

IN MEMORIAM

ROBERT EDWARD EAKIN

Professor Robert Edward Eakin died October 19, 1979 at his home in Austin after being in ill health since his retirement in 1976. He is survived by his wife, Esther Aline Eakin, whom he married on October 13, 1940, four sons, Richard Timothy Eakin and Robert Patrick Eakin of Austin, Dennis Michael Eakin of Hardin, Montana, and Brian Kelly Eakin of Chapel Hill, North Carolina, and two grandchildren, Elizabeth Lieben and Margaret Katherine Eakin of Austin.

Professor Eakin was born January 23, 1916 in La Grande, Oregon. After completing his secondary education at La Grande High School in 1932, he attended Eastern Oregon Normal College for two years before transferring to Oregon State College where he received his B. S. Degree in 1937 and M. S. degree in 1939. He moved with his major professor, Roger J. Williams, to the University of Texas in 1939 and was awarded the Ph.D. degree in 1942. After two years (1941-1943) as a research biochemist associated with Professor Tom D. Spies at the University of Cincinnati, he was commissioned as an Ensign in the U.S. Navy and served at the Naval Medical Research Institute from 1943 to 1946. When he left the U.S. Navy in 1946 as a Lieutenant SG, he

returned to the University of Texas as a Research Scientist in the Clayton Foundation Biochemical Institute and as an Assistant Professor in the Department of Chemistry. He served as Associate Professor (1947-1957) and Professor (1957-1976). He was also a Research Scientist in the Clayton Foundation Biochemical Institute from 1946 through 1976.

Professor Eakin served as a consultant to Eli Lilly and Company (1949-1951) on problems related to the intrinsic factor associated with vitamin B₁₂.

He was a member of the American Society of Biological Chemists, the American Chemical Society, Sigma Xi, and the American Association for the Advancement of Science.

Professor Eakin served as the supervising professor for 21 students for the Ph.D. degree and 21 for the M.A. degree. Professor Eakin's devotion to teaching undoubtedly stimulated a large proportion of his doctoral students who subsequently pursued academic careers, becoming leaders in their research fields.

In his research work, Professor Eakin was responsible for the discovery of the vitamin-binding properties of two proteins. One of them, the egg white injury factor, was shown to exert its effect by binding biotin, rendering it unavailable to mammals, and was isolated using a yeast assay which he developed. He

named the crystalline protein avidin. Early in his academic career Professor Eakin became interested in pernicious anemia, which was known at that time to be alleviated by injectable liver extracts. In a collaborative effort, microbial assays were developed for the anti-pernicious anemia factor. Using this assay, he and his student, Jessie Ternberg, demonstrated that the intrinsic factor of gastric juice, which was lacking in pernicious anemia patients, was actually a protein that bound the anti-pernicious anemia principle of liver (vitamin B₁₂) making vitamin B₁₂ unavailable for the microbe but allowing it to be utilized by man. This was the initial work on the vitamin-B₁₂-binding proteins that were later shown to be involved in vitamin B₁₂ transport. During this period, he also contributed significantly to elucidation of the role of folic acid in transfer of single carbon units, the biosynthesis and function of biotin, and the first microbial assay for vitamin B₆.

Subsequently, Professor Eakin became interested in developmental biochemistry and demonstrated the requirement for nucleic acid biosynthesis during these processes. The techniques which he developed allowed some early insight into these processes.

In 1956 Professor Eakin initiated, organized, and conducted the pilot program for the summer courses for academically

talented high school students (Fund for the Advancement of Education), and the following year (1957) he served as administrator and coordinator of an expanded program involving four other campuses besides the University of Texas program. This was the forerunner of the various federal programs for talented high school students that subsequently developed and was implemented nationwide.

Professor Eakin was very devoted to excellence in teaching and in 1962 he received an Award for Excellence in Teaching from the University of Texas Students Association. In 1968 he served as Chairman of the Conferences for the Advancement of Science and Mathematics Teaching, two statewide conferences sponsored by the University of Texas.

Professor Eakin had an unusual ability to provide novel approaches to research problems, and many students and staff sought his advice. He played a major role in providing ingenious suggestions in many of the research projects of the Biochemical Institute. He published sixty-eight research papers during his career.

Bill Eakin will also be remembered for his quick and good natured humor, for his annual wearing of the green on St. Patrick's Day, for his tolerance, generosity, and compassion, and for his friendship which all of us have cherished.

Peter T. Flawn, President of
The University of Texas at Austin

William Francis, Secretary
The General Faculty

This Memorial Resolution was prepared by a Special Committee consisting of William Shive (chairman), Lester J. Reed and Daniel M. Ziegler.

Publications of Robert E. Eakin

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* Work performed under direction of Robert E. Eakin

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Patents

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