

February 15, 1989

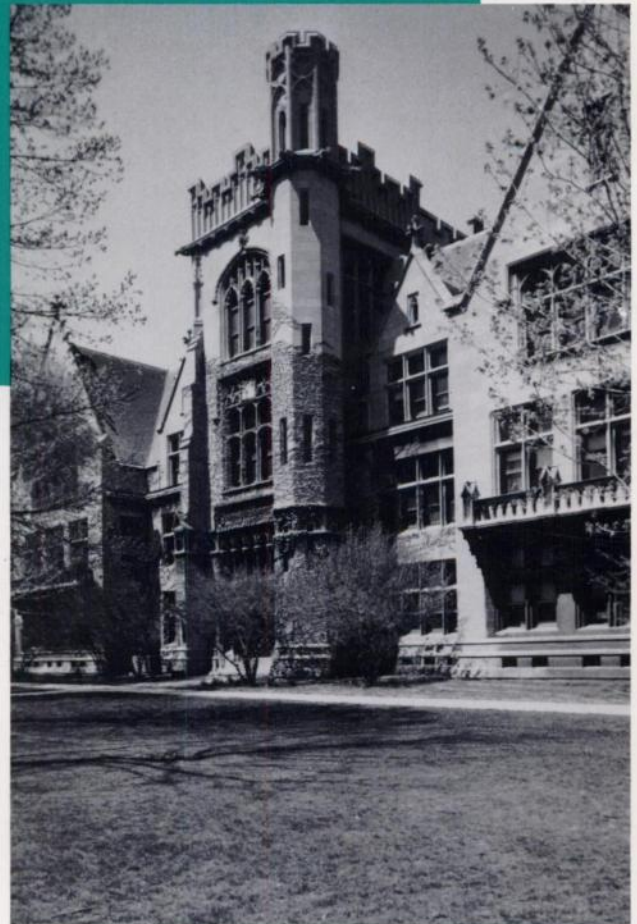
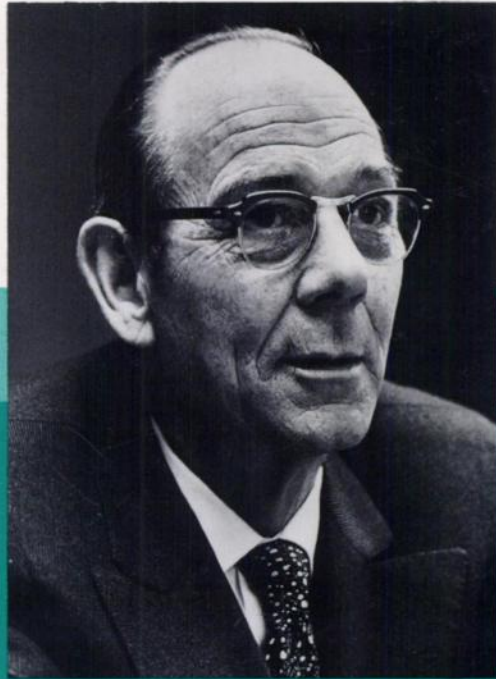


