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Series Editor’s Foreword

In my introduction to Volume 1 of this series (1960), I stated that
progress in experimental tumor research had become so rapid that it was
difficult to keep abreast of developments. This is, of course, true now even
more than 18 years ago. Nevertheless, the eight chapters which Dr. Wallach
has assembled on membrane anomalies of tumor cells not merely bring us
up-to-date, but some of them point ahead to new avenues of approach
for the future. Thus, this volume admirably fulfills our intention for this
series - to review fast-moving segments of experimental tumor research,
and to present historical background as well as current data, extrapolations and speculations in order to become an effective tool for cancer researchers everywhere.

I am grateful to the series editor, Dr. Wallach, and to all of the contributors. I sincerely appreciate the competent editorial assistance of Mrs. Mary Miller and the intelligent, generous and technically impeccable contribution of the publisher, Mr. Thomas Karger.

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Guest Editor’s Foreword

The membrane biology of neoplastic cells continues a most active biomedical field. The area has excited the interest of scholars from many diverse disciplines for many reasons, some relating to cancer as a disease and others to neoplasia as a fundamental biological process. Most prominent among these reasons is the suspicion that the social interactions between cells in tissues depend upon their surface membranes and that the disruption of tissue homeostasis in cancer derives from cell surface deviations. This suspicion appears well justified and we therefore present intensive treatments of five topics that concern plasma membrane alterations in neoplasia: Cell adhesion and tumorigenicity, genetic plasma membrane variants, membrane transport, the role of calcium in membrane function and the immunochemical characterization of membrane antigens in cells transformed by simian virus 40.

The interest in membrane anomalies of neoplastic cells should however, not be restricted to the plasma membrane: Numerous metabolic functions that are commonly abnormal in tumor cells involve diverse intracellular membranes. This point is evident from the three chapters that comprehensively review the mitochondria of malignant cells, abnormalities of the endoplasmic reticulum in neoplasia and the anomalies of cholesterol metabolism found in many tumor cells.

Together, the eight chapters of this volume document major progress in critical areas of experimental tumor research in a timely, authoritative and unique fashion accessible to specialists in both tumor biology and membrane biology, as well as to a wide circle of graduate students and other scholars in diverse fields of biomedicine.

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