BOOKS RECEIVED

Microbial growth dynamics

This book is an excellent and concise summary of selected recent fundamental and applied research into the dynamics of microbial growth, arising from a symposium of the Society for General Microbiology held in December 1988. An introduction by Professor S. John Pirt places the subject matter in the context of the pioneering work of Monod and the rigorous analytical approaches of the groups in Rome, Porton Down and London with which he has been associated. The work is quantitative, fundamental microbiology, central to an ultimate understanding of microbial growth and physiology. Thus it is, in some ways, of limited direct relevance to practical microbiology, including the work of hospital laboratories and much of applied medical microbiological research. Nevertheless, some of the chapters give intriguing insights into phenomena familiar to all of us. For example, the factors which affect the formation of microbial colonies by diffusion-limited growth, and the effects of mechanical stress during growth on cell shape and development are explored. The problems and questions raised in considering growth at low growth rates (impossible to simulate accurately by chemostat methodology) and the concept of the maintenance coefficient which relates to the need to maintain viable but non-growing cells at some energetic cost, also impinge on the practicalities of storage of viable cultures. Less immediately relevant to the medical microbiologist are chapters on production of fungal biomass for use in food, the kinetics of secondary metabolite production, stability of microbial populations, and microbial process optimisation.

This book will certainly be a useful addition to the microbiology literature, bringing together in a concise form several reviews of current thinking on microbial growth. It has been produced quite promptly and at reasonable cost following the symposium from which it is derived and continues the tradition of academic value associated with Special Publications of the Society for General Microbiology.

C. W. PENN

Control of virus diseases

This readable and well presented book contains the proceedings of the 45th Symposium of the Society for General Microbiology held at Warwick in April, 1990. The book is divided into two sections: Part I embraces various problems associated with vaccination and Part II describes the general strategies of chemotherapy in relation to pathogenesis and specifically examines the chemotherapeutic approaches for selected virus diseases.

The book opens with an Introductory section by Professor J. L. Melnick on conventional viral vaccines and their influence on the epidemiology of disease. This is a balanced and informative review, but it is hard to resist the feeling that most of us—"ordinary mortals"—could have written such a chapter, and that the considerable wisdom and experience of Professor Melnick might have been utilised at a deeper level, perhaps on one particular aspect of virus disease. However, the chapter does provide background and would clearly have set the scene at the Symposium. The remainder of Part I provides a comprehensive account of the different aspects of immunisation ranging from problems at the molecular level to problems of uptake of vaccination at community level—an aspect which is often largely forgotten by "laboratory-biased" virologists. The chapter on presentation of virus antigens provides an informative and indeed heroic contribution to the complexities of the cell-mediated immune response to virus antigens and encourages belief that one might yet understand the intricacies of immune cell interactions. Part II deals in a clear and distinct fashion with the strategies of chemotherapy, and in detail with respiratory virus disease, hepatitis, human immuno-deficiency virus and herpes viruses in the immunocompromised host; it would be hard not to have a good grasp of the current status of virus chemotherapy following perusal of this volume.

A minor criticism is almost inevitable in a book of this nature which depends on the availability and willingness of experts in the various fields to contribute to the book. There is a certain patchiness. For example, virologists interested in herpes viruses might have welcomed discussion on the rationale, feasibility and prospects of vaccination against herpes simplex, cytomegalovirus and EB virus infections; even varicella zoster virus vaccines, which are licenced for restricted use in various countries, are given only a grudging mention.

In summary, this book will be of great interest to research-orientated and clinical virologists, candidates for the membership of the Royal College of Pathologists specialising in virology and as a reference volume for undergraduate medical and biological science students for whom virology is a component of their course. The price of £45.00 may seem a little high but, for nearly 400 pages of high quality information prepared by experts in the field, it is an excellent purchase and should certainly be available in Medical and Science Libraries.

G. R. B. SKINNER