Book Reviews


When in 1968 this journal started its new section, Oncogenesis, the editors gave in the subtitle of the section prime emphasis to the developmental-biological aspects of cancer. The monumental work of Leslie Foulds could be considered as a Magna Charta of this line of research. As the author states in the ‘Preface’, his aim is to treat neoplasia as ‘a developmental process akin to normal development in some respects but differing from it in important particulars that are not yet well-defined’. This is perhaps the clearest definition of developmental oncology to the knowledge of this reviewer.

The book consists of a relatively short but very careful and accurate ‘Historical Introduction’ (Part I), a detailed ‘General and Experimental Pathology of Neoplastic Development’ which deals with aetiological factors, chemical carcinogenesis, the mammary tumor phenomenon, morphological and histological analysis of various kinds of neoplasmas (with a good lucid classification) and biochemical characteristics (Part II), and finally a detailed treatise on ‘Biological Organization and Developmental Biology’ (Part III). This latter is probably the most important and most original part of the book, the result of deep thinking about concepts of biological organization as a suitable basis for theories of malignant growth. The author treats such seemingly heterogeneous material as the genetic code and the mechanism of transmitting hereditary ‘characters’; the ultrastructure of the cell; the organization of Protozoa; the developmental processes of Metazoa from fertilization to embryonic induction and tissue interactions; relation between cell-proliferation and -differentiation; the differential utilization of the genome and some purely theoretical considerations about the nature of development. But it all falls in place and makes a beautiful picture which gives the reader much logical pleasure. Probably nobody else could have accomplished this quite in the same manner as the author. One of the great pioneers of developmental oncology, he has a unique encyclopedical knowledge of the subjects and its many ramifications. He is personally involved in active research (the list of his publications since 1932 covers a whole page in the bibliography) and has, therefore, some strong opinions. Consequently, some sets of data and viewpoints receive preferential treatment in his book, while others, probably equally significant and justifiable, are neglected or left out entirely. But this is inevitable in a work which covers such a vast field (with so much terra incognita within it) and does not detract from the great value of the book. On the contrary, it gives the volume a special flavor and we should look forward with great expectation to the continuation.

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Analogues of Nucleic Acid Components, Mechanism of Action.


Insufficient detail to be of great value to a researcher in the field and too sophisticated to be an introductory text well describes this volume. It is a brief monograph which introduces the
purines and pyrimidines – their metabolism and some of their clinically useful analogues–and selected nucleoside antibiotics.

The review of the clinical literature is comprehensive and provides an excellent starting point for any one wishing to investigate this aspect of the analogues of nucleic acid com-

ponents. The biochemical literature is not treated in an extensive manner and the reader must possess a familiarity with the field if he is to read this monograph with much comprehension. Therefore, this volume is of more interest to the clinician than to the biochemical researcher. There are several errors in the text. For example, on page 20 there appears a discussion of the role of 5-methylation in the metabolism of 6-mercaptopurine. Clearly this should be the role of S-methylation. Also, on page 23 the author states that inosine or guanosine kinases have not been reported to occur in mammalian cells. There are 3 independent reports of inosine kinase activity in mammalian cells [Banaschak, Acta biol. med. germ. 18: 581 (1967); Pierre and Le Page, Proc. Soc. exp. Biol. Med. 127: 432 (1968); Payne et al, Exp. Cell. Res. 59: 289 (1970)].

T. The author has attempted to survey briefly one important aspect of biochemistry and clinical medicine, and in his effort to achieve brevity has sacrificed much depth and clarity. Because he presumes a considerable foreknowledge on the part of his reader, his volume cannot be recommended as an introductory text, but may be helpful to a clinician or to a student of the paramedical sciences who has a familiarity with basic biochemistry. A recent volume on the same subject, Antagonists and Nucleic Acids by M. E. Balis (North Holland, Amsterdam 1968) which is of greater depth, clarity, and scope should prove of greater value than Roy-Burman’s Analogues.

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