
Book Reviews

Therman, E: Human Chromosomes. Structure, Behavior, Effects. Berlin, Heidelberg, New York: Springer 1980. 235 pp., 55 figs., 8 tabs. Hard bound DM 37,00.

In the author's conception this book is an introduction to classical human cytogenetics. It describes structure and behavior in mitosis and meiosis and reviews the usages of various human chromosome techniques. Human syndromes are described as illustrations of the effects of abnormal chromosome complements on the phenotype. Theories and hypotheses used to explain gene actions are quite explicit, illustrated by corresponding phenomena in plants and animals. The relationship between cancer and chromosomal conditions is examined and modern attempts to map human chromosomes are explained. The book surely will serve the author's intention to be an useful introduction for both students in biology and medicine. It will also be a useful aid to scientists seeking an overview of the subject.

P. Eberle, Braunschweig

Schweiger, H.G. (ed): International Cell Biology 1980-1981. Papers presented at the second international congress on cell biology, Berlin (West), August 31-September 5, 1980. Berlin, Heidelberg, New York: Springer 1981. 1033 pp., 595 figs. Hard bound \$ 61.00.

This book fulfills a task considered to be impossible: it compiles all the essential progress made in cell biology since the last cell biology conference in Boston 1976. From the more than 1,800 abstracts of the conference (West Berlin, 1980) 111 papers together with H. Harris' stimulating opening lecture were selected for this compendium. The extensive and somewhat heterogeneous field of cell biology is separated into six

chapters: Genome and gene expression (28 papers, 257 p), cytoskeleton (12 papers, 123 p), pathology and pathogenicity (10 papers, 81 p), differentiation and development (10 papers, 71 p), membrane and cell surfaces (28 papers, 245 p), and functional organisation (23 papers, 207 p). It is logical that the limits of these chapters have to be artificial. In the first part, e.g., from gene analysis via transcription, RNA, RNP, ribosomes, gene transfer, chromatin, meiosis, mitochondria and in the Emil Heinz lecture by D. von Wettstein, the interplay of chloroplasts and nuclei is covered. In the unit functional organisation, circadian rhythms, somatic hybrids, water and cell, ions and cell, and keratinization are discussed. According to this natural heterogeneity and according to the fact that hardly any reader will go through the whole book, the excellent subject index with more than 5,000 citations is exceedingly useful.

Although some parts of the book may be outdated at the time when this review appears, the book will keep its actuality. Most papers begin with a short review and contain quite a number of citations - unfortunately in the short version - so that it can replace a reprint collection. Checking, for example, the field of plant cell biology, one can note that such late developments as plastom action, disease resistance, polarity, root nodules, protoplasts and microspore regeneration are included. Transferring this to other fields one can conclude that anyone working in the field of cell biology will benefit from this book.

The value of the book is enhanced by its nice printing and the high quality of the pictures. Taking the volume and the quality, as well as the scientific content into consideration, the price is very modest.

G. Wenzel, Grünbach