Pathogenic and non-pathogenic amoebae

In the past, protozoa of the order Amoebida have been divided into two groups, parasitic and free-living, and only the former were considered as possible pathogens. Within the last 20 years, however, it has become apparent that certain free-living amoebae can cause fatal disease of the central nervous system in man, and much attention has been given recently to these organisms. It is therefore timely that a book should appear that reviews current knowledge of the various genera and species of amoeba and of their ability to cause disease.

The author deals firstly with the biology and distribution in nature of the free-living amoebae, the methods of cultivation and soil sampling, the interrelationship between soil amoebae and bacteria, and the role of these organisms as potential pathogens. There are well-illustrated descriptions of some of the identified members of the group, and current knowledge of the pathology, epidemiology and chemotherapy of the disease now known as primary amoebic meningo-encephalitis is fully discussed. The second half of the book is concerned with the parasitic intestinal amoebae, and here it is a little disappointing to find that, apart from *Entamoeba histolytica*, these get little more than passing mention. The structure and behaviour of *E. histolytica* are described in considerable detail, as well as the methods used for its cultivation in the laboratory, the mechanisms of its pathogenicity, the results of experimental studies in animals, and the factors that influence drug therapy.

The task of compiling and critically analysing the available data on these organisms has been achieved with distinction by the author, whose own researches on the subject extend back over 35 years. While leaving many questions unanswered, the book contains a wealth of useful practical information concerning the medically important amoebae, is lucidly written, and should be of great value to parasitologists working in this field.

A. L. JEANES

Clinical microbiology. How to start and when to stop

The editor of this contribution to the "American Lecture Series" explains that the vast majority of the 13 000 medical laboratories in the United States are in small- to medium-sized hospitals and do not have the resources and trained staff to provide a sophisticated service. At a seminar held in 1974 by the American Society for Microbiology, six microbiologists gave advice on the performance of diagnostic work in small laboratories and this book is the published version of their lectures.

The chapter on respiratory specimens is by far the best. It describes what must be done in any laboratory that offers even a limited service; it will not lead the non-expert into difficult areas, and clearly indicates when the help of a reference laboratory should be sought. The chapter on blood cultures is similarly sound. For urine cultures, methods are described that few small laboratories will want to use as routine, such as pour-plates for quantitative culture, liquid- or agar-dilution methods for antibiotic-susceptibility tests, and methods for detailed identification of Gram-negative rods. The flow diagram for the processing of faeces—not mentioned in the text—is sound but will not yield early results; the use of polyvalent agglutinating sera does not come into play until the 4th day, after two stages of biochemical screening.

This is a brave effort to describe basic bacteriology for non-experts; but it is only partly
successful because the authors of the six sections have different views on where the cut-off should be between do-it-yourself and send-it-to-a-reference-laboratory. Another indication of minimal collaboration between authors is that the Bauer-Kirby method of antibiotic-susceptibility testing is described in similar detail by two of them in immediately adjacent chapters.

ROBERT BLOWERS

Advances in the biosciences, volume 12: Schering symposium on immunopathology

This is the published report of an international symposium on immunopathology, held in Yugoslavia in 1973. The first part of the meeting was on some basic immunological problems, such as immunoglobulin receptors and antigen recognition in lymphocytes, mechanisms of cell-mediated lysis of target cells, the interrelationships of complement activation and the blood coagulation pathways and amyloid.

The second part of the symposium was on immunopathological aspects of infectious disease. Indeed, it was the first international meeting at which this important subject was discussed at length. In addition to general reviews there were systematic considerations of animal models such as infections with lymphocytic-choriomeningitis virus in mice, where acute disease of the central nervous system is an immunopathological reaction mediated by T-lymphocytes and late glomerulonephritis is due to the accumulation of complexes of viral antigens and antibodies. The shock syndrome associated with dengue-virus infection in man was discussed by S. B. Halstead in relation to enhanced infection of leucocytes produced by antibody, and by V. A. Bokisch and colleagues in relation to complement activation. V. Houba and P. H. Lambert presented evidence that complexes of Plasmodium malariae antigen accumulate in the kidneys of Africans with a particular type of nephrotic syndrome. K. S. Warren and D. G. Colley outlined the role of cell-mediated immunity and eosinophils, respectively, in the immunopathological mechanisms which play such an important part in the pathogenesis of schistosomiasis.

Although this meeting was held more than 2 years ago, the text is still useful and most of the conclusions remain valid. The volume is well edited, with short printed discussions to each paper.

A. C. ALLISON

Medical microbiology. Volume two: the practice of medical microbiology

A criticism of the eleventh edition of Cruickshank's "Medical Microbiology", which appeared 10 years ago, was that it included a considerable amount of purely technical information of little interest to those not engaged in laboratory work. In order to correct this fault, the twelfth edition has been divided into two volumes, the first "aimed primarily at medical and science students and doctors" and the second, the subject of this review, "directed to professional and technical laboratory staff". There are now four editors and twice the previous number of contributors.

Part I of Volume Two is essentially Part V of the eleventh edition revised and brought up to date and is concerned with technical methods. It is an admirable account of apparatus and methods used in medical microbiology laboratories.

Part II of the volume concerns the identification of microbes and the diagnosis of specific infections, and should read, according to the editors, in conjunction with Volume One. It represents the praiseworthy attempt to separate technical matter from other matter in the book, but it has to be admitted that there are not a few signs of schism. For all the editors' attempts to avoid it, repetition is rife. This affects exclusively Volume Two, as Volume One