MEMORIAL

JOHN HUNDALE LAWRENCE

NATHANIEL I. BERLIN

Early in the morning of September 8, 1991, John H. Lawrence, a member of this Association since 1965 passed away at the age of 87.

John H. Lawrence was born in Canton, S.D. on January 7, 1904 the son of Dr. Carl and Gunda Lawrence. His father at that time was the Superintendent of Schools of Canton and later the President of the Northern State Teachers College. John was the younger of two children. His older brother Ernest O. Lawrence was the inventor of the Cyclotron and the 1939 Nobel Laureate in Physics.

John H. Lawrence is the product of the public schools of Canton, the University of South Dakota and the Harvard Medical School. His initial clinical training was at the Peter Bent Brigham Hospital, the Strong Memorial Hospital and Yale (then Grace-New Haven Hospital) where he began his academic career as an instructor in medicine at a time when the instructor rank was truly the beginning rank. He then moved to the University of California (Berkeley) where he joined his brother as a member of the faculty and, of equal importance, joined his brother in bringing to medical research the newest tools of the physicist, the cyclotron and radioactive isotopes; thus, starting what is now known as nuclear medicine.

He created the Donner Laboratory and the Division of Medical Physics of the Physics Department and was the "biologist" to the Radiation Laboratory. It was in the Donner Laboratory and on the Berkeley campus that the earliest studies and application of radioisotopes to man were done.

During World War II the Donner Laboratory turned to high altitude physiology to aid the United States Army Air Corps. Beginning in 1947 the laboratory became a training ground for physicians interested in the application of the tools of physics to medicine. Melvin Calvin (Nobel Laureate in Chemistry for his work in photosynthesis) did part of his work in the Donner Laboratory.

Of particular significance was the use of radioactive phosphorus to treat polycythemia vera, which began in 1939 and is today probably the best treatment option but as Lawrence himself acknowledged, not the ultimate treatment. After the war when the 184" cyclotron began operation, Lawrence and his colleague applied the high energy particle beam to the treatment of pituitary tumors; the first patient was treated in 1954.
The Donner Laboratory was the home of John Gofman who opened up the field of the lipoproteins in the late 1940's; Cornelius Tobias—who used the high energy particle beams to study fundamental radio-biological problems; and Hardin B. Jones—a physiologist who participated in many of the research efforts; Hal Anger, an Electrical Engineer who developed the Anger Camera the forerunner of today's scintillation camera for imaging; and others who made major advances in understanding erythropoiesis.

In recognition of his contributions to medicine Lawrence received honorary degrees from his Alma Mater, U. Bordeaux and Catholic Univ. of America. Among other honors were the Welch, Kast, Ranson and Von Hevesy lectures, the Caldwell, Davidson, Pasteur, and Marshall Brucer Medals, and in 1983 he received the Enrico Fermi Award. After becoming emeritus, the Governor of California appointed him to the Board of Regents of the University of California.

I had the pleasure of working at the Donner Laboratory with him from 1947 to 1954 on erythropoiesis and the polycythemias and knowing his wife Amy, who passed away in 1967, his mother and father and his children.

John Lawrence was truly a giant and his legacy at the University of California and in medicine continues.