BOOKS RECEIVED

The pathogenesis of infectious disease

By C. A. MIMS. 1982, 2nd ed. Academic Press Inc., London. Pp. ix and 297. £5.60.

The first edition of Professor Mims' book was received with considerable enthusiasm. Rather than dealing with microorganisms from the systematic or clinical point of view, he considered the interplay between the organism and its host. The study of microbial pathogenicity has always been one of the most demanding areas of microbiology dealing as it does with two variables—host and parasite. Professor Mims succeeded in explaining the subject with brevity and clarity, using examples from all areas of microbiology. Although a virologist, he did not allow his own subject to distort the book's balance.

The quality of the first edition is reflected in the 6-year gap between it and the second edition. The changes are minor: some revision and updating of references and of the sections on phagocytosis, immunity and diarrhoea, together with a new section on the role of infectious agents in diseases of unknown aetiology. Little more is needed. One can, of course, find mistakes, generalisations and oversimplifications, but these are few and far between and almost inevitable in a book of this breadth written by a single author. The price has been kept remarkably low and the second edition is only slightly longer than the first. It remains excellent value for money and will, I am sure, long continue to be a standard text.

C. S. F. EASMON

Principles and practice of disinfection, preservation and sterilisation

Edited by A. A. RUSSELL, W. B. HUGO and G. A. J. AYLIFFE. 1982. Blackwell Scientific Publications, Oxford. Pp. x and 653. £32.00.

This large book is divided into three sections, on disinfection, preservation and sterilisation. The disinfection section begins with a brief history, from 450 BC to the present day, and then covers, in great detail, the chemistry of 15 different groups of disinfectants. The chemistry is well described, in detail not easily obtained elsewhere, together with the antimicrobial effects, but includes some older references that could be misleading to an inexperienced person. After considering factors influencing the efficacy of disinfectants, such as concentration, temperature, pH, the presence of organic matter and the type of organism, the different tests for investigating antimicrobial activity are described, including practical tests for instruments and surfaces, with useful references on practice and statutes in other countries. Disinfectant mechanisms and kinetics are covered in an excellent chapter, followed by discussion of the biochemical and biophysical actions of disinfectants on different components of the cell and its wall; these are summarised in a useful table and diagram, comparing different mechanisms of the various groups. A short chapter on microbial resistance, dealing mainly with heavy-metal ions, is followed by the problems of hospital disinfection. The need for a disinfectant (or cleaning) policy is emphasised, as well as the unnecessary use of disinfectants on walls and floors when detergent suffices; care of anaesthetic equipment is carefully considered. The section ends in a discussion on the use of disinfectants as "antiseptics", dealing mainly with skin and burns, and of the problems of plasmid-coded resistance.

The second section reviews the preservation of industrial products and is of no relevance to the medical microbiologist. The third section concerns sterilisation. The kinetics of thermal death (D value) are well explained, as are the conditions affecting it, and there is a chapter on the physics of autoclaving. Industrial applications are reviewed for the medical and food industry, concentrating on thermal processing of contaminated products and highlighting the microbial risks. Other methods of sterilisation, namely, radiation, gas (ethylene oxide) and filtration, are