

Book Reviews

Malignant Transformation by Viruses. Recent Results in Cancer Research, Vol. VI. W. H. Kirsten (ed.). New York: Springer-Verlag, 1966. 177 pp. \$8.

This small book is a collection of papers presented at a symposium held in February 1966 at the University of Chicago. The object was to survey recent advances in the field of viral transformation, that is, the alteration of normal cells to cancer cells following virus infection. The papers vary in form, approach, and coherency. Most of the data are up-to-date because of the rapidity of publication. The book is neither a complete treatise nor meant for the uninitiated. However, it is worthwhile for anyone with a background knowledge of tumor viruses who wishes to keep abreast with the fast-moving field of viral oncology. The book is divided into 3 sections: characteristics of malignant transformation by viruses; genetics and immunology of malignant transformation by viruses; and significance of malignant transformation in relation to human neoplasms. The formal papers are followed by a lively round table discussion under Huebner's leadership, and finally by Sabin's provocative summary of the symposium. Very little attention is devoted to human neoplasms because of consistent failures to demonstrate a viral etiology. Sabin asks, "How long should one continue with the search for a possible viral etiology?" and then answers, "As long as there are reasonable questions to ask and reasonable techniques with which to answer them, so long it is necessary to persist."

Joseph L. Melnick

Impact of Basic Sciences on Medicine. Proceedings of the International Symposium held in Jerusalem, June 21-28, 1965. B. Shapiro and M. Prywes (eds.). New York: Academic Press, 1966. 328 pp. \$14.95.

The 31 articles appearing in this volume are based on lectures delivered during a symposium on the "Impact of Basic Sciences on Medicine," held in Jerusalem in June 1965 on the occasion of the inauguration of the Medical School building at the Hadassah-Hebrew University Medical Center. Most papers are well-written, informative, and stimulating. Among the more outstanding contributions are those of A. B. Sabin (Contribution of Virology to Human Medicine during the Past 40 Years), E. Racker (Control Mechanisms in Energy Metabolism), and E. Lederer (C-methylations in Biological Systems). Unfortunately, most of the papers, although excellent, have very little to do with the title of the symposium. An exception is, "The Implications of the Contemporary Scientific Revolution on the Education of Teachers of Medicine," by W. D.

Bean. Although he strongly believes that a medical student should be "groundedly learned in biological principles," Dr. Bean appears to rely mostly on the role of maturity and honesty on the part of the student. I would suggest that perhaps this is precisely the area where basic sciences may influence medicine most of all. Scientists, by training, have more often than physicians that quality that we like to call intellectual integrity. If scientists can teach the basic principles of intellectual integrity to our future physicians, it is safe to say that basic science will exert on medicine an impact that will go far beyond the value of the individual scientific discoveries. Perhaps this should be the direction we should take in our efforts to improve the quality of medical education.

Renato Baserga

Microbial Models of Cancer Cells—Frontiers of Biology (Volume 1). G. F. Gause. A. Neuberger and E. L. Tatum (eds.). Philadelphia: W. B. Saunders Company, 1966. 97 pp. \$4.50.

This, the first volume in a new series, is devoted to consideration of some specific defects in the metabolic and regulatory mechanisms of tumor cells (particularly those concerned with impaired respiration and enhanced glycolysis), and the search for microbial analogs of these biochemical defects in tumor cells. As the author points out, although such a search in itself was perhaps somewhat naive, it has nonetheless resulted in the delineation of a class of biochemical mutants of various microorganisms which appears to be characterized by distortions in DNA base composition; and indeed, these mutants appear to exhibit defects in metabolic and regulatory mechanisms similar to those described in some kinds of tumor cells. It is of interest that these distortions in DNA base composition are so extensive as to be inconsistent with the concept that the usual mutation ordinarily involves only minor alterations in DNA base composition. The author speculates that these distortions may in some way be equated with the hypothesized differences between the DNA of normal and neoplastic cells, and that appropriate microbial models may be useful in the elucidation of the mechanisms underlying the biochemical deletions thought to accompany neoplastic transformation.

Whether or not these speculative goals are ultimately achieved, and whether or not these distortions in DNA base composition prove to be secondary to one or another metabolic defect, the results of these studies represent a substantial contribution to microbial biochemistry. The rhetoric is lucid, the format is pleasing, and the volume should be of interest to the microbiologist, geneticist, and biochemist.

George E. Foley

Cancer Research

The Journal of Cancer Research (1916–1930) | The American Journal of Cancer (1931–1940)

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