Recruits on the Front Lines of Science

The First Biological Sciences Scholars Arrive
In commemoration of Allen Lichter’s appointment as dean last May, the first six deans of the University of Michigan Medical School were remembered in the previous issue of *Medicine at Michigan*. While these forefathers established a solid foundation for medical education at Michigan, there remained a substantial way to go before the Medical School attained its respected status of today. The deans from 1891 to 1959 were instrumental in effecting the transformation from a good medical department to today’s leading institution with its international reputation in medical research and education. The deans during this period initiated clinical and laboratory work, a series of curriculum reforms, dramatically expanded patient care, and strove to inspire higher standards of excellence from their faculty, staff and students.

Prior to 1891 the deans were elected by fellow faculty members, but due primarily to the growth of the University, the board of regents decided that the dean would be appointed by the regents and the president. The first dean of the Medical Department appointed in such a way was bacteriologist and educator Victor Vaughan.

Victor Vaughan’s education and personal qualities gave him solid preparation for assuming a leadership position as dean at the Medical School. Vaughan came from Missouri to Ann Arbor, attracted in part by the University’s excellent chemical laboratory, in 1874. He earned three degrees from the University: an M.S. in 1875, a Ph.D. in 1876 for chemistry, geology and biological studies, and an M.D. in 1878. Vaughan started teaching physiological chemistry in 1876 and held the positions of professor of physiological and pathological chemistry and associate professor of therapeutics and materia medica from 1883-1887.

He and Frederick Novy went to Germany to study bacteriological technique under Robert Koch for a year at the University of Berlin. In 1887 he founded a hygiene laboratory at Michigan, and in that year he became professor of hygiene and physiological chemistry as well as director of the laboratory. He received an honorary LL.D. degree from the University in 1900.

Vaughan's initial research was in medical chemistry. He studied poisons, describing putridine poisoning and becoming such an expert toxicologist that he served as a witness in many criminal and civil trials. Vaughan recognized that “poisoned” milk was caused by bacteria, and in 1885 discovered tyrotoxicon, a poison that forms in dairy products. His research interests then broadened to the nascent field of bacteriology, and included as well sanitation and public health. After his European tour, Vaughan returned to Michigan and instituted the first formal laboratory courses in bacteriology in the U.S. in 1889. He co-founded the Michigan State Board of Health, of which he was chairman for many years.
Beyond his work in medical research and teaching, Vaughan was active in the military, writing extensively on typhoid fever and prevention of communicable diseases. He served as major and surgeon in the Michigan Volunteer Infantry during the Spanish-American War, and upon the outbreak of World War I, Vaughan was appointed to serve under the surgeon general as a colonel in the Medical Corps. In 1919 he was acknowledged with the Distinguished Service Medal for his patriotic service in the war effort.

Vaughan’s tenure as dean from 1891 to 1921 had a tremendous impact on the development and improvement of the University of Michigan Medical School. He worked diligently to recruit research-minded faculty from around the country with the attitude that “Medicine is a live, growing science, and no one is entitled to hold a chair in a…medical school who is not a contributor to the growth and development of his specialty.” [Kenneth M. Ludmerer, “The University of Michigan Medical School: A Tradition of Leadership,” Medical Lives & Scientific Medicine at Michigan, 1891-1969, ed. Joel D. Howell (Ann Arbor: The University of Michigan Press, 1993), p. 21.] In the tradition of his predecessors Abram Sager, Silas Douglas and Alonzo Palmer, Vaughan valued a curriculum that combined basic science and clinical practice. Vaughan also helped raise admission requirements, instituted a longer period of instruction, and emphasized the importance of having a comprehensive library.

Vaughan was agreeable, relaxed, soft-spoken, and determined to improve the standards of medicine at Michigan, encouraging both students and faculty to conduct research. He was revered as a leader, teacher, and researcher, and his leadership made Michigan a paragon of modern medical education. He retired emeritus from the University of Michigan in 1921, and died eight years later.

Succeeding Victor Vaughan as dean was Hugh Cabot, a colorful and controversial figure. Called visionary by some, tyrannical by others, Cabot accomplished much as dean and had a remarkable academic career. He challenged the status quo to bring change and innovation to the University of Michigan Medical School.

