liability, error reduction and future developments, before reviewing all current major autoanalysers available.

A useful feature throughout the CD is that certain slides considered to be essential knowledge are marked with red asterisks, as is the 'cut and paste' design which enables individual slides to be incorporated into customised lectures.

This series of lectures is a comprehensive and valuable learning tool that would be a useful addition for any transfusion department's training regime, and further editions promise to cover additional lectures on items such as 'transfusion reactions' and 'the red cell membrane'.

One point the authors are keen to point out is that the lectures on the CD-ROM should be used as an adjunct to other educational and teaching material, and not seen as a replacement. □

B. Hill

Collins and Lyne's Microbiological Methods

C. H. Collins, P. Lyne, J. Grange, J. Falkinham (eds). London: Hodder Arnold (8th Edn), 2003: pp 480. ISBN 0340808969 (paperback). £45.

This book was first published over 40 years ago. Now in its eighth edition, it aims to provide a thorough and updated overview of methods in microbiology. The text is well written in a logical format and is presented well in a monochrome style. Figures and tables, mostly the latter, are provided for additional information and references are supplied where required.

As well as providing an introduction to areas such as health and safety, quality assurance and sterilisation methods, the book covers the methods required for handling and identifying all the common groups of bacteria. I do feel, however, that certain sections of the book fall short of their promise and, in some cases, are factually incorrect. For example, the chapter on automated methods does not cover the breadth of automation now available in microbiology and only three pages are devoted to molecular biology, while the chapter on identification methods does not include newer typing methods such as multilocus sequence typing (MLST), which was first described in 1998 and is now widely adopted in reference laboratories for typing some major bacterial pathogens.

Moreover, it states that gels used for pulsed-field gel electrophoresis (PFGE) and restriction fragment length polymorphism (RFLP) analysis can be scanned and made available to clinicians in a hospital a distant location. While this does not happen in practice, it is also incorrect in that such methods are often not reproducible. It is now widely accepted that nucleotide sequence-based methods provide better methodology for comparisons to be made worldwide as the data generated are truly digital.

Another major shortfall of the text is that, in many chapters, the references are out of date. It also over cites chapters from various editions of Topley and Wilson. While I am a big believer in retaining references of historical importance, updated references should be supplied where possible.

This said, the book will prove very useful as a standard text for undergraduates worldwide and will be used commonly, as the authors state, as a bench book. □

S. C. Clarke

Modern Medical Microbiology: The Fundamentals

Stuart C. Clarke. London: Arnold, 2004: pp 239. ISBN 0-340-81044-0. £19.99.

Regular readers of *The Biomedical Scientist* will need no introduction to the name of Dr Stuart Clarke, as he has authored an extended series of articles covering a range of microbiological topics. Once upon a time I kept all my copies of *The Biomedical Scientist* but limited space has now changed the habit of a lifetime. Thus, it was a great pleasure to discover that Clarke's review articles from *The Biomedical Scientist* have been collated into a single volume.

The articles are not grouped in chronological order of original publication but into five sections. Part I covers contributions ranging from 'Health and Safety in the Laboratory' through 'Microbiology of Catheters' to 'Bioterrorism'. Parts II–V contain review papers dealing with bacteriology, virology, parasitology and mycology, respectively. These papers are not dedicated solely to detail of microbiological study in the laboratory, but deal with disease entities; hence, most articles have titles such as 'Botulism', 'The Common Cold', 'Malaria' or 'Candidiasis'.

All the articles are written in very clear English and are referenced in a conventional scientific manner. Consequently, they make excellent reading for those who need an authoritative overview of a topic for introductory or revision purposes. A lapsed microbiologist such as your reviewer found this compilation both stimulating and salutary in exposing the limited nature of one's knowledge. The appendix that lists relevant websites is also useful.

Every library that serves biomedical scientists should purchase a copy of this book immediately because I am not lending mine to anybody! □

D. J. Rogers

Medical Microbiology

C. Mimms, H.M. Dockrell, R. V. Goering, I. Roitt, D. Wakelin, M. Zuckerman. London: Mosby (3rd Edn), 2003: pp 660. ISBN 0 7234 32597. £35.99.

Although now in its third edition, I have not had a copy of this book in my hands before. Its overall appearance is very impressive, as is the wealth of information within its cover. Such wealth does not come lightly, however, as the book weighs nearly 3 kg!

I have criticised many UK microbiology textbooks because of the paucity of colour in illustrations and page design. Our US colleagues produce much more attractive textbooks that are often no more expensive to buy. This book, however, has over 480 colour diagrams, figures and photographs, with touches of colour on the pages to distinguish different sections of the book.

So, it has colour, but what about the quality of the information provided? It is excellent for several reasons. The authors have rejected the traditional catalogue of organisms with listed characteristics and updated control measures. They have also spurned the simplistic 'microbe + host = disease' concept because most host–microbe contacts do not

result in disease. Instead, they prefer to study the complex interplay between host and parasite that more accurately predicts the outcome of disease or health. Content also reflects the change in medical school curricula where microbiology is no longer taught as a separate discipline but is integrated with pathology, immunology and clinical studies.

There is an opening section that describes the microbial adversaries: bacteria, viruses, fungi, parasites, prions and the host–parasite relationship. Host defences are described in the next section: innate and adaptive responses, cellular adaptive immune responses. The third section describes the conflicts and battlegrounds of infective disease. The fourth section describes the groupings of disease by organ infection and vectorborne infections. The last section describes diagnosis and control in the familiar world of the microbiology laboratory where chemotherapy, immunotherapy, vaccination, hospital infections, sterilisation and disinfection still reign.

Each of the 36 subsections concludes with a summary of key facts, questions (not easy unless one looks at the 'Answers' section) and suggested further reading. Many readers will be pleased to see a closing 70-page 'pathogen parade' that provides brief but comprehensive descriptions of the major pathogens that attack humankind.

When the reader finally puts down this book, will they be wiser or merely better informed? Both, is this reviewer's opinion. □

E. Y. Bridson

Proteomics in Nephrology

V. Thongboonkerd and J. B. Klein (eds). Basel: Karger, 2004: pp 335. ISBN 3-8055-7636-6. $198.25.

This book, volume 141 in the 'Contributions to Nephrology' series, provides a welcome addition to the available literature on the practical applications of proteomics techniques. It is divided into three parts: first, a brief overview/introduction to proteomics and its application in nephrology; second, a series of articles describing the principles of techniques commonly used in proteomics; and third (the major section), specialist articles on applications of proteomics in nephrology.

In Part II, the article on sample preparation for two-dimensional gel electrophoresis (2-DE), which is written by the editors, is particularly useful to readers who intend to start work in this area. Experimental procedures are described in sufficient detail to enable them to be carried out readily. Articles on 2-DE, applications of mass spectrometry in proteomics and mass spectrometric strategies for quantitative proteomics provide good introductions to the techniques but lack the level of technical detail of the sample preparation article.

However, the final article in this section, entitled 'Practical Bioinformatics for Proteomics', again by the editors, is a gem. Using worked examples, bioinformatics tools for the identification of the protein, the presence of post-translational modifications, sequence similarities and homology, transmembrane domains, function and subcellular location are all described. URLs for the software used are given, together with examples of graphical outputs. Once again, a major strength of this chapter is that it gives sufficient detail for the procedures to be followed and utilised easily.

Part III contains 14 articles that either describe actual applications or discuss the potential of proteomics in nephrology. Articles are included that cover major kidney diseases such as cancer, hypertension, renal Fanconi syndrome and diabetic nephropathy. Descriptions of the proteomics techniques for the identification of biomarkers of glomerular disease, and for use in the study of proteins removed by dialysis, are also included. Other articles in this section describe the use of proteomics for the study of nephrotoxicity and kidney cell types (including techniques for the study of the post-translational modification of proteins within them). The final article in this section is entitled 'Proteomics and Drug Discovery' and seems a little out of place; nonetheless, it is interesting in its own right.

Overall, this volume will be of interest to both beginners and practitioners in the field, the broad coverage of the topics offering something for a wide range of readers, from analytical scientists to medical practitioners. As I work at the analytical end of the proteomics spectrum, learning the context of, for example, projects to identify post-translational modification of kidney proteins was particularly interesting. □

M. Clench