Book reviews

ANTIBIOTIC AND CHEMOTHERAPY By Mary Barber and Lawrence P. Garrod. (Pp. vii + 366; illustrated. 35s.) Edinburgh and London: E. & S. Livingstone. 1963.

Antibiotics and sulphonamides nowadays provide much of the clinical pathologist's daily work. He must do numerous sensitivity tests by methods which, though technically simple, are difficult to perform accurately, and he is often asked to advise his clinical colleagues about the treatment of their patients. It is for the second of these functions that this book, by authors of unrivalled experience, will be chiefly valuable to pathologists, though the short section on laboratory control is also useful.

This is not a comprehensive textbook on the treatment of microbial diseases. Such a book would be larger, probably less up to date, and in any case beyond the competence of authors who rightly state that the treatment of patients embodies clinical considerations about which bacteriologists as such cannot advise. Their aim has been to give as much factual information as possible about treatment directed against the microbe, and in this they have succeeded well. The result, in a book of modest size, is an authoritative and balanced account of modern chemotherapy. The first part deals with the properties of the drugs, their actions on microbes, and the factors in the host which may influence their therapeutic efficiency. (The chemotherapy of protozoal, helminthic, and malignant diseases is excluded.) The second part is concerned with practical aspects of chemotherapy of infections, classified by systems.

Among the many good things in the book, the chapters on the penicillins, on drug resistance, and on the general principles of treatment are outstanding. The space given to different drugs is not always commensurate with their importance. Novobiocin and the erythromycin group each has more pages than the tetracyclines. This policy is probably correct, since the less often a drug is used, the more information may be needed when it is given. The sulphonamides are described very thoroughly but their limitations are insufficiently stressed, for example, in the treatment of haemolytic streptococcal pharyngitis. