In Memoriam

Kenneth Merle Brinkhous, M.D. 1908–2000

Kenneth Merle Brinkhous, M.D., Distinguished Alumni Professor Emeritus and Chair Emeritus of the Department of Pathology and Laboratory Medicine at the University of North Carolina at Chapel Hill, died at his home in Chapel Hill on December 11, 2000 at the age of 93. Dr. Brinkhous remained active in research and teaching until shortly before his death, working in his laboratory in the Brinkhous-Bullitt Building at UNC virtually every day until 1998.

From 1946 until 1973, he chaired the UNC Department of Pathology, developing it from a two faculty member department that lacked a strong research tradition into a research department of premier rank both nationally and internationally. While building a renowned research program, Dr. Brinkhous also maintained the high quality of teaching and clinical service for which his predecessors had been known. He had a leading role in planning and implementing the pathology laboratories for the North Carolina Memorial Hospital (now a component of UNC Hospitals) that opened in 1952 in conjunction with the expansion of the UNC School of Medicine from a two-year to a four-year school. Dr. Brinkhous was very influential in the development and staffing of the renewed and expanded medical school, especially its clinical departments. Particularly important was his insistence that excellence in research did not compromise excellence in teaching and clinical service, but, rather, that excellent teaching and clinical service required associated research programs of high quality.

Kenneth Brinkhous was the product of a pathology training program that was unique for its time. He graduated from the University of Iowa Medical School in 1932 and trained in pathology there. His mentor, Dr. Harry P. Smith, led a training program that combined clinical aspects of pathology and laboratory research, the latter focusing on aspects of blood coagulation. While in Iowa, Dr. Brinkhous carried out research on hemophilia as part of a research team that included several other experts in coagulation. He made the seminal discovery of antihemophilic factor (Factor VIII) and showed that it was lacking in hemophiliac patients. His research in Iowa was disrupted when the second world war began. During the war, Dr. Brinkhous commanded an Army laboratory in Australia, which served as the medical reference laboratory for the U. S. military forces in the South Pacific. After the war he returned to Iowa, but he soon became a

Dr. Kenneth Merle Brinkhous

candidate for pathology chairs at several major medical schools and research institutes. His choice of UNC in 1946 appears to have been influenced by his love of the ambience of small towns and intimate university campuses.

At UNC, Dr. Brinkhous was intent on developing a coagulation research program, such as the one that had existed at Iowa. Rather than the “cottage industry” approach to research that then existed at UNC, in which individual faculty members worked alone on a limited aspect of a problem, he wanted to tackle problems in blood coagulation with a team of researchers who worked in concert but from different perspectives. That he succeeded is a testament to his determination, his qualities as a scientist and administrator, and his ability to arouse the enthusiasm of young scientists with his research vision. Throughout his career, Dr. Brinkhous re-

cruited local students to research, many of whom became renowned scientists in their own right. He was an outstanding mentor, who combined friendship and personal concern with a demand for persistent, intense effort. He tolerated only the best that one could muster.

The contributions made by his research team at UNC included the demonstration that hemophilia could be controlled by administering plasma containing Factor VIII, followed by the development of methods to purify and concentrate Factor VIII so that it was a more reliable therapeutic agent. His research team developed the partial thromboplastin test, still used in hospital laboratories around the world. The team also investigated other clotting disorders, including von Willibrand's disease, and studied the effects of snake venom on blood clotting, which led to the use of proteases in treating victims of vascular thrombosis.

None of these advances could have been accomplished without the colonies of dogs and pigs with genetically determined bleeding disorders (hemophilia A and B and von Willibrand's disease) that Dr. Brinkhous assembled at Chapel Hill, beginning in 1947, and are now housed at the Francis Owen Blood Research Laboratory, which he was instrumental in building. This unique animal resource continues to have a fundamental role in blood coagulation research and treatment, most recently in providing the animal tests that proved the feasibility of gene

therapy for hemophilia in humans. Dr. Brinkhous continued to lead gene therapy studies in these animals when he was in his 80s and 90s, concluding his remarkable career of laboratory research on blood coagulation that spanned over 60 years. In 1997 he received recognition from the National Institutes of Health for the longest continuously running grant award (1947–1997).

Kenneth Brinkhous earned many honors, including honorary doctorate degrees from UNC and the University of Chicago, the O. Max Gardner Award of the UNC Board of Governors, and election to the American Academy of Arts and Sciences and to the National Academy of Sciences. He took great pride in the Gold-Headed Cane awarded to him by the American Society of Pathologists (predecessor of the American Society of Investigative Pathology), an organization that he served with diligence and wisdom in many capacities, including as its President.

Dr. Brinkhous is survived by his wife of 64 years, Frances, and by his son, John, three grand-daughters, and a great-grand-daughter. Another son, William, predeceased him.

Joe W. Grisham
J. Charles Jennette

*University of North Carolina at Chapel Hill
Chapel Hill, North Carolina*