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Obituary

J. Lawrence Oncley, PhD Biophysicist February 14, 1910–July 14, 2004

It is with sadness that we record the death of J. Lawrence Oncley—one of the pioneers of biophysical science. The following obituary was provided by members of his family. Some of Dr. Oncley's personal reminiscences and historical notes were published recently in this journal [1].

J.L. Oncley was born on Valentine's Day, 1910, in Wheaton, IL. He attended high school and Southwestern College in Winfield, KS. He earned a PhD in chemistry at the University of Wisconsin in 1932, then moved to Boston, MA where he was to work for 30 years, first at M.I.T. where he began to collaborate with Professor Edmund Cohn of Harvard Medical School studying the physical properties of plasma proteins. He moved full time to the Cohn Laboratory at Harvard in 1936 where he received a faculty appointment to Harvard Medical School in 1939.

As World War II approached, the Cohn Laboratory was mobilized to develop methods for the separation of the various components of blood plasma for later reconstitution and use on the battlefield. Dr. Oncley's unique contribution to this work was the development of the method for isolating and purifying the gamma globulin fraction containing antibodies against many disease-causing bacteria and viruses. At present, it may be estimated that tens of thousands of individuals, both normal and immune deficient, have been protected against a variety of infections by the injection or infusion of purified gamma globulin.

After World War II, Dr. Oncley returned to basic research focusing particularly on plasma lipoproteins. In work published in the late 1940s and 1950s, he defined high-density and low-density lipoproteins (HDL and LDL), which carry cholesterol in the blood. This work, as well as that of others, led to the terms, "good cholesterol" and "bad cholesterol" as used today.

In 1947, Dr. Oncley was elected to the National Academy of Sciences. At the time, he was the youngest individual ever to achieve that honor. In 1950, he became a full professor at Harvard. In 1958, the recently formed Biophysics Study Section of the National Institutes of Health, of which Dr. Oncley was the first member appointed, organized a 4-week conference at the University of Colorado in Boulder. The presentations at the conference formed the basis of a book, of which Dr. Oncley was editor-in-chief, entitled, "Biophysical Science: A Study Program". The publication of this book is regarded by many to represent the birth of Biophysics. That same year, the Biophysical Society was founded and in 1962–1963, Dr. Oncley became its president. From 1964 to 1967, he was editor of the Society's major publication, The Biophysical Journal.

In 1962, Dr. Oncley moved to the University of Michigan as Professor of Chemistry and Biologic Chemistry and director of a new interdepartmental Biophysics Research Division. There, investigators from a number of departments could affiliate and collaborate while still maintaining commitments to traditional departments. This interdepartmental, multidisciplinary model proved highly successful in Michigan and has subsequently been followed at a number of institutions.

In 1976, Dr. Oncley stepped down as Director of the Biophysics Research Laboratory but continued his own research. In 1980, he became Emeritus Professor although he continued to be an advisor and mentor to younger colleagues and students. His last paper, published in the journal, "Biophysical Chemistry", in 2003, when he was 93 years old, was titled, "Dielectric behavior and atomic structure of serum albumin".

In 2001, Dr. Oncley moved to Harwich, MA, where he died on July 14, 2004, of a cardiac event. Two wives predeceased him, Genevieve Reese and Lephia French, both college classmates. He is survived by a brother, Paul Oncley of Oberlin, OH, daughters Nancy A. Thyng of Harwich, and Louise O. August, of Darnestown, MA, stepchildren Cora Lee Carlson of Chatham, MA, and John Giles of Princeton, NJ, seven grandchildren, five step-grandchildren, and seven great-grandchildren.

Reference

[1] J. Oncley, Dielectric behavior and atomic structure of serum albumin, Biophys. Chemist. 100 (2003) 151–158.

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