Cancer Research

OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH

VOLUME 49 • NO. 4 • PP 767-1074

ISSN 0008-5472 • CNREA 8



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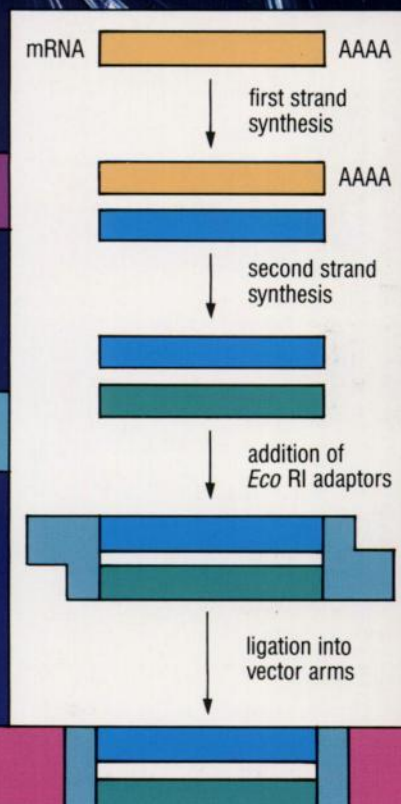
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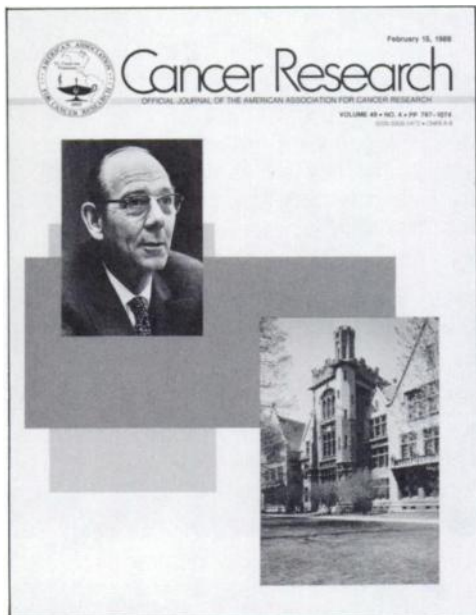
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COVER LEGEND



The Manhattan Project, although commonly remembered for the development of the first nuclear weapons, also resulted in many pioneering studies on the biological and medical effects of radiation, under the leadership of Leon O. Jacobson. He was born in 1911, graduated from the State University of North Dakota, and, after teaching in that state for three years, pursued medical studies at the University of Chicago, graduating in 1939. After completing house staff training, he was assigned, as a health officer of the Manhattan Project, to monitor the health of the physicists and chemists, among whom were Enrico Fermi, Edward Teller, Herbert Anderson, Arthur Compton, James Franck, Leo Szilard, and Glen Seaborg. Taking advantage of the opportunity to study the biological effects of radiation, for which no quantitative data existed at the time, he described the changes in hematological parameters over a wide range

of radiation doses in mice, rats, and rabbits. During the years 1943 to 1945, he made a study of the therapeutic effects of Compound X, later identified as nitrogen mustard [bis(chloroethyl)amine], in lymphatic disorders. His initial treatment of patients with Hodgkin's disease and lymphomas, reported in the *Journal of the American Medical Association* in 1946, was a first step in cancer chemotherapy.

In the late 1940s he discovered the beneficial effect of spleen shielding as determined by reduction of mortality in mice after total body radiation. This vital observation was confirmed widely and set the stage for rapid advances in tissue and bone marrow transplantation. In later work, he explored the physiological role of erythropoietin and demonstrated its primary origin from the kidney.

In 1951 he was promoted to professor of medicine, and from 1951 to 1957 he was Director of the University of Chicago's Argonne Cancer Research Hospital, later renamed the Franklin McLean Memorial Institute. In 1961 he became Chairman of the Department of Medicine, and in 1966 he was appointed Dean of Biological Sciences of the University's Pritzker School of Medicine.

Among his awards are the Janeway Medal of the American Radium Society, the Robert Roesler de Villiers Award of the Leukemia Society, the Theodore Roosevelt Rough Riders Award from the state of North Dakota, and the Ralston Award for Research in the Medical Sciences. He was elected to the National Academy of Sciences, U.S.A. and the National Academy of Arts and Sciences in 1965. He is currently the Joseph Regenstein Professor Emeritus of Biology and Medical Science in the Joint Section of Hematology/Oncology at the University of Chicago.

Dr. Jacobson is pictured with the Ryerson Building of the University of Chicago campus. Photographs were provided by Nicholas J. Vogelzang of the University of Chicago Medical Center.

Nicholas J. Vogelzang