



Franklin Hutchinson III (1920-1997)

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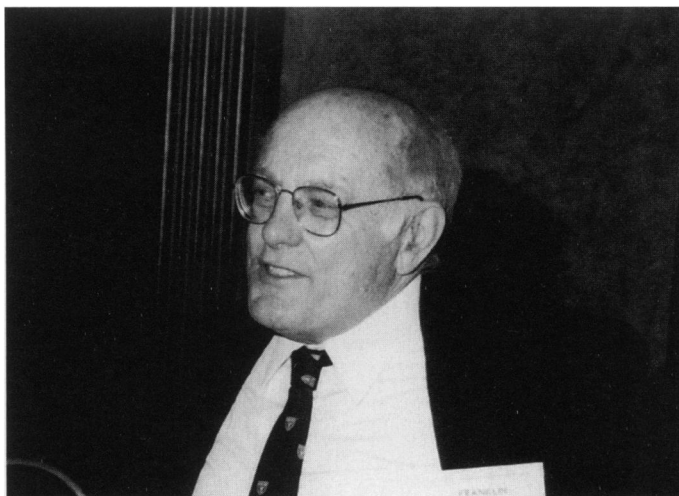


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IN MEMORIAM

Franklin Hutchinson III (1920–1997)



Dr. Franklin Hutchinson III, Professor Emeritus of Molecular Biophysics and Biochemistry at Yale University, died on October 26, 1997, in New Haven, CT. He was 77 years old. He was born on February 29, 1920, in Brooklyn, NY.

His insightful research in radiation biology and in biophysics, as well as his tenure at Yale, spanned half a century. A member of the Radiation Research Society since 1953, he published regularly in *Radiation Research*, beginning with the first issue of the first volume in 1954. Mathematics, a major tool of physicists, played a prominent role in much of his work. He had a deep understanding of the mechanism of the interaction of radiation with the molecules that compose our cells. He was characterized by an extraordinary degree of collegiality and enthusiasm for his research.

Dr. Hutchinson (Hutch) pursued a wide range of research topics over the past 50 years. He is best known for his work on the repair of X-ray-induced DNA double-strand breaks in *E. coli*, for identification of the lesions produced by ultraviolet light in DNA containing 5-bromouracil, and for his more recent thought-provoking studies on mutagenesis of DNA. Work from Hutch's laboratory showed that the free radical produced when 5-bromouracil is photo-dissociated from DNA by ultraviolet light extracts a hydrogen atom from the 5'-deoxyribose, thereby causing a single-strand break. In later work, he showed that DNA double-strand breaks resulted from a single photochemical event at a frequency of 1% of the single-strand breaks. A conclusion from his research on ionizing and ultraviolet radiations was the importance of unrepaired double-strand breaks as lethal lesions. For ionizing radiation, his work suggested recombination to be the mechanism for the repair of double-strand breaks.

Hutch received his bachelor's degree in physics from the Massachusetts Institute of Technology (MIT) in 1942 and then joined the Radiation Laboratory at MIT. His work on the development of radar during World War II earned him three patents in microwave electronics. He entered graduate school at Yale in physics in 1945 and, under the direction of Dr. Ernest C. Pollard, received his Ph.D. in 1948 for studies on the self-diffusion of argon. Hutch was a faculty member at Yale from 1948 until 1990, and pursued his research as Emeritus Professor until his death.

His interests in radiation biology and biophysics began during his time in graduate school. He joined the Biophysics Program Faculty within the Physics Department in 1948. He became professor of Biophysics in

1960, the year the Biophysics Department merged with Biochemistry to form the Department of Molecular Biophysics and Biochemistry. He was also a fellow of Jonathan Edwards College at Yale. Hutch gave continuity to the department in its formative years. He served as Chairman of the department, and later as Director of Graduate and Undergraduate Studies.

Hutch was committed to Yale University, to his department and to his profession. Early in his career he became associated with Radiology and Radiation Safety at Yale. His first faculty appointment was as VA Instructor of Radiology and Biophysics, and he served on the University Radiation Safety Committee from 1948 until he retired in 1990. He was the first Chairman of the Division of Biophysics of the American Physical Society and Chairman of the Committee on Education of the International Union of Biophysics. He received a Guggenheim Fellowship to pursue biophysical research at King's College, London, in 1963–1964.

Hutch also had an avid interest in music. He began lessons on the French horn in 1969 and joined the New Haven Civic Symphony in 1971.

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