It will be of special value to practising clinical microbiologists, pathologists and medical laboratory technologists; it will be welcomed by senior students of medical microbiology; and it can be recommended to clinical colleagues who seek a range of tutorials on the pathogenic anaerobes.

J. G. COLLEE

Biochemical methods in cell culture and virology

By R. J. KUCHLER. 1977. Chichester, Sussex: John Wiley & Sons Ltd. Pp. ix and 331. £22.50.

The title of this book accurately describes its contents. It is a compendium of materials and methods directed principally at investigators studying biochemical aspects of virology. The book is in three sections dealing with cell culture, virology and macromolecular analysis. The first part, on cell culture, consists of an orthodox treatment covering a selection of procedures as described in other well-known text books. The second section comprises two chapters, one on isolation and identification of animal viruses and the other on virus growth and purification. These deal entirely with animal virology; none of the material relates to bacterial or plant viruses. The methods described vary from straightforward isolation and diagnostic procedures to methods for the production of conditional and lethal mutants and for the purification of variants. The third section, on macromolecular analysis, has three chapters headed Deoxyribonucleic Acid, Ribonucleic Acid and Protein. The methods described include simple preparation procedures, electronmicroscopy, gradient centrifugation and electrophoresis, and extend to oligonucleotide mapping and peptide mapping procedures.

The author's style is terse. Indeed, this is absolutely essential to cover the range of procedures in just over 300 pages. However, many of the methods are not described in detail sufficient for them to be carried through at the bench. The text is supplemented by a carefully selected bibliography of papers describing the original methods and this is perhaps the greatest virtue of the book. Indeed, one wonders, given access to the original papers whether much of the text is really necessary. On the other hand, the amount of information given for many procedures does provide the reader with a good idea of what is involved and, together with the original literature, is of real practical value.

Here and there there are a few hints that obviously have come from the author's personal experience, but by and large it is difficult to find anything in the book that is original; its main attraction is that it brings together in one volume many methods that a virologically-orientated biochemist might want to have in his methods notebook. However, the potential purchaser of this book should not expect to find it in any way comprehensive. Indeed a striking characteristic is its patchiness. For example, in the virology section there are good down-to-earth practical instructions on the technology required to diagnose common viral infections; later on there is a discussion on cubic symmetry. The one is very appropriate for a "how-to-do-it" book, but the latter would be more appropriate for a theoretical treatise. The DNA section has a very elementary introduction on DNA chemistry that later escalates to a discussion on hybridisation kinetics, but there is no mention of the common assays with S1 nuclease. The RNA section devotes a fair amount of space to sequence analysis, while the subject is not discussed at all in the DNA chapter. Five different assays for viral RNA polymerase are detailed, yet there is no mention of the use of sepharose in the preparative sections.

The question I kept asking myself was "For what readership is this book intended?" I found no satisfactory answer. For the expert in the field the descriptions are either cursory or superfluous. Undergraduates do not want to be loaded with formulae for all kinds of biochemical procedures. It might prove useful to early post-doctoral students of virology, to give them a quick review of the available techniques. But possibly those who would find it most useful would be technicians wanting a book that gives a general outline of the techniques used in virology.

JOHN PAUL