



Clarence Cook Little
1888–1971

OBITUARY

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Clarence Cook Little died of a heart attack December 22, 1971, in Ellsworth, Maine. His wife of 41 years, Beatrice Johnson, two daughters, two sons, and nine grandchildren survive him. They and many friends throughout the world, whose lives have been profoundly touched by his life, mourn the loss of this great humanitarian.

Dr. Little was born in Brookline, Massachusetts, October 6, 1888, the son of James Lovell and Mary Robbins Revere Little, a direct descendant of the American patriot, Paul Revere. Dr. Little's boyhood home was on a large estate, where his family had many animals which led to his interest in purebred livestock and pets. Later in his research he established the principle of using genetically uniform animals in laboratory experiments. At the present time, Jackson Laboratory animals go to almost every country in the world—desired because of their known, controlled genetic makeup.

Dr. Little was educated at Harvard University, receiving his A.B. in 1910, M.S. in 1912, and D.Sc. in 1914 in zoology, with special interest in the new science of genetics. For several years he had various positions at Harvard University: secretary to President Lowell, assistant dean of the college, acting marshal, and part-time researcher at the Harvard Medical School.

With the entrance of the United States into war in 1917, Dr. Little enlisted in the U.S. Army; trained at Plattsburgh, N. Y.; and was subsequently assigned to the Signal Corps in Washington for administrative duty in what later became the U.S. Air Force. He was discharged with the rank of Major at the end of the war in late 1918. During his military service, Dr. Little made sure that his breeding stocks of mice were sustained in the laboratory at Harvard Medical School.

In 1919, Dr. Little accepted a position as research associate and assistant director of the Station for Experimental Evolution, Carnegie Institution, Cold Spring Harbor, N. Y. After serving in this position for 3 years he became President of the University of Maine at Orono. After 3 years in Maine, he went on to Ann Arbor to become President of the University of Michigan. At age 36 he was the youngest man ever to hold that position.

In 1929, Dr. Little decided that his real interest was firmly rooted in mammalian genetics and cancer. He had hoped to find the cause of cancer. With the financial backing of several prominent citizens of Detroit he went back to Maine and, at Bar Harbor on his beloved Mt. Desert Island and on the very land where he and his students from Maine had had a summer school and studied the migration of carrion beetles and other ecological phenomena, he built the Roscoe B. Jackson Memorial Laboratory. Mr. Roscoe B. Jackson, President of the Hudson Motor Company, Mr. and Mrs. Edsel Ford, and the Messrs. Oscar and Richard Webber were the sponsors. Unfortunately, before the laboratory was finished, Mr. Jackson died of a heart attack while vacationing abroad. There was no endowment and the United States was having a depression, which meant that Dr. Little practically had to become a mendicant friar begging for continued support of his

“Adventure in Faith,” as he called it. The project burgeoned and today not only is the laboratory widely known for its scientific program, but the inbred mice are much in demand, millions being sold each year to help support the continuing research investigations.

It was also in 1929 that Dr. Little agreed to serve half-time with the American Cancer Society as its Managing Director, a position he held until 1945. He instituted a program throughout the United States of visiting doctors whose mission was to teach local physicians better methods of examining patients in search of early cancer. He obtained the capable cooperation of the Federation of Women's Clubs in launching the Women's Field Army Against Cancer. Dr. Little's belief was that women themselves were in the best position to detect early signs of unusual growths or differences in their own physiological behavior. Thus, an intense educational campaign was undertaken. Its success was phenomenal.

Dr. Little continued through the years as Director of the Jackson Laboratory with many other collateral assignments. In 1954 he became Scientific Director of the Tobacco Industry Research Commission; 2 years later he retired to Director Emeritus of the Jackson Laboratory and he and Mrs. Little moved just off the island to establish their home, Little Haven, overlooking Goose Cove, an inlet of Frenchmen's Bay.

But the life of this man extended far beyond this biographical core. He had active membership in the National Academy of Science, the American Academy of Arts and Letters, and many other scientific organizations and prominent social clubs. He was awarded honorary doctorates from nine colleges and universities.

The American Association for Cancer Research owes much to Dr. Little. He served as President of the Association in 1931 and again in 1940, when he steered the members through the annual meeting at Pittsburgh to reorganize the Association and establish CANCER RESEARCH as its official organ. Although the sessions were stormy, at the end he felt great personal satisfaction that the Association was now organized as the members wanted it.

Dr. Little was an impressive man. He was tall, square-shouldered, and athletic, with a closely clipped black mustache and high forehead. He lived life to the fullest, leading others along with him. Dr. W. E. Castle has related that, when he was teaching genetics at Harvard sometime before 1910, this tall captain of the track team came over and signed up for his genetics course. After a few sessions the whole track team had signed up.

