BOOKS RECEIVED

financial, as well as scientific, drawbacks in the final product. Future volumes in this series will be awaited with interest.

MICHAEL CLEMENS

Comprehensive virology 15. Virus-host interactions. Immunity to viruses

This is the latest addition to a series of books on virology, the previous ones having dealt with molecular and biological properties. There are five chapters, beginning with a description, by M. B. A. Oldstone, of general immune responses and specifically immune tolerance. He outlines his own work, and that of others, with lymphocytic choriomeningitis virus and presents evidence that the state of tolerance induced in immune incompetent neonates by direct inoculation of the virus or its vertical transmission from infected mothers is not absolute, because specific antibodies, within immune complexes, and even a T-cell response can be found. The second chapter, by B. Mandel, tries to untangle the mysteries of the interaction of viruses with neutralising antibodies. He discusses the methods of measuring neutralising antibody and the kinetics of neutralisation, and attempts to throw some light on the mechanism. This is a comprehensive treatise on neutralisation, with the historical background, and includes recent hypotheses on how infectious virus is neutralised. Next is a chapter by N. R. Cooper describing the humoral response with the emphasis on the possible role of complement in combating virus infections. This is a neat, succinct piece of writing that threads its way through the intricacies of the complement system, with references for those who need the finer details. Since the discovery of cytotoxic T cells, researchers have been investigating their role in immunity to virus infections, none more successfully than the author of the chapter on T-cell response, R. M. Zinkernagel. However, this was a slightly disappointing chapter because, unlike the others, he did not introduce us gently to the subject. A short resumé of the major histocompatibility complexes and maps of the HLA system in humans and the H2 systems in mice would have made easier what for many may be a difficult chapter. The final chapter, on interferon, is by E. De Maeyer and J. De Maeyer-Guignad. It concentrates on type-I (fibroblast) interferon because more is known about its structure and induction, than in the case of type II (leucocyte) interferon, and because it may be more important for viral infections, being produced by all tissue cells. This is also a very comprehensive chapter describing research on interferon from the time of its discovery. Interferon is a very topical subject and this chapter shows the failings of books attempting to present up-to-date work. The authors mention that more valid progress would be made in understanding the molecular biology of interferon and its clinical potential if its genetic information could be cloned in bacteria—something actually achieved only recently. Nevertheless, this is a very good chapter, which deals also with the other actions of interferon, including its possible regulatory role in the immune system.

This book highlights the problems of research on host-virus interactions, by experts in the field, and each chapter is accompanied by a large bibliography. It should be useful to postgraduate students and research workers in the fields of virology and immunology.

D. J. McCANCE

Practical tissue culture applications

This unusual little book is the outcome of a conference held at the International Laboratory for Research on Animal Diseases in Nairobi, Kenya, in August 1978. It is primarily concerned with ways in which tissue culture can be applied in the study and management of tropical parasitic diseases and, with this as a theme, it crosses some of the common disciplinary boundaries and brings together a disparate but related collection of papers.
The book is in three sections. The first two deal in a rather general way with tissue-culture techniques, with some emphasis on their application to solving the disease problems of developing countries. The four chapters of the first section are purely introductory and cover general aspects of tissue culture, including that of invertebrates and plants. The second section contains another ten chapters on various aspects of tissue culture. Those that are most relevant to the third section are concerned with invertebrate tissue culture and the isolation and identification of human viruses. There are two chapters on very large-scale tissue culture, including an account of the system used at the Plum Island Animal Disease Centre for production of foot-and-mouth-disease vaccines. Insinuated in this section too is an interesting argument for the use of plant tissue culture for plant quarantine which, though a little out of place in relation to the other articles, has its own interest.

The meat of the book undoubtedly lies in the eleven chapters of the third section which are concerned with the cultivation of parasites including Theileria, Plasmodia, schistosomes and trypanosomes. This section also has some chapters on the propagation of arthropod tissue cultures, particularly cultures from mosquito, tick and tsetse-fly cells. At the end of the section come two interesting chapters, one by Maramorosch on the biological control of insect pests with viruses, and the other by Galun on the use of in-vitro feeding techniques and tissue culture for studying arthropod-borne disease agents.

Many of the subjects discussed in this book may be regarded as of a highly specialised and rather exotic nature in a north-west European context but are clearly of great relevance to disease problems in developing countries in the tropics. Hence, although it is patchy both in the subjects covered and the quality of the articles, some of which are little more than brief, superficial reviews, I believe it contains a useful collection of articles for those who might see possible applications for tissue culture in tropical medicine.

JOHN PAUL

The vibrios


This booklet surveys the clinical infections in man caused by vibrios, as well as giving detailed methods suitable for routine laboratories for their isolation from clinical and environmental material. The current concept of classification into halophilic and non-halophilic species is discussed together with their nomenclature and relationship to similar organisms, such as aeromonads, plesimonads and photobacteria. It is a practical compendium of essential information for this relatively poorly understood group of organisms presented in a clear and readable way. It is thoroughly recommended as a useful guide for those interested, and as a first-class standby for others.

G. I. Barrow

A colour atlas of pathogenic fungi


In their preface, the authors make the following statements: “This atlas provides a visual and textual aid to the identification of fungi pathogenic to man. The fungi are described on the basis of their macroscopic and microscopic appearance. We believe that the atlas will be useful as a reference aid not only to students of the biological sciences, medicine and medical technology, but also to dermatologists and pathologists untrained in mycology”. If these comments describe the purpose for which the atlas was produced, the authors have admirably succeeded and, apart from minor criticisms, there is little for a reviewer to say.

The atlas describes and illustrates the cultural and microscopic appearances of 22 species and