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COVER LEGEND

Leonell Clarence Strong (b. 1894 in Renova, Pennsylvania), former Research Professor at Yale University School of Medicine, and Director of The Springville Laboratories of Roswell Park Memorial Institute, was the originator of many inbred strains of mice used in cancer research. The now famous A and C or High Tumor Family (HTF) of inbred mice were started in July 1921 at St. Stephen’s College (now Bard College), Annandale, New York. The original unpigmented mice and their descendants were housed from 1921 to 1925 in a tar-paper shack. This building, shown with Strong and his two sons, was heated by a potbelly stove. Tar paper was added for warmth in the winter and removed during the summer. The mice were maintained in wooden boxes and fed a diet of bread, milk, and mixed seed.

The original matings of unpigmented mice, obtained from various sources, were represented by a letter of the alphabet. From the original letters, only the F, I, and N strains exist today. The A and B lines, both albino, were mated and from this cross arose the A strain. The A line was crossed also to the D line, a dilute brown; the offspring were selected for high rates of spontaneous tumors. As shown in the pedigree, the descendants of this cross produced the C, C3H, CHI, and CBA strains. The letters on the bottom left side of the pedigree squares represent the line; the numbers on the right, the age when a spontaneous tumor first appeared in the mouse. The pedigree represents the direct descent of the first few generations of the C Family. Hundreds of collateral lines were not maintained or shown in the pedigree.

With the exception of a few father-to-daughter matings in the early pedigrees, all matings were strictly brother to sister, for over 100 generations. In terms of human generations, a comparable genealogy would span over 3500 years.

The strains, once developed, were disseminated among many investigators. Today there are hundreds of sublines scattered throughout the world. In a 17-month period, from December 1966 to April 1967, approximately 840 publications appeared in the world literature, using mice as a research tool. Of these papers, 43% depended on the use of one or more strains of mice first developed in the old tar-paper shack.

The pedigree is reproduced from Cancer Res., 2: 531, 1942. We are indebted to Dr. Stanley J. Mann for his assistance in the preparation of the material.

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