Hugh Cabot had developed a successful professional life before he came to Michigan. He completed his A.B. and M.D. degrees at Harvard University, where he was assistant professor of surgery from 1912 to 1918, and professor of surgery from 1918 to 1919. He interned in the Surgery Department of Massachusetts General Hospital, specializing in urological surgery. Cabot spent most of his time teaching and performing surgery rather than conducting research. He wrote Modern Urology in 1918 and was one of the first to suggest that urology ought to be a distinct specialty.

At Harvard, Cabot organized a medical unit before the United States entered World War I, and from 1916 to 1919 he was honorary lieutenant colonel in the Royal Army Medical Corps in France. When he returned from the war he found that his private practice had practically vanished, so he decided to accept the U-M Medical School’s offer to be a new “full time” professor. Cabot thought Michigan would be more progressive than his home state of Massachusetts since it had a university subsidized by taxes and a shorter, less restrictive tradition. Cabot was interested in making quality health care affordable for the average citizen, and envisioned a health care system with full-time, hospital-based group practices where patients would pay according to their means. He strongly believed that medicine was a profession that required scientific education and should benefit humankind—that it was not simply a trade with monetary gain as a primary interest. Seeking change and new opportunities, Cabot left conservative Boston at age 47 to join the University of Michigan as professor of surgery in 1919.

Cabot had a strong influence at the University of Michigan as a teacher and as dean. He was a good speaker who gave vivid, interesting lectures, and he was dedicated to maintaining high
standards of academic performance. Cabot’s protégés included Reed Nesbit and Nobel Prize winner Charles Huggins. He was chair of the department of surgery and head of the section of urological surgery. When Cabot was appointed dean in 1921, many faculty members had recently left the surgery department because of the structural reorganization from part-time to full-time teaching positions. This gave Cabot the opportunity to build a new department, so he hired Frederick Coller, Leroy Abbott and John Alexander, all eminent specialists. At this same time, specialties within the department were differentiated into general, orthopedic, neurosurgery, urological, and thoracic sections.

Cabot also oversaw the completion and staffing of the new University Hospital on Ann Street, the East Medical Building and the Simpson Memorial Institute. Also during Cabot’s tenure, the Department of Biological Chemistry was established, and most departments had graduate-level training programs. In accordance with a resolution passed in 1921 by the state legislature, Cabot effected the closing of the Homeopathic Medical College by combining it with the “regular” medical school.

While Cabot was accomplished as dean, some of his actions caused members of the faculty to hold him in high disfavor. Cabot was described by one of his trainees, Henry K. Ransom, as “short and stocky in build with a sturdy physique, a brusque manner and a domineering attitude.” [H. K. Ransom, “The Department of Surgery of the University of Michigan during the Cabot Administration (1919-1930)” (Internal document, University of Michigan Department of Surgery), p. 4.] It has been suggested that the influence of American philosopher Ralph Waldo Emerson, a friend of Cabot’s father present during his formative years, fostered Cabot’s tendency to speak honestly and directly — sometimes at the risk of his personal relationships.

Aggravating an already unstable dynamic at the Medical School was Cabot’s confrontation of the ongoing issue of part-time faculty seeing private patients. Cabot disapproved of professors who put a lot of time and attention into their private practice but neglected their teaching and hospital responsibilities. Cabot’s aforementioned economic ideology and support of a full-time faculty threatened private practitioners, who eventually aligned with the Michigan State Medical Society to formally oppose the “full-time” method at the hospital. Cabot held steadfast in his principles, but in order to assuage the unrest, the regents requested Cabot’s resignation early in 1930. His dedication and integrity did leave a positive mark, however, as many of his innovative policies were quietly accepted by the Medical School decades later.

After Hugh Cabot’s departure, the administration at the Medical School went through a transitional period. Instead of immediately appointing another dean, the regents selected an Executive Committee of five faculty members. The original Committee was formed midway through the 1929-1930 academic year, consisting of James Bruce, G. Carl Huber, Frederick Novy, Max Peet, and Udo Wile, with President Ruthven as chairman, ex officio. The following academic year Harley A. Haynes and assistant professor Arthur C. Curtis replaced Huber and Peet, and Frederick Novy became chairman of the committee. The Executive Committee directed the affairs of the school from 1930 to 1933, overseeing the appointment of five new department chairmen and the addition of two new floors to the hospital. The Executive Committee still exists today with the dean as chair.