Only in a personal way can one write about this man. In the university he was a very popular president with the students, who called him “Prexy,” a name by which he was affectionately known by all members of his scientific staff as well, although his early Bostonian and Harvard friends called him “Pete.” He never failed to inspire the young scientist. One going into Dr. Little's room to discuss a research program would come out feeling that he was doing something very important and that he must get on with it. Later, when the work would be presented at a meeting, the master was always

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there to offer a few words in discussion that made even the mediocre paper something significant. There was a mutual affection between him and his staff that could be felt best at the regular laboratory parties that everyone from diener to director, including spouses and children, attended on those cold winter evenings with equal interest and feeling of significance. In summer this could be a picnic including a lobster feast, games, or a footrace. He always won even at an age when most have quit such physical antics. In giving the annual report to the Board of Trustees he could never mention his staff without choking up with tears in his eyes and pausing a moment before going on. His viable interest in students continued, and scientific careers were born in many high-school neophytes brought into his laboratory in a unique summer program to work side by side with the scientist.

Dr. Little was a man of great faith—faith in his Creator and faith in his fellowman. Only his closest friends were aware of the depth of his spirituality. He was an Episcopalian and on numerous Sundays he spoke from the pulpits of this Church.

The Jackson Laboratory was built on his faith in his fellowman, and this same faith carried the laboratory through the depression of the 1930's when the staff planted gardens to grow their food and fished from the sea. His faith also brought the laboratory through the terrible forest fire of 1947. Standing on the charred ruins with the surrounding trees burned away, he said prophetically, "Now we can see the sea." In a short time the horizons of the Jackson Laboratory had extended around the world with a well-equipped new building and a scientific program reaching far beyond the original one of genetics of cancer to include immunology, biochemistry, cell culture, virology, and behavior.

Dr. Little loved the outdoors. He said it enriched one's life when he heard the song of a bird through the woods to know what bird was singing and to be able to visualize it. He knew where the fish were biting, and on the hunting team he always came out with the most points even though he had the least time to get out.

Dr. Little lived far ahead of his time and thus at periods was controversial, but even those who disagreed with him admired his commitment to what he saw as truth. One of the factors in his leaving the University of Michigan in 1929 was that he advocated birth control, something that in those days even his faculty could not accept. But out ahead is where discoveries are made. By 1920 he was already considering that X-rays could probably cause genetic change, and he and his collaborators soon were publishing about heritable abnormalities among descendents of their X-rayed mice. Muller's work with *Drosophila*, which eventually won for him the Nobel Prize in this area, came a number of years later. As characteristic of Dr. Little's ever-probing mind, one day in 1938, with a pair of forceps, he dipped newborn mice into a solution of benzpyrene, because he felt that these animals would be more susceptible to the induction of cancer since their immune mechanisms would not be as highly developed as those in older mice. More than 20 years later the newborn animal became the sensitive test animal of choice for many potential carcinogens, including viruses.

Cancer research owes much to his dedication and untiring effort for the financial support of biomedical research. He accepted the presidency at the University of Michigan only

after he was assured that his research program also would be given adequate financial support. He approached the American public by organizing the Women's Field Army, who rang doorbells to collect dollars for the support of cancer research; this later developed into the grant program of the American Cancer Society. He then visualized the Federal Government as a potential source of extensive support for medical research and came to Washington to help write the National Cancer Institute Act and to defend it before the Congressional hearings. He was arguing for the establishment of the National Cancer Institute with the unheard-of budget of one million dollars a year to support not only intramural research but also a grant program, and he did this in the face of certain prominent men in cancer who thought that the Federal Government had no business in medical research. Later he viewed private industry as the last potential source of almost unlimited funds to be tapped for medical research and, although he may have told relatively few people, this was the primary motivating force for his becoming associated with the tobacco industry.

The published record of his contributions to science and mankind consists of approximately 200 articles and books. In line with his firm foundation in basic science is the observation that his first paper published in 1909 was on "The Peculiar Inheritance of Pink Eyes among Colored Mice" and the last published 60 years later was on "Reproductive Effectiveness in Crosses between Five Inbred Strains of Mice." Some grasp of the amazing breadth of the man is obtained from a scanning of the titles in between. A paper on coat color in mice is followed by one on factors influencing human sex ratio. The next is on inheritance of coat color in Great Danes, and the next on inheritance in doves and canaries. Later there is one on how to educate women to recognize breast tumors, one on white cats and deafness, and one on uterine cancer in Jews and Gentiles. Outstanding is his book, *Civilization Against Cancer*. He led in laying the foundation for the science of tissue transplantation. He and his staff discovered the first virus to be readily accepted as a cancer virus, but his greatest scientific contribution was the inbred strains of mice and, indirectly, of rats. This decision that genetically controlled strains would be needed to answer questions in disease, and particularly cancer, came while he was still an undergraduate. He started to inbreed strain DBA in 1909.

Added to the printed word were the many lectures he gave. It might be a college presidential inaugural address or a stump speech on the town green, planned or extemporaneous, but it was always delivered beautifully and with a great command of the English language. Of even greater value were the intimate conversations in which, with words of advice and encouragement, he gave so much to so many.

Who can assess the contributions of this giant idealist? Who can measure the breadth of a life that has influenced so many other lives? Clarence Cook Little was the greatest man I ever knew.

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