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Biological Aspects of Cancer and Aging
Studies in Pure Line Mice
by Leonell C Strong
pp xv+221 75s
Oxford &c: Pergamon Press 1968

Studies on pure line mice since the early 1920s have made possible many important advances in mammalian biology, genetics, immunology, and oncogenic virology. Any book by Strong, who played such a vital part in the development of inbred strains of mice, must therefore command attention for historical reasons if for no other.

Five of the seven chapters in the present volume are based on lectures and consist of somewhat philosophical discussions of data from three multigeneration inbreeding-segregation-selection studies reported elsewhere. Of the third of these, which is still in progress, Strong writes (p 29)

'. . . we are obtaining evidence that biological characteristics, such as age of first litter, reproductive capacity, fertility, fecundity, longevity and incidence of spontaneous tumors are not randomly segregating out in the separate sublines. Many of these biological characteristics show a linear sequence associated with increasing maternal age.' It is a pity that the reader is not given details of these observations, since their validity is crucial to much of the remainder of the book.

For non-geneticists the book presents difficulties in understanding; and for geneticists, difficulties in belief. Is it possible in long-drawn-out multigeneration studies to control environmental factors closely enough to justify the conclusion that there exists a specific pleomorphic gene, 'LST', which favours earlier first litters, more rapid production of successive litters, shorter life span and higher incidence of spontaneous tumours?

This book is not essential reading for those engaged in experimental cancer research, but the exercise of dissecting justifiable from unjustified conclusions might be fascinating for some.

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