BOOKS RECEIVED

Laboratory handbook of medical mycology

By M. R. MCGINNIS. 1980. Academic Press Inc, New York and London. Pp. xiii and 661. £30.80.

This is an impressive book on the practical aspects of medical mycology and is more of a reference work than a handbook. It begins with a chapter on basic mycology which deals with fungal structures, growth, reproduction and classification and this is followed by chapters on laboratory safety, the collection and processing of specimens, the identification of moulds and yeasts, antifungal susceptibility testing and bioassay procedures, maintenance of culture collections, quality control, a synopsis of the mycoses and, finally, media and reagents. There is also a useful glossary and an appendix with lists of fungal synonyms and pathogens. The book is well illustrated with numerous high-quality photographs, mainly of the sporing structures produced by the different fungal species and there are also many references to the techniques, fungi and mycoses.

Individual mycoses are described only in outline and the approach throughout the book is very practical, with the various procedures and techniques described in detail. The section on the identification of fungi is particularly extensive and great emphasis has been placed on a modern treatment of this aspect. Practical details of serodiagnostic tests are not included but there is a table that lists the tests used for diagnosis of particular mycoses. There are some minor irritations; photomicrographs and tables are often several pages away from their point of reference in the text, and the alphabetical arrangement of fungi in the section on identification means that information on pathogens is scattered among that for non-pathogens, although it has to be admitted that this makes for easy reference.

Overall, the book provides an up-to-date and comprehensive account of the laboratory procedures and techniques used for the diagnosis of fungal infections and for the identification of fungi encountered in medical mycology laboratories. It is therefore recommended as a reference work for specialist medical mycology laboratories and for workers in microbiology laboratories who occasionally have to deal with fungi.

E. G. V. EVANS

Antibiotic and chemotherapy

By L. P. GARROD, H. P. LAMBERT and F. O'GRADY, with a chapter on laboratory methods by PAMELA M. WATERWORTH. 1981, 5th ed. Churchill-Livingstone, Edinburgh and London. Pp. 514. £18.50.

In 1963, when the first edition of this standard work was published, it was notable for bridging the gulf between the laboratory and the clinic. Yet the field of antimicrobial chemotherapy was then still relatively uncomplicated, without cephalosporins, gentamicin or the newer aminoglycosides, the lincomycins or trimethoprim; and the first few semi-synthetic penicillins had only just been introduced. Almost 20 years later, the book has outlived its original authors, Professors Mary Barber and L. P. Garrod, and after an awkward gap of 8 years since the previous edition it now faces impressive competition in an increasingly complex field.

Well produced in its new, larger format, the book happily compares favourably with other available texts. Readers will, however, be disappointed to find very few references to work published in the past 4 years. Thus, in the very rapidly developing field of β -lactam antibiotics, it is disconcerting to find that only 11 out of 186 references to penicillins and a mere five of the 77 references to cephalosporins are more recent than 1977. Authors will know that nerves of steel are required to convince their publishers about the necessity for allowing judicious revisions while a text is in press. But previous editions included references to papers appearing just a few months—rather than a few years—before publication date. We therefore look in vain for any

word about such important antibiotics as moxalactam, ceftazidime or thienamycin (let alone the latter's exciting N-formimidoyl derivative).

The chapter on penicillins is distinguished from the others by the lack of a comparative chart on structural formulae to guide readers through the jungle of analogues and ever-proliferating derivatives. The discussion on penicillin dosage requirements is based on a dogmatically stated need "to maintain an effective concentration in the blood continuously" after dismissing tissue levels as largely irrelevant. There is, moreover, no mention of the persuasive arguments that have been advanced for "pulse-dosage" regimens of β -lactam antibiotics. Among many points of detail that merit comment, the statement that ampicillin produces "occasional gastric intolerance" is surely too bland; we look in vain for a discussion of "antibiotic diarrhoea"—not to be confused with pseudomembranous colitis, which is well discussed. Similarly, the supposed better absorption of flucloxacillin over cloxacillin is described without any mention of contradictory evidence from the manufacturers' own research work, nor of the poorer stability of flucloxacillin to staphylococcal β lactamase. The comparable drug nafcillin appears under the guise of "nafcillin", and cyclacillin is not given its (illogical) UK approved name of "ciclacillin"; likewise, "cefamandole" is described but not "cephamandole" (except in fig. 4.5)—although, as with *Staph. aureus* and "*Staph. pyogenes*", both "cefazolin" and "cephazolin" are used indiscriminately in the text (but only the former is indexed)!

More seriously, though, the earliest cephalosporins, cephaloridine and cephalothin, are still advocated for routine clinical use, despite the generally held view that both drugs should now be replaced by safer and more effective derivatives. The presentation of large arrays of MICs for cephalosporins (table 4.1) and for a wider range of antibiotics (table 14.1) against the main pathogenic bacteria has the semblance of useful comparative data; but this is totally misleading because the results are culled from numerous disparate studies. Moreover, caution is not advised in relation to, nor account taken of, important pharmacokinetic and other differences that greatly affect in-vivo activity. Arbitrary blood levels are, however, listed in table 14.1, but these are of total rather than free drug. The same applies to the drug concentrations found in bone (table 16.1).

Among errors that should be corrected are the statement that cefoxitin is only 20% protein bound (p. 108) whereas table 4.3 shows it more correctly to be 70% bound, the structural formula of amikacin (p. 130), the illogical remark that gentamicin urinary levels of 1 mg/ml are achieved "in the presence of renal impairment" (p. 145), and the comment that the sum of the FICs "of > 0.25 indicates synergy" (p. 485). The reader would also be helped if cefamandole were to be excluded from the section headed "New beta-lactamase-resistant cephalosporins", because the authors' own table 4.2 shows that this antibiotic is even more susceptible than cefazolin to the all-important type III (TEM) enzyme, as well as to type II among others. Also a note about the extraordinary enzyme susceptibility of cefaclor would be useful. As a general point, the headings need to be reorganised logically because they usually fail to indicate "rank"; for example, ANTIPSEUDOMONAL PENICILLINS and then UREIDOPENICILLINS are given in the same block capitals as the individual examples, AZLOCILLIN, MEZLOCILLIN AND PIPERACILLIN.

One of the most valuable features of the book is the almost 200-page-long section on treatment; this is a distillation of the authors' extensive experience. Readers will inevitably differ on matters of detail or may regret some omissions—such as ignoring the values of prophylactic erythromycin in close contacts of pertussis; but there is little to complain about in these particular chapters, nor in Miss Waterworth's concise section on laboratory control. Despite the disappointments and criticisms that have been expressed this book will undoubtedly form an essential feature of all clinical microbiology libraries. We can only hope that another 8 years will not elapse before an up-to-date sixth edition makes its appearance.

S. SELWYN

Microbiology of human skin

By W. C. NOBLE. 1981. Lloyd-Luke (Medical Books) Ltd, London. Pp. xii and 433. £25.00.

During the 9 years since the appearance of the first edition of this unique book, skin microbiology has emerged as an exciting subspeciality in its own right. Stimulated by Mary