is complete in itself. For example, all the information on the properties of *Staphylococcus aureus* given in Volume One is repeated in the second volume, albeit in a more elaborate form, but if the laboratory worker wishes to know about the pathogenesis or epidemiology of staphylococcal infection, not included in this volume, he must sift through the account in the other to find it. In solving the problem of the non-technologists the editors have merely shifted it to other users of the book.

A further aim is to make Volume Two a "bench book". This has been largely successful, with sufficient information given for most procedures to be undertaken, or giving references to other authorities when it is not. It does not, however, give details on the routine processing of clinical samples but discusses them in the context of specific pathogens. As in all books of this type some subjects receive better treatment than others, and there are grounds for numerous minor disagreements. Why, for example, should a perfectly respectable group of mycobacteria continue to be labelled atypical? Why should a-haemolytic streptococci receive such scant attention in comparison with the enterococci? Why should not *Acinetobacter Iwoffi* receive attention if *A. anitratus* does, and why is the latter not indexed? And, although one agrees with the suggestion that most fungi should be sent for identification to reference laboratories, why is there so little on the fungi—five pages, in contrast with 14 for mycoplasmas?

One final item that deserves comment, particularly as students often have difficulty with it, is the typographical inconsistency found in headings that include the names of microorganisms. Thus we have *Pseudomonas aeruginosa* (best, in my view) in chapter 5, *Pseudomonas pyocyanea* (also correct, but inconsistent) in chapter 32, *Pasteurella multocida* (inconsistent and incorrect) in chapter 35, yet *Francisella tularensis* in the same chapter. One would not pretend that such variations in typography constitute a major problem, but they deserve correction when the opportunity arises.

In all, Volume Two of the new "Cruickshank" successfully completes what must have been the immense labour of a complete "rethink". Like the previous editions, the twelfth will find a secure place on the shelves of students, medical and technical, and of practising microbiologists.

**IAN PHILLIPS**

Pathogenic microorganisms from atypical clinical sources


This is a record of the proceedings of a conference held at Yale University School of Medicine. It includes 20 papers on a wide range of topics divided into five parts relating to isolations from the blood, the respiratory tract, the central nervous system, urine and miscellaneous sources. There are papers on bacteria, fungi and yeasts, rickettsiae, mycoplasmas and viruses.

Whilst there is no doubt that parts of this text will be of special interest to various workers concerned with opportunistic infection, the volume has many of the disappointing features associated with a rather unstructured collection of papers given at a conference.

This is the first of a series intended to give workers an opportunity to present their data and their own interpretations. The general standard of presentation is not good and I cannot recommend this book.

**J. G. COLLEE**

Effects of interferon on cells, viruses and the immune system


The discovery of interferon by Isaacs and Lindenmann in 1957 raised great hopes that here at last was a substance that could successfully be used for the treatment of virus diseases. Some 20 years later, and in spite of intensive efforts, we sadly have to accept that these high
hopes have not materialised. However, during these years interest in interferon has increased rather than abated. A substance irregularly produced by cells, coded for by the cell genome and with the capability of interfering profoundly with the function of foreign nucleic acid introduced into these cells, is clearly a powerful biological tool that can be used for the understanding of cell function. In 1973, a gathering of scientists interested in the biological rather than the therapeutic aspects of interferon met in Portugal and this volume is an account of their deliberations.

The wide range of topics discussed have been loosely arranged under six general headings. The first deals both with the location of the genetic control of interferon production and with the problem of whether it is necessary for interferon to enter cells to produce an antiviral state. Next follow papers concerned with the induction of interferon by synthetic and viral nucleotides with emphasis on the nature and siting of the receptors for these synthetic inducers. The general biological law of "common cussedness" is manifest in the next section which deals with the antagonists of interferon that are found in normal tissues.

Of particular interest are the next two sections which are concerned with the interaction of the immune and interferon systems and with the effects of interferon on normal and neoplastic cell growth. The former is an intriguing aspect of host defence-mechanisms against viral infection and the latter may reflect the true natural function of interferon. The concluding section contains papers on the mechanism of action of interferon at the molecular level, and other miscellaneous topics.

The book is well edited and well presented and each contribution has a useful list of references for those who wish to delve deeper into particular topics. It should prove useful to those interested in the more academic aspects of this fascinating substance.

R. B. Heath

Clinical bacteriology


There must be a few diagnostic medical microbiological laboratories in the United Kingdom, and elsewhere, that do not look upon Dr Stokes' work as authoritative. The fourth edition of her book, like preceeding editions, is sound, up-to-date and, above all, practical.

Dr Stokes is selective in the material that she adds or changes and the reader is aware, throughout the book, of that exercise of clinical judgment that she rightly esteems and worthily practises. Nothing is added simply because it is new. This realistic approach is of immense benefit to the reader, who may rely upon the methods and techniques propounded, knowing them to have been thoroughly tested and found apposite to the clinical situation.

There are some textual changes in terminology and taxonomy, together with changes in recommended techniques, for example, those pertaining to urine and blood cultures, examination of pus for anaerobes and sputum examination. Accounts of computer usage and quality control have been added, and, with respect to the latter, Dr Stokes does not flinch from stating her opinion that the contribution of the medical bacteriologist should be included. A section on prevention of laboratory-acquired infection has been added, and the section on investigation of tuberculosis has been rewritten. The section dealing with the serological diagnosis of treponemal disease has been extended, as has the chapter on media testing and other techniques.

Clinical virology does not fall within the scope of the book, but, at appropriate points in the text, the author indicates the nature of the specimens that should be taken and the relevant mode of transport.

The book is excellent, still inexpensive, and mandatory for all who wish to practice clinical bacteriology to a high standard.

Rosalinde Hurley