higher quality illustrations and some revamping of parts of the text.

G KONDRATOWICZ

Cowan and Steel's Manual for the Identification of Medical Bacteria. 3rd edn. Ed GI Barrow, RKA Feltham. (Pp 331; £40.) Cambridge University Press. 1993. ISBN 0–521–32611–7

The publication of the third edition of "Cowan and Steel," almost 20 years after the last, is like the return of a very dear, old friend. The beauty is that despite everything that has happened, the friend is at heart just the same—the mission "to help those who have isolated a bacterium (from a "medical" source) and want to identify it".

The book begins with five general chapters on classification and nomenclature; culture media (with Frau Hesse still in her rightful place); isolation techniques; characterisation; and identification. I found the relative dismissal of the antibiogram as an aid to identification unsubtle, and would have liked to have more on the perils of over-reliance on kits. I believe, however, that the warning to the medical microbiologists of the future that the "materials and methods (that) are simply to be taken from the refrigerator or shelf as kits" may be a fool's paradise is timely.

The essence of the book for the DIY enthusiast is to be found in chapters 6 and 7 in which all the major medical bacteria are considered in the familiar series of first, second, and third stage tables. Of course they are longer than before; there are, for example, now 26 staphylococcal species compared with eight last time. It seemed to me that a potential inconsistency which the authors challenge us to find concerns motility in *Enterococcus faecium*. On page 26 it is implied that many strains of *E faecium* are motile. Table 6.3b has *E faecium* non-motile (up to 15% possibly motile according to the key to the tables), but *E casseliflavus* and *E gallinarum* motile. On page 66 they refer to *E faecium* "with its five varieties". What are the facts please?

The authors continue a tradition of not being afraid to be different. They have not really given up much in relation to *Klebsiella* (the little essay on the genus is great fun) and hang on to *Acinetobacter lwoffii*. Tables 7.5 and 7.6 are masterpieces of active speciation, being not quite up to date. However, they could have been a little more daring with the old *Bacteroides* genus, and *Mobiluncus* dosen't fare well. Overall, however, most of the organisms that turn up in a medical laboratory find a home here, even if only among such taxonomic evasions as "A group of difficult organisms".

The Appendices are far from incidental and contain a great deal of valuable information on media and stains, characterisation tests and test organisms (all useful ammunition in current European discussions on standardisation), and on information processing. There are three sections on the bacteriological law in relation to taxonomy, and finally a useful glossary. There are almost 50 pages of references.

This book is very definitely a must for anyone who calls him or herself a microbiologist, whether clinical, medical, or technological in persuasion.

IAN PHILLIPS

Quality Management for Chemical Safety, Environmental Health Criteria No. 141. IPCS. (Pp 112; Sw fr 16.) World Health Organization. 1992. ISBN 92–4–157141–1

This monograph is the production of the International Programme on Chemical Safety—a joint venture of the United Nations Environmental Programme, the International Labour Organisation, and the World Health Organisation. As the title suggests it is primarily concerned with all aspects of safety testing for chemicals and is not primarily a medical text. Over half the monograph is devoted to a comprehensive review of the organisational requirements for the quality assurance of such testing, with the remaining text specifically concerned with the quality management of toxicity studies (on animals) and of environmental monitoring studies including those on humans). Any pathologist who has prepared for laboratory accreditation will recognise much of the terminology used—SOPs (Standard Operating Procedure), QAP (Quality Assurance Programme), and there may be an experience of *déjà vu* from other acronyms such as MAD (Maximum Allowable Deviation). Overall, however, this monograph is not aimed at the clinical pathologist; rather it is aimed at the environmental scientist seeking an organisational structure.

MD PENNEY

Flow Cytometry Data Analysis. Basic Concepts and Statistics. JV Watson. (Pp 288; £35·00.) Cambridge University Press. 1992. ISBN 0–521–41545–4

Flow cytometry is a high precision technique for rapid analysis and sorting of cells and particles. It is well established in research laboratories and is gaining increasing use in clinical medicine and pathology. The technique provides statistical accuracy, reproducibility and sensitivity, and permits simultaneous measurements of several constituents on a cell to cell basis. Although one of the frequently voiced advantages of the technology is that it produces "good statistics" because large numbers of cells have been analysed, data handling and analysis are often difficult, and confidence limits are rarely placed on results.

During my stay in Jim Watson's magic world of photomultipliers, dual lasers, fluorescent dyes and computers at the MRC Clinical Oncology Unit in Cambridge, we often needed to interrupt his moments of intense meditation so he could help us to translate dull numbers into meaningful information. In order to have a more peaceful and undisturbed intellectual life Jim has provided all users of the custom-built instrument with a brilliant monograph on flow cytometry data analysis. This book can also be highly recommended to all doctors and biologists using flow cytometers. It covers, in a very humorous way, basic number-handling techniques, regression analysis, multivariate analysis, probability, functions, statistical tests and methods analysing dynamic processes. Potential pitfalls of flow cytometric DNA histogram analysis and measurement of cell cycle kinetics and dynamic cellular events are all described. Anyone who uses flow cytometry in their research will find this book an invaluable and entertaining guide to interpreting the data produced by flow cytometers.

PETER A VAN DAM

Flow Cytometry. First Principles. Alice Longobardi Givan. (Pp 202.) Wiley-Liss. 1992. ISBN 0–471–56095–2

Until a few years ago, flow cytometers were found in dedicated laboratories. Most of them were definitely "user unfriendly" and demanded the attention of a specialist. The modern bench-top instruments are designed for use by the non-specialist. These machines cannot sort cells and will not perform the same range of sophisticated analyses as their larger parents but they will carry out, quickly and efficiently, 90% or more of the analyses required by most laboratories. Such bench-top machines hugely outnumber the larger versions and are to be found in a wide variety of research, clinical, and other laboratories.

Although these instruments are relatively easy to use, the worker still needs to understand the technology, its applications, and how the data are to be interpreted. The growth of flow cytometry has spawned a wide variety of books but they have tended to address the aspiring expert. The only attempt to produce a short, digestible description of flow cytometry was the opening chapter by Nigel Carter and Bingo Meyer in the book which I edited a few years ago.

Alice Givan has filled the gap in the market. She has produced a simple, readable account of flow cytometry and its applications. It is a book for a new technician or student or a young clinician embarking on an MD project. It is short enough to be read in a few sittings and it covers the fundamentals of flow cytometry and its applications in a straightforward and simple manner. The book is also attractively illustrated.

Inevitably, in a short book, there are some omissions and a few mistakes. For example, there is a confusion over the definition of a "bit-map" (a way of storing data in the computer) which is equated, incorrectly, to a "dot plot" (a type of display used in flow cytometry).

I would recommend that every laboratory with a flow cytometer should keep a copy of Alice's book on their shelf to be handed to every novice on their first entry into the laboratory.

MG ORMEROD

Methicillin-Resistant Staphylococcus aureus. Clinical Management and Laboratory Aspects. Ed Mary T Cafferkey (Pp 202; £89·75.) Marcel Dekker Inc. 1992. ISBN 0–8247–8604–1

Confusion is rife in both the medical and lay press as to the precise nature of methicillin-resistant *Staphylococcus aureus* (MRSA). The publication of an authoritative text on the subject is therefore apposite.

This is the sixth monograph in the "Infectious Diseases and Therapy" series edited by BE Scully and HC Neu. Sixteen authors drawn from Eire, England, and the USA have produced 12 essays on various