Pathology of the Syrian Hamster

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This volume is dedicated to
C. C. Little (1888-1971)

Late founder and first Director of Roscoe B. Jackson Memorial Laboratory at Bar Harbor, Maine (now The Jackson Laboratory), who in 1941 predicted
(speaking of mice) that, ‘With inbred strains now available there is a whole new field of attack, not only on the problems of experimental cancer, but on those of the nature of individuality and of the fundamental processes of ontogeny.’

and to
William S. Murray (1899-1971)

One of the pioneers in mammalian genetic research, late Associate Director emeritus of The Jackson Laboratory, and co-founder, General Manager and Treasurer of TELACO®, Bar Harbor, Maine, first commercial producer of inbred Syrian BIO® hamsters.

Editor’s Foreword

This book is the result of many discussions among the members of the Editorial Committee, George P. Fulton, Alfred H. Handler, F. Homburger and Agnes Russfield who, each in his own field - microcirculation, transplantation, virology, experimental comparative pathology and endocrinology - has made extensive use of Syrian hamsters. All of us felt a need for a reference work which would contain most of today’s available knowledge on the pathology of Syrian hamsters. We also realized that no one person could singlehandedly write such a volume and agreed that it could best emerge from a meeting of those now actively engaged in research using Syrian hamsters.

In these days of limited research support it was most difficult to obtain funds for such a meeting and subsequent publication. After rejection of our applications to the usual major sources for such moneys we decided to appeal to drug houses and to our long-time friend and publisher, Thomas Karger. Also, we limited travel subsidies for speakers and obtained registration fees from most of the participants. The contributing sponsors are most gratefully acknowledged below.

Nearly one hundred persons participated in the symposium, which was held November 18th-20th, 1970, at the Museum of Science, Boston, with one evening session at the Harvard Club of Boston. The response of the participants was enthusiastic and we hope to repeat this kind of symposium at intervals of two to three years, thereby updating these volumes on hamster pathology. Since Syrian hamsters have an important role in carcinogenesis, tumor transplantation and oncogenic virus studies, it is appropriate that these volumes on hamster pathology become part of the well established
series, Progress in Experimental Tumor Research, even though the subjects
covered in this serial publication range far afield from oncology.

We wish to thank the sponsors of this symposium, especially the publisher,
not only for his financial support but also for his generous cooperation
in other respects. We also express our appreciation to the participants
for their promptness in submitting their papers and to Mrs. Mary Miller,
editorial assistant, for her careful polishing of the manuscripts.

On behalf of the Editorial Committee,

F. Homburger, M.D.
Editor
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Message of Welcome

by
The Honorable Elliot L. Richardson,
Secretary of Health, Education and Welfare,
Washington, D.C.

It is at best difficult for a layman to gauge the full significance of
developments in the complex fields of biomedical research. Too often, I fear,
we tend to grasp onto the dramatic and sensational achievements of medical
science and overlook the more fundamental work that makes them possible.
We seize on news of drugs that promise the control of cancer or heart disease,
or on new insights into the cause of these and other afflictions, but we
neglect, because we cannot appreciate, the arduous labors of those scientists
whose work lays the foundations for such brilliant flashes of success.
I have had the good fortune, in my personal life and my public life,
to come close to the corridors of biomedical research, to the places where
patient men and women forge the tools and the knowledge of which success
is made. I know, with you who are participating in this symposium, that
the control of disease will come, as it must, from the continual, painstaking, often unheralded growth of man’s understanding of nature.

In the intricate, almost awesome, environment of computers, of electron microscopes, of unbelievably sensitive devices with which to find, measure, and understand biological processes, one tends to forget that it is living things - cells, animals, people - toward which all this power and energy are directed. Without the model of life itself, facts pile up in formless masses that bring us no closer to the goal of understanding, no closer to the conquest of disease. You who are attending this symposium are helping to perfect a tool no less powerful, no less essential than the most sophisticated electronic device. Strains of laboratory animals, the Syrian hamster prominent among them, are literally revolutionizing our understanding of biology.

Without them, and without the work of scientists like yourselves, mankind, even in this age of technological marvels, would be all but powerless to move toward the goal of health, of freedom from disease, of coexistence with the natural world of which we are a part.

Your research is a vital link in the chain of understanding that science seeks endlessly to pay out. I wish for you a successful and productive meeting, for I know that the well-being of mankind depends in no small way on your work.

Elliot Richardson
Secretary