entering virology. For the more traditional biological or medical virologists the books offer an easily digested assessment of modern biochemical methods in research virology.

J. S. OXFORD

Biochemistry of antimicrobial action

Many medically-qualified microbiologists have not had the advantage of a formal course in microbiology. Certain science graduates who have received formal training in chemistry or biochemistry undoubtedly wish to apply their hard-won knowledge in the medical field. Such persons might be expected to buy this book, the first to gain insight into biochemical modes of action, the second to relate their training to the medical usage of antimicrobial agents. Each will, however, obtain a slightly distorted view of the subject. After an introductory chapter that whets the appetite, the M.B. is likely to find subsequent sections somewhat heavy going, particularly those on polypeptide antibiotics, intercalating agents and the ionophors, the last of these calculated to make the head spin (how many medical microbiologists know what "ORD" is, for instance?). The section on antiseptics is helpful and could have been longer; however, it is curious that there is no mention of iodophors.

The majority of compounds mentioned in this book have no clinical value, so that the biochemist will receive a rather blurred view of their medical importance. It is surprising that there is no mention of anaerobic bacteria; this gives rise to fallacious statements such as "Lincomycin and ... clindamycin are inactive against gram-negative species" (p. 129). Proprietary names are almost completely absent, except for "Dettol" and "Septrin" ("Bactrim" is not mentioned), which will be a relief for some readers and a hindrance for others. Perhaps a separate section for this might have been usefully included.

There appears to be some uncritical carry-over from the first edition, published in 1971; for example, the hoary myth of "cephalosporinates", analogous to penicillinoates, can be found on p. 189, there is no mention of amikacin (BB-K8) on p. 206, and the mode of action of griseofulvin is still talked of in terms of "curling factor" (p. 154).

Throughout the book there are clearly delineated chemical formulae, which will be welcomed by many. However, despite the stress on biochemistry, there is no illustration of molecules in a state of physiological ionisation and, oddly enough, pKa appears not to merit a mention in the Index. The chapter on penetration, a new feature, is a worthwhile attempt to clarify a field in which knowledge is at present fragmentary, and the final chapter, on mechanisms of resistance, is very clear.

The overall impression to the reviewer, after reading the book several times, is that it might lull biochemists and antimicrobial chemists into a false sense of security. The statement on p. 12, "New antibiotics continue to appear, but the urgency of discovery is now much less since most of the important infections are now controllable'", is, to a medical microbiologist, a very dangerous one. Methicillin was not a true advance, as it merely restored the status quo of the 1940's; the true advances of ampicillin and gentamicin are now in danger of being eroded by the emergence of resistance. There is no place whatever for complacency in the field of antimicrobial agents, either from the biochemical or the medical standpoint.

J. M. T. HAMILTON-MILLER

Practical chemical microbiology and mycology: techniques and interpretations

This book is the bench manual of the Stanford Hospital Clinical Laboratory reproduced directly from the typewritten draft. Despite its title, it deals only with bacteriology, serology and mycology; there are no sections on viruses, chlamydia, mycoplasmas or rickettsiae.
BOOKS RECEIVED

Only one technique is described for each procedure, and no mention is made of other equally well-known methods or media, let alone of any assessment of the relative merits of alternative techniques. For example, the only serological test given for syphilis is the VDRL. However, the techniques are described in generally admirable detail and are sound, if rather more extensive than those used in most countries. Although the List of Contents is extensive, there is no index and the reader wades through six pages of print before finding out that Gram's strain is described on p. 258; the media-abbreviation chart is on p. 211. There are no illustrations in the bacteriology and serology sections, but there are approximately 100 black-and-white and 12 colour illustrations of fungi; the pictures of colonies are very poor, those of stained preparations only slightly better.

This book is definitely only a bench manual; it is unlikely that other laboratories would wish to follow it in its entirety. It would be quite useful for obtaining the exact details of a technique, provided this happened to be one used by Stanford University and provided one is prepared to hunt for it through the lengthy list of contents.

E. J. Shaw

Spores VI

In this volume are collected together selected papers from the Sixth International Spore Conference, held in October 1974. The papers are all of a very high standard, as expected in publications of the American Society for Microbiology. All aspects of the subject are covered, in papers dealing with actinomycetes, myxobacteria and slime moulds, as well as the fungi, yeasts and eubacteria. The bulk of the biochemical studies are concerned with the eubacteria. Molecular biology and genetics are well represented. For many, spores are important only because of the sterilisation problems associated with the medically important members of the genera Bacillus and Clostridium. Nevertheless, a knowledge of the molecular biology of the "simplest" form of biological differentiation may give an insight into the mechanisms of differentiation of more complex organisms, including man. This book provides an understanding of the current knowledge on sporulation and germination, not only for microbiologists but for all those concerned with the biological and biochemical processes of morphological differentiation.

K. A. Bettelheim

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