BOOKS RECEIVED

Molecular Pathogenesis of Gastrointestinal Infections

Edited by T. WADSTROM, P. H. MAKELA *et al.* 1991. ISBN 0-306-44020-2. Plenum Press, New York. Pp. 342. \$85.00.

An understanding, at the molecular level, of the pathogenesis of gastrointestinal tract infections will be essential to the future development of effective intervention measures. This publication describes recent advances made in the molecular biology of known virulence factors and presented at the 58th FEMS Symposium on Molecular Pathogenesis of Gastrointestinal Infections (Denmark, September 1990). Although the use of camera-ready copy allows a disconcerting inconsistency of type face, style and layout between papers, this is acceptable when it provides the advantage of rapid publication.

The proceedings of such symposia are always difficult to collate, and tend to be of limited value to those who did not attend. Often, the value of the text is increased by the inclusion of review articles providing insight into current research directions, and editorial overviews of discussions and consensus opinions expressed during the meeting. Unfortunately, on this occasion, the editors have not provided such additional material.

The book contains 37 full papers, as well as 11 contributions from the poster session, and most concentrate on bacterial agents causing enteritis. There are only two presentations on parasites and none on viruses. I found it surprising that the thermophilic campylobacters, the most common cause of enteritis, are not mentioned. All of the papers in the section entitled "The parasite" document the available and extensive information on the molecular biology of *Escherichia coli* adhesins. A section on "Enterotoxigenic organisms" includes the identification, characterisation and biological activity of toxins from *Vibrio cholerae*, shigellae, *E. coli* and *Clostridium difficile*. However, the relevance of these toxins and adhesins in the disease process is generally not discussed. A section on "Invasive organisms" surprisingly included papers on *Giardia lamblia* and *Helicobacter pylori*, both of which are generally considered non-invasive. The two papers on vaccines were a welcome inclusion, giving clear indications of the future prospects for the application of molecular techniques to this area. Surprisingly, the effects of the host's role in pathogenicity and changes in expression of virulence factors in response to different environmental conditions are given little consideration. Nevertheless, this publication demonstrates that an understanding of those mechanisms by which infective agents overcome the host defences, colonise the gastrointestinal tract mucosa and mediate disease is now closer, and the book is a welcome addition to the microbiologist's library.

D. NEWELL

Drug and Alcohol Abuse Reviews. Liver Pathology and Alcohol

Edited by R. R. WATSON. 1991. ISBN 0-89603-206-X. Humana Press, New Jersey. Pp. 620. \$99.50.

Forty contributors have written 23 chapters in this comprehensive review of the effects of alcohol on the liver. This is a book which is more specifically directed to the biochemist rather than the microbiologist, but there are a few chapters of microbiological interest. These include the interaction of virus infection with alcohol and liver cancer (although the references in this section seem a little out-of-

date) and a succinct review of inflammation and alcoholic liver disease with special reference to the contribution of neutrophils to cell and tissue injury.

However, the dominant theme, which is consistently reviewed in this book, is that of free radical damage and the protective role of anti-oxidants. Many of the authors review similar areas of interest and there is overlap in many of the chapters. Nevertheless, this repetition is useful and it allows each of the authors to develop their own theories, and for the reader to view different thoughts on free radical research.

The chapter on polymorphisms of alcohol and aldehyde dehydrogenases demonstrates the practical use of the modern techniques of molecular biology. The authors show the use of these techniques to demonstrate family members who are more at risk of developing liver injury as result of alcohol consumption and, clearly, the practical applications of this research could be potentially useful in the future.

The chapter on effects of alcohol lipoprotein metabolism was a disappointment. Many of the references were over a decade old and there were few up-to-date references in an area where there is considerable pathological interest in abnormal lipoproteins and atherosclerosis.

This book is certainly not of specific interest to a microbiologist. However, the techniques which have been used, the emphasis on free radicals and damage produced by them, are of general pathological interest and this book would certainly not be out of place in a pathology library.

R. CRAMB

Current Topics in Microbiology and Immunology, volume 171. Retroviral Insertion and Oncogenic Activation.

Edited by H. J. KUNG and P. K. VOGT. 1991. ISBN 3-540-53857-7. Springer-Verlag, Berlin. Pp. 179. £136.

This book is another volume in the excellent series *Current Topics in Microbiology and Immunology* published at intervals by Springer-Verlag as a series of up-to-date, well-referenced review articles by leading researchers in the subject. *Retroviral Insertion and Oncogenic Activation* is no exception to this rule and represents an invaluable asset to both new researchers in the field of retrovirology and to well-established workers in related fields needing to keep abreast of new insights and developments in retrovirology.

Despite the editors' statement in the preface that there are six chapters in the volume, this reviewer could find only five; these include a general overview of the topic followed by chapters on retroviral oncogene activation in the mouse mammary carcinoma, feline leukaemia, and rodent and human lymphoma systems. The final chapter on mutagenesis of the mouse germline by retroviruses provides a more general and genetically orientated viewpoint on the subject.

The authors are all leading researchers in retrovirology and each chapter has an excellent reference list. Individual chapters, besides giving an invaluable, detailed exposition of current understanding and recent advances in the subject, open with commendably clear and brief introductory passages.

The book will be of undoubted value to, and be consulted by, established workers, post-doctoral and post-graduate researchers in retrovirology, molecular geneticists and oncologists, and would represent a worthy addition to the bookshelves of a busy and active research laboratory concerned with work in these subject areas.

R. JENNINGS