James D. Bruce served on the Executive Committee as director of postgraduate medicine. He earned his M.D. degree from the Detroit Medical College in 1896, and practiced for eight years before starting his graduate studies at the U-M Medical School. He was an assistant in the Department of Internal Medicine, and practiced general medicine and surgery in Saginaw from 1906 to 1925. Bruce served in the U.S. Army Medical Corps in France during World War I, and from 1923 to 1934 he was councilor of the Michigan State Medical Society. Believing that standards of medical service needed to improve, Bruce gave up his private practice to lead the Department of Internal Medicine at Michigan. In 1931 he was appointed vice-president in charge of university relations, a position he held until retiring as vice president emeritus in 1942. Bruce strongly supported continuing education for physicians and helped create medical teaching centers around the state.

Udo J. Wile served as director of clinical medicine on the Executive Committee. Wile became professor of dermatology at the age of 28 and was at the time the youngest member of the medical faculty ever to be given the rank of professor and chairman of the department. He had studied with distinguished physicians and researchers in Europe, and enjoyed an encyclopedic knowledge of dermatology. Albert Furstenberg, later dean of the Medical School, related this story about Wile:

When he [Wile] arrived in town he looked a little timid and embarrassed. Some of the older faculty members thought they would have some fun with him. They told him that at the annual convocation that marked the opening of the Medical School, he would be expected to give an inspiring extemporaneous speech. Naturally, he went to the convocation with fear and trembling and was miserable throughout the exercises. Finally, when all of the events of the program were over, Dean Victor C.
Vaughan arose and said, “My Christian friends, students of the Medical School, it now becomes my privilege and pleasure to introduce a new member of the medical faculty. I shall not ask him to speak. I merely want him to stand up so that you will not mistake him for a freshman.”


Having survived this mild hazing, Wile proved to be a valuable faculty member and became chairman of the Department of Dermatology. He clearly showed his students how medical knowledge applied to clinical problems, and Albert Furstenberg wrote that he created “a measure of leadership in our programs of undergraduate and graduate medical education.” [Ibid.] He was optimistic, had genuine concern for the welfare of his patients, and received respect and admiration from his students and colleagues.

Harley A. Haynes, director of the University Hospital, brought economic savvy paired with medical experience to the Executive Committee. Earlier in his career, he was a clerk in the auditor’s office of the Central Vermont Railroad. He redirected his interests toward medicine, and received his medical degree from the University of Michigan in 1902. He completed a surgical internship in the University Hospital from 1902 to 1903, and was resident physician at the Michigan Reformatory in Ionia. In 1924 Haynes was named director of University Hospital, holding the position until he retired as director emeritus in 1945. He was one of the first to introduce cost accounting to hospital administration. Besides working as a physician and administrator, Haynes later became president of the State Savings Bank of Ann Arbor, and a director of the Michigan Consolidated Gas Company in Detroit.

Also a member of the Executive Committee was Arthur C. Curtis, secretary of the Medical School. Curtis graduated from the U-M Medical School in 1925, interned at University Hospital, and moved his way up the ranks from instructor of internal medicine in 1928 to associate professor in 1935. In 1941 he started postgraduate training at the Mayo Clinic, and returned to the University of Michigan in 1942 to be professor of dermatology. Curtis was chairman of the Department of Dermatology from 1946-1967, and served on numerous professional organizations, including the American Board of Dermatology, of which he was president. Curtis became a world-renowned dermatologist, and had a lifelong dedication to medicine at the University of Michigan.

The chairman of the Executive Committee and director of pre-clinical medicine was Frederick G. Novy, who was formally appointed dean in 1933. He held a brief two-year tenure as dean, but throughout his long career he made a great contribution to the Medical School. As a boy, he had saved money to buy a microscope, which he had used to study samples from nearby swamps. Novy went on to study at the University of Michigan, where he received four degrees: a B.S. in chemistry in 1886, an M.S. in 1887, a Sc.D. in 1890, and an M.D. in 1891. He went to Europe with Victor Vaughan to study in the laboratories of Pasteur and Koch and to purchase equipment for use in a bacteriology course. Novy’s class was so successful that it became a requirement for students in the Medical School. In 1902 he became professor of bacteriology, heading the department from 1902 to 1935.

Novy was an accomplished and innovative researcher, and his work truly spanned bacteriology, protozoology, virology, and immunology. He was one of the first to demonstrate anaphylatoxin, a histamine, which laid groundwork for future developments in antihistamines. He discovered one of the two organisms that causes gangrene, known later as Novy’s bacillus, and invented laboratory tools such as the Novy coverslip forceps and the Novy anaerobe jar. Novy was on the Michigan Board of Health from 1897 to 1899, and with Victor Vaughan helped educate the public about the germ theory of disease, food poisoning, disinfection, and control of communicable diseases such as diphtheria and typhoid fever. He was a member of the U.S. Commission to Study Bubonic Plague in San Francisco, California, in 1901, and treated a case of pneumonia plague in a University student. He received the honorary LL.D. degree from the University of Michigan in 1936.

Frederick Novy was loved and respected by colleagues and students, and even in his 22 years of retirement, he was sought as an expert authority and counselor. He had a colorful personality, which Sinclair Lewis drew on for the character of Dr. Gottlieb in his highly popular
novel *Arrowsmith*. He had little interest in nonscientific and social activities, but he was witty and had a good sense of humor, his remarks often preceded by a twinkle in his eye or a wink. Novy had many characteristic mannerisms, providing rich material for imitation by his students. For example, his students vividly remembered that he had a tall, striking appearance in the amphitheater and would wind one leg around the other while lecturing. He was a world-class bacteriologist and teacher, as well as an American pioneer in microbiology and important leader at the U-M Medical School.

Following the retirement of Novy, **Albert C. Furstenberg** was appointed dean in 1935. Furstenberg served 24 years as dean, and his stable yet enthusiastic leadership propelled the U-M Medical School into a fully modern institution. A Michigan native, Furstenberg showed an interest in medicine even at the young age of eight by accompanying a local physician on house calls. Later he attended the University of Michigan, earning his B.S. in 1913 and his M.D. in 1915. From 1915 to 1916 he held an internship at University Hospital, and started a practice in Ann Arbor which he kept until his retirement in 1965. Furstenberg specialized in otolaryngology, and he conducted research on the fascial planes of the neck and neurology of the ear, nose, and larynx. He also studied Ménière’s disease, osteomyelitis of the skull, and conductive deafness, and wrote numerous papers.

In 1918 Furstenberg became instructor of otolaryngology, and he moved his way up the ranks to chairman of the department in 1932. His teaching at Michigan earned him much respect and admiration. He was a great lecturer and teacher, and cared enough about his students to become personal friends to many of them. He encouraged and advised his students by telling them, that if they were willing to devote their lives to it, medicine would be a better way of life than any other.

In 1935, Furstenberg was appointed dean. He proved to be an excellent leader and energetic administrator, always thinking ahead to the future of the Medical School. He made considerable effort to expand and improve the facilities, achieving great success. During his tenure as dean, the University of Michigan Medical School became the largest in the country. Classes were expanded to 200 students, and Furstenberg helped select outstanding teachers and scientists for the faculty. Since former dean Hugh Cabot did not especially promote research at the Medical School, Furstenberg helped revitalize this aspect of medical education at Michigan. Michigan became a premier medical research institution, and facilities were expanded thanks to government and private funds. Furstenberg’s ongoing friendships with philanthropists Sebastian Kresge and Charles Stewart Mott helped facilitate their financial contributions to the Medical Center. Their substantial gifts helped establish the Kresge Research Building in 1953, the Kresge Library in 1955, the Institute of Industrial Health in 1957, the Kresge Hearing Research Institute in 1962, and the C.S. Mott Children’s Hospital in 1969.

An example of Furstenberg’s excellent leadership capabilities was his response to national need during World War II. Furstenberg had some military experience, having served as 1st Lieutenant with the U.S. Army Medical Reserve Corps in Ann Arbor during World War I, and as consultant to the Office of the Surgeon General of the Army during World War II. When a shortage of physicians developed during World War II, Furstenberg temporarily accelerated the medical program at Michigan.

In addition to his other accomplishments, Furstenberg was the National Research Council subcommittee chairman, and an honorary member of the Army Medical Library. His distinguished career was recognized with many professional honors, and in 1960 he was named dean emeritus. He died in Ann Arbor in 1969.

Furstenberg was the last dean to divide his time between departmental administration, private practice, and direction of the Medical School. William Hubbard became the first full-time dean in 1959. This new era of leadership leading up to the present will be explored in the next issue of *Medicine at Michigan*, in conclusion of this three-part series on the history of the deans of the University of Michigan Medical School.

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