
Book Reviews

Bainbridge, B. W.: Genetics of Microbes. Tertiary Level Biology. Glasgow, London: Blackie 1980. 193 pp., 100 figs., 38 tabs. Soft bound £ 7.95.

This book presents a survey of the modern genetics of phages (1 chapter), bacteria (about 4 chapters), and fungi (5 chapters) and is directed principally to students of microbiology.

In the first of 11 chapters, the book explains basic principles of microbial genetics. The following chapters link classical data with that now becoming available by the methods of *in vitro* recombination and gene isolation, which are treated in chapter 9.

The text is completed with practical exercises on these subjects with illustrations and the mathematics of experimental deviations.

It should be noted that each chapter draws the reader's attention to basic or review literature. The text includes ample figures and tables. Thus, the reader is kept fully informed on the "skeleton" of microbial genetics and acquires the knowledge to understand more detailed presentations as well as to undertake the practical exercises. H. Böhme, Gatersleben

Williamson, R. (ed): Genetic Engineering, Part 1 and 2. London, New York, Toronto, Sydney, San Francisco: Academic Press 1981. P.1: i-xi, 167 pp., P.2: i-xii, 203 pp. Soft bound \$ 24.- each.

These two volumes represent the first in a series that will present reviews of particular topics using genetic recombinant DNA techniques. Volume I brings together three extensive contributions on the preparation and screening of a complementary DNA clone bank (by Williams) on the use of gene-

specific probes in gaining an understanding of genetic diseases within a clinical setting (by Little) and finally a chapter on expression of cloned genes in cell-free systems and in micro-injected *xenopus* oocytes (Wickens and Laskey). All three chapters have much of interest to those who work with higher organisms in various ways and are written so as to be intelligible also to the good student seeking to learn more about the genetic engineering field. The concept of gene banks (gene libraries) is taken up again in the second volume in the series, this time Flavell and colleagues concentrate on the way in which genomic libraries can be made and analysed. This lengthy chapter is of particular interest to those searching for human genes implicated in hereditary disease. The second volume begins with an article by Jeffries on gene evolution in animals, demonstrating how a comparison of genes isolated by recombinant DNA techniques is opening up a major new field of research in molecular evolution. The article deals essentially with the globin gene family, which has spanned a period of 1000 million years. The remainder of the second volume includes a chapter on the restriction enzymes, dealing with the basic enzymology of these endonucleases, a better understanding of which can give better results, and finally a chapter on the known vectors allowing cloning in yeast. Industrial applications, including brewing, are referred to, and the possibility of extending the application of yeast cloning techniques to the isolation and expression of eukaryotic genes in general is discussed.

These two volumes will be of immense value to those working in, and to those studying, recombinant DNA technology, especially as it applies to the higher plants and animals. J.F. Jackson, Glen Osmond