BOOKS RECEIVED

components. An able presentation by Fellner on virus RNA genomes, outlining the latest results of sequencing studies, is timely in view of the current upsurge of interest in the development of these techniques and in their application to comparative investigations. Structure-function relationships are discussed by Brown and the chapter reflects the relative paucity of knowledge of the functional aspects of the virus and cell interactions. This comment is applicable to most other areas of animal virology and is a reflection of our inability to investigate multicomponent systems in any meaningful way with the techniques and information currently available. Indeed, the medical microbiologist will not find very much in this book of immediate application. Nevertheless, on careful reading it will be evident that progress, particularly over the last 10 years, in our general understanding of molecular events has been considerable, and in some areas application of these discoveries to disease problems will certainly become much more apparent in the future. Several chapters examine various aspects of virus polypeptide synthesis and processing, the most outstanding being that by Korant, who discusses in some detail the current state of knowledge with respect to cellular and viral proteases in these viruses. Remarkably little is known of the enzymes involved in the processing of viral polypeptides although they seem to play a key role in the maturation of a wide variety of viruses. One of the more exciting recent findings in picornaviruses is that they, like some DNA-containing viruses, possess a protein apparently covalently linked to the 5' terminus of their genomes. The discovery of this protein, its properties and its possible function during infection are expertly described by Wimmer and provides one of the most interesting chapters in this volume. A review by Jackson of mammalian protein synthesis gives an excellent background for consideration of the problems associated with the control of virus polypeptide synthesis—these are discussed in some of the later chapters. Aspects of interferon research are reviewed at some length in three chapters and the more recent observations on the significance of protein kinases and endonucleases and the role of 2'5'oligo A in the action of interferon are very adequately covered and broaden the perspectives of the book significantly.

In summary, this book is not one that need be within immediate reach but will be a very useful addition to the library for those who wish to keep abreast of current developments.

W. C. RUSSELL

The interferon system


Interferons are proteins that have an astonishingly high intrinsic activity, and that currently are proving of great interest to workers in fields as diverse as clinical medicine, molecular biology and protein chemistry, to name but a few. It is thus no light task for one person to write an advanced text book dealing with these substances. Dr Stewart must be congratulated on not only undertaking this herculean task but also on completing it so successfully.

He has, himself, contributed much to several areas of interferon research. Correspondingly, the sections in this book on, for example, the structure, characterisation and heterogeneity of interferons, contain excellent reviews of the state of the art up to the end of 1978. Inevitably, there are other areas, for example interferon and clinical medicine, where Dr Stewart writes without personal experience, and here the treatment is correspondingly shorter and the conclusions are less decisive.

The index, not prepared by Dr Stewart himself, is a disappointment, with inaccuracies, e.g., Renoviruses instead of Arenoviruses and some major errors and omissions, e.g., the main section on species specificity is not indexed. On the other hand, there is an enormous and useful bibliography.

All in all, this is a tour de force. Dr Stewart has produced a book that all those working on interferon will want to own. It can be thoroughly recommended to others as a valuable reference source.

N. B. FINTER