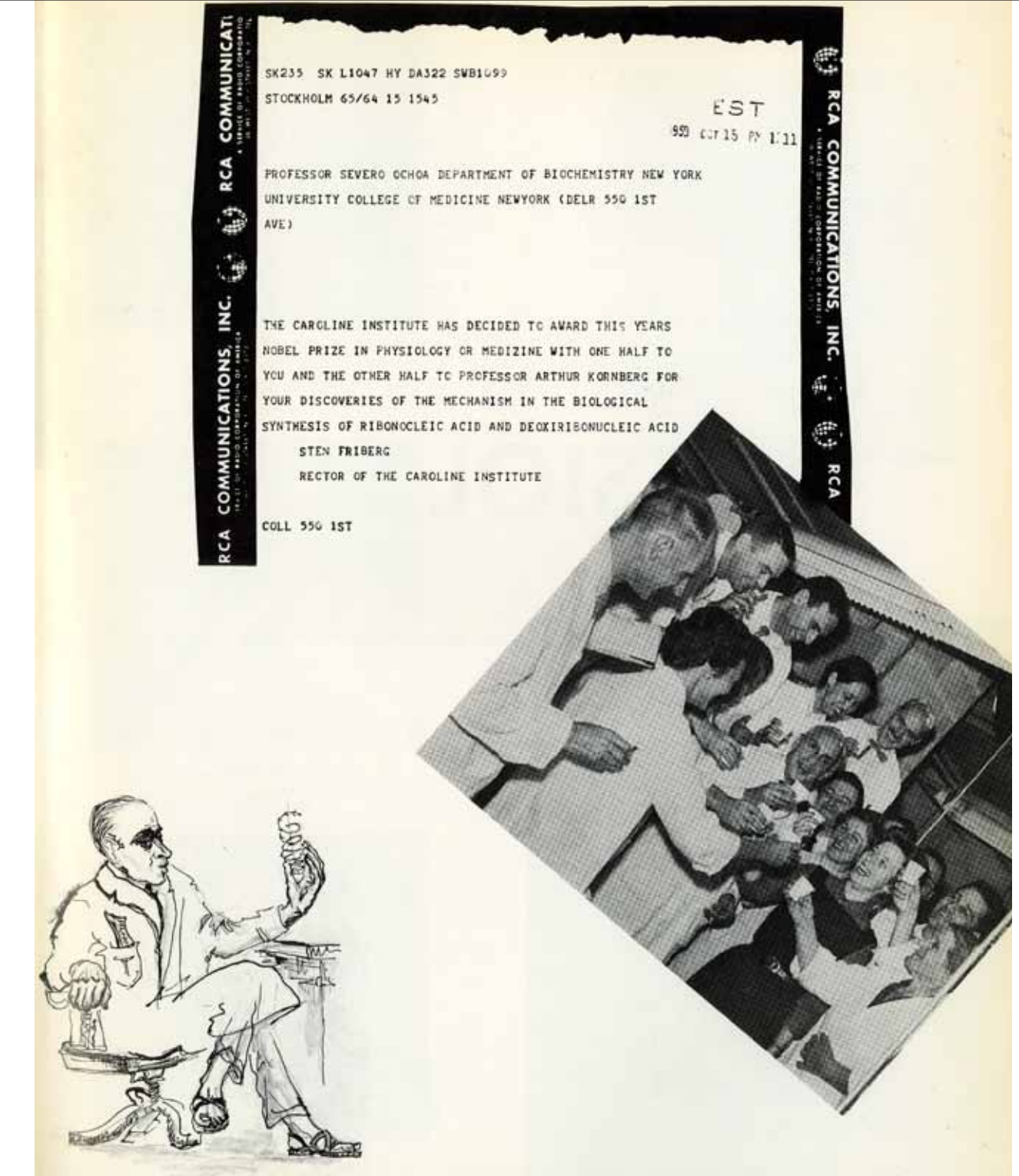
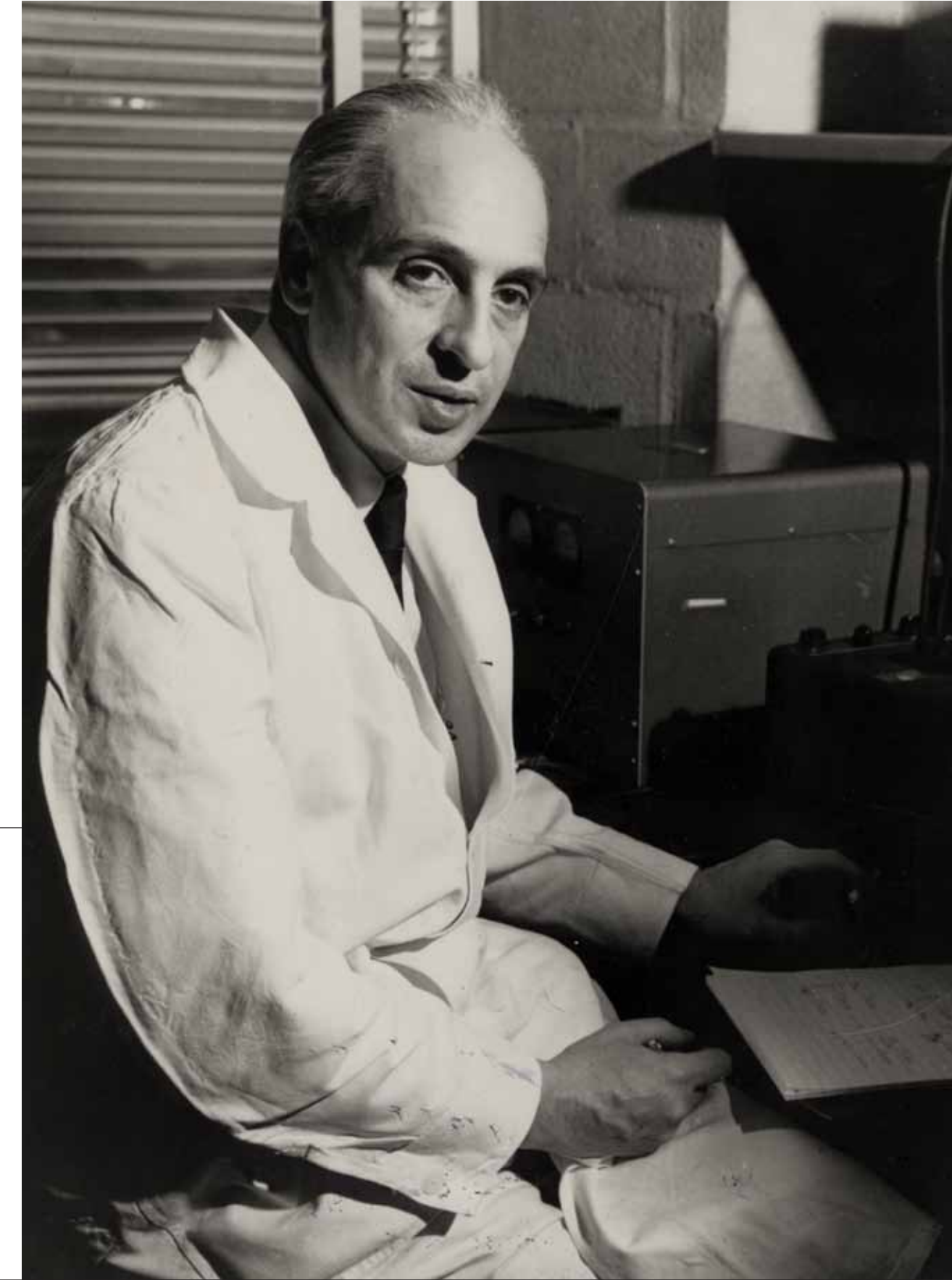


“Just as man and woman are responsible for the regeneration of mankind, likewise is the interplay between proteins and nucleic acids the only and universally repeated basic mechanism of life... Deoxyribonucleic acids, which Arthur Kornberg has now synthesized, are mainly present as the hereditary substance in chromosomes. The ribonucleic acids, which Severo Ochoa has synthesized, have other functions, such as to assist in the synthesis of proteins. The discovery of the mechanisms in the biological synthesis of ribonucleic acid and deoxyribonucleic acid... have helped us to advance quite some distance on the road to understanding the mechanism of life.”

—NOBEL PRIZE PRESENTATION SPEECH, PROFESSOR H. THEORELL,
ROYAL CAROLINE INSTITUTE, 1959

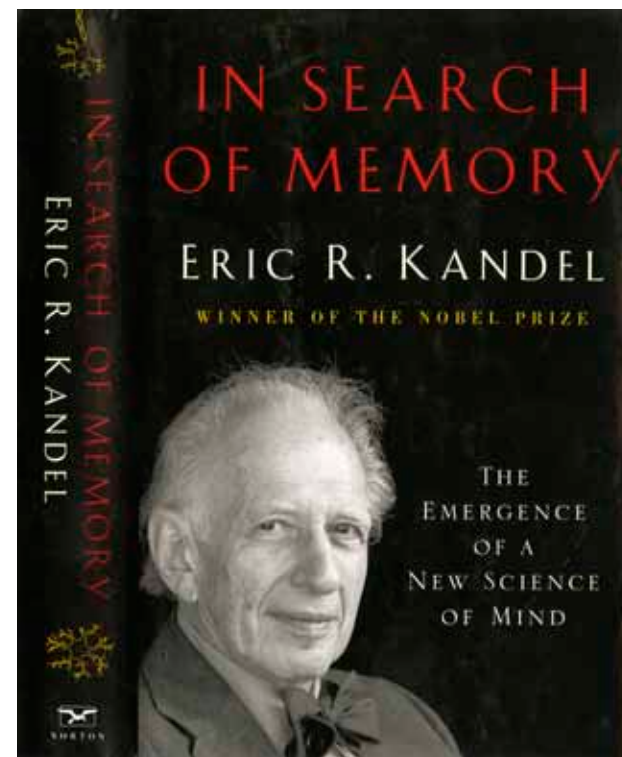
SEVERO OCHOA

Severo Ochoa (1905–1993)
Professor of Biochemistry (1942–74), New York University School of Medicine



Ochoa was born and educated in Spain and spent his early career working with scientists in Europe before joining the faculty in 1942. He became chairman of the Department of Biochemistry in 1954 and remained in that post until he retired in 1974. Ochoa's research focused on enzymatic processes in biological oxidation and synthesis and the transfer of energy. It contributed greatly to the knowledge of the basic steps in the metabolism of carbohydrates and fatty acids, the utilization of carbon dioxide, and the biosynthesis of nucleic acids.

In 1955, Ochoa was the first to successfully synthesize ribonucleic acid (RNA) outside the cell. Ochoa and Arthur Kornberg received the Nobel Prize in Physiology or Medicine in 1959 for their discovery of the mechanisms in the biological synthesis of RNA and DNA.



A graduate of NYU College of Medicine in 1956, neurobiologist Kandel taught in its Department of Physiology and Psychiatry from 1965 until 1974, when he left to join the Columbia University faculty. In 2000 he was awarded the Nobel Prize in Physiology or Medicine (with Arvid Carlsson and Paul Greengard) for research on the physiological basis of memory storage in neurons. Beginning with the study of a single reflex mediated through a simple neural circuit, he had gone on to elucidate the molecular genetic steps by which memory is consolidated, and the associated growth and plasticity of the synaptic connections necessary for its transmission. He has written several textbooks and *In Search of Memory: The Emergence of a New Science of Mind* (2006), which traces advances in understanding learning and memory as well as his own life and intellectual development.



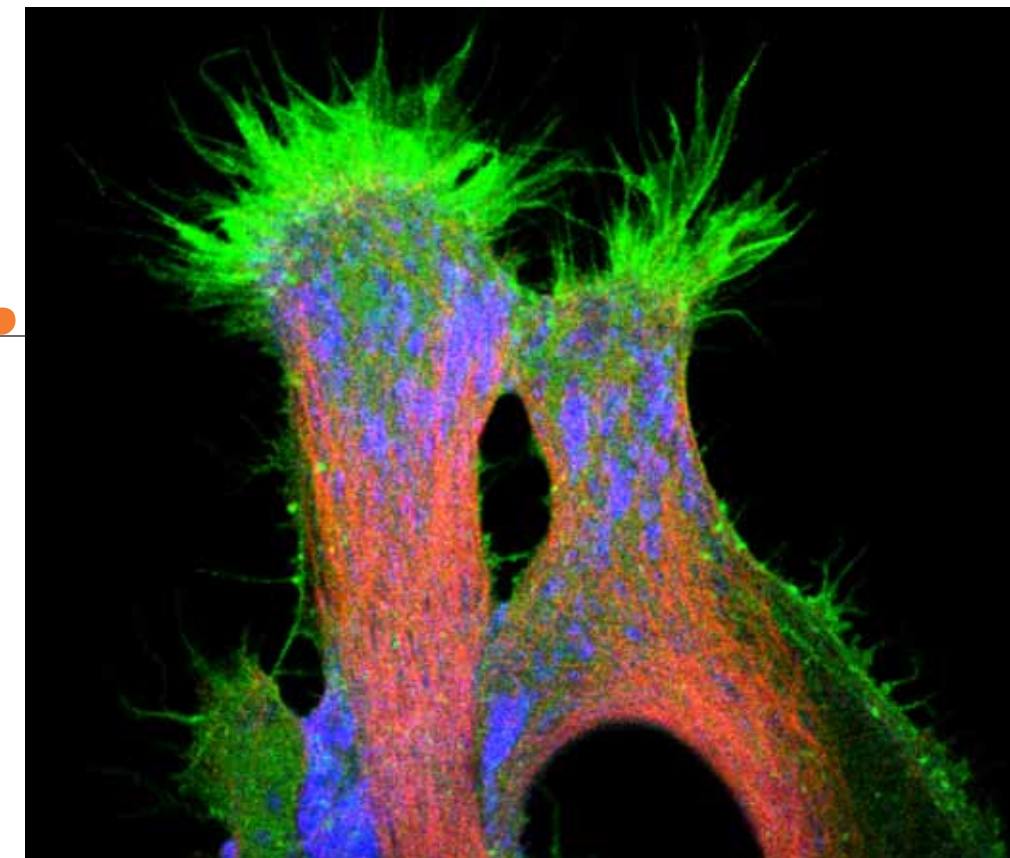
“(The human brain) consists of 100 billion nerve cells, which is the same number of cells as the total number of human beings that have ever lived on this earth. Eric Kandel’s work has shown us how these transmitters, through second transmitters and protein phosphorylation, create short- and long-term memory, forming the very basis for our ability to exist and interact meaningfully in our world.”

—NOBEL PRIZE PRESENTATION SPEECH, URBAN UNGERSTEDT, NOBEL COMMITTEE, KAROLINSKA INSTITUTET, 2000

ERIC R.

KANDEL

Eric R. Kandel (b. 1929)
Alumnus, Class of 1956, New York University College of Medicine;
Professor of Physiology and Psychiatry (1965–74), New York University School of Medicine



OPPOSITE PAGE, FROM LEFT: Kandel’s *In Search of Memory* (2006). Portrait of Eric R. Kandel. **THIS PAGE:** The large neurons of the *Aplysia*, a giant marine snail, were used by Kandel in the research that led to his Nobel Prize.

THE NEXT

THE NEXT CHAPTER | Creating an Environment Commensurate with Our Legacy of Excellence

CHAPTER

THE NEXT CHAPTER

(noun) a forthcoming period or sequence of events, as in history or a person's life.

NYU Langone Medical Center has set out to fulfill an ambitious new vision: being a world-class patient-centered integrated academic medical center. Key to achieving this vision is the transformation of our campus. Our researchers will have state-of-the-art laboratories and technologies, built to encourage and support collaboration to accelerate the translation of scientific discoveries to the patient bedside. Our students and teachers will benefit from modern facilities outfitted with the latest technological capabilities to enhance education. And most importantly, with every brick we lay and wall we build, our patients' and families' needs, comfort, and convenience will be paramount.

The most sweeping revitalization in our 170-year history, the campus transformation will set a new standard for academic medical centers and define our future for decades to come. Here are some of the highlights.

EAST RIVER SCIENCE PARK

(NOT PICTURED) 30TH STREET AND FDR DRIVE: NYU Langone will open the Commercial and Translational Science Accelerator, with 70,000 square feet of leased laboratory space distributed over three floors, at the Alexandria Center for Life Science.

180 VARICK ST.

180 VARICK STREET will accommodate the relocation of research programs from the Perelman Building and Tisch Hospital to facilitate the concentration of clinical care functions within the hospital.



2011



CLINICAL RESEARCH CENTER

227 EAST 30TH STREET: At this center, NYU Langone will house the Clinical and Translational Science Institute as well as a number of research programs in population sciences, community health, biostatistics, epidemiology, and bioinformatics.

THE CENTER FOR MUSCULOSKELETAL CARE

333 EAST 38TH STREET: An outpatient facility occupying 110,000 square feet, the center will integrate research, clinical practice, rehabilitation, and wellness services for conditions involving the spine, arthritis, autoimmune diseases, sports injuries, and total joint replacement. It will be the largest freestanding facility of its kind in the United States.



TISCH HOSPITAL

ELEVATOR & LOBBY EXPANSION & RENOVATION:

The addition of an 18-story tower containing four new elevators will dramatically improve visitor access to the upper floors of Tisch Hospital. The main lobby of Tisch will also be expanded and reconfigured to include many more patient and visitor amenities. Late, once the Kimmel Pavilion is fully complete, additional construction will take place to renovate, renew, and refresh the facility. These projects are funded by an extraordinary gift from the Tisch family.



2012

140
THE FUTURE

AMBULATORY CARE CENTER

(NOT PICTURED) 240 EAST 38ST STREET: Approximately 300,000 square feet of condominium space will accommodate a broad range of outpatient programs from the NYU Cancer Institute, the Rusk Institute of Rehabilitation Medicine, and other services.



CENTER FOR EMERGENCY SERVICES

550 FIRST AVENUE: A new expanded emergency department with state-of-the-art technology, which will more than double the department's current size (from 6,900 to 16,900). Improvements include separate treatment areas for pediatric patients.

2013

141
THE FUTURE

ENERGY BUILDING

A new 78,600-square-foot plant, adjacent to the Kimmel Pavilion, the Energy Building will meet the campus' growing energy needs by wielding combined heat and power generation. It will also provide a new and roomier home for the Department of Radiation Oncology.



SCIENCE BUILDING

A new 300,000-square-foot center, located at the southwest corner of the medical center's campus where Rubin Hall and a section of Schwartz Lecture Hall are currently, will enable NYU Langone to expand its strong translational research efforts, turning laboratory advancements more quickly into clinical innovation. Emphases will include the neurosciences, immunology, inflammation, and infection.



2015

HELEN L. & MARTIN S. KIMMEL PAVILION

A new 800,000-square-foot hospital, the Helen L. and Martin S. Kimmel Pavilion will offer state-of-the-art, patient-centered acute care. Funded by a generous leadership gift from Helen L. Kimmel, it will integrate seamlessly with the existing Tisch Hospital to concentrate inpatient clinical services in the northern area of the medical center's campus.



HASSENFELD PEDIATRIC CENTER

A new child and family-friendly 160,000-square-foot pediatric hospital within the Kimmel Pavilion, funded by a generous gift from the Hassenfeld family.

2016

VISION

VISIONARIES | Our Leaders and Partners Throughout History

ARISE

VISIONARIES

(noun) one having unusual foresight and imagination.

Over the last 170 years, the evolution of NYU Langone Medical Center has been guided and enabled by a group of individuals committed to creating a premiere academic medical center of international renown. Through their commitment to pursuing dreams, their investments in the future, and their energetic drive, our visionary benefactors and leaders have supported a community of pioneering physicians and scientists and have fostered our growth. We are indebted to their service and contributions, which have touched countless lives.

VISIONARY SUPPORTERS

Throughout our history, friends of NYU Langone Medical Center have made remarkable gifts to help advance our educational initiatives, research and patient-centered care. In the list below, we gratefully acknowledge those who have given generously to our fine institution.

\$100,000,000 AND ABOVE

The Druckenmiller Foundation

Helen L. and Martin S. Kimmel

Elaine A. and Kenneth G. Langone

The Family of Wilma S. and Laurence A. Tisch

Marica and Jan Vilcek

\$10,000,000 – \$99,999,999

American Cancer Society, Inc.

Leon H. Charney

Dr. Jerome S. Coles and Mrs. Geraldine Coles

Dysautonomia Foundation, Inc.

Edith K. and Frederick L. Ehrman

Laurence and Lori Fink

Charlotte and Henry E. Fleck

Arlene and Arnold Goldstein

The Hassenfeld Family

The Irma T. Hirschl Trust

Howard Hughes Medical Institute

Stanley Allan Isenberg, MD '43

Kate Macy Ladd Fund

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National Foundation for Facial Reconstruction

Ronald O. Perelman

Bernard and Irene Schwartz

The Skirball Foundation

Mr. and Mrs. Joel E. Smilow

Anita and Joseph Steckler

The Family of Joan H. and Preston Robert Tisch

VISIONARY LEADERS (1850–PRESENT)

Founded in 1841 by six visionary physicians, our evolution has been guided by a succession of leaders committed to making world-class contributions that place service to human health at the center of an academic culture devoted to excellence in research, patient care, and education.

John W. Draper *(1850–1873)*

Alfred C. Post *(1873–1877)*

Charles Inslee Pardee *(1877–1897)*

Egbert Le Fevre *(1897–1898*)*

Edward G. Janeway *(1898–1905)*

Egbert Le Fevre *(1905–1914)*

William H. Park *(1914–1915*)*

Samuel A. Brown *(1915–1932)*

John H. Wyckoff *(1932–1937)*

Currier McEwen *(1937–1955)*

Donal Sheehan *(1943–1954*; 1955–1960)*

S. Bernard Wortis *(1960–1963)*

Saul J. Farber *(1963–1966*)*

Lewis Thomas *(1966–1969)*

Ivan L. Bennet, Jr. *(1970–1982)*

Saul J. Farber *(1979–1987*; 1987–1997)*

Noel L. Cohen *(1997–1998*)*

Robert M. Glickman *(1998–2007)*

Robert I. Grossman *(2007–present)*

*served on acting or interim basis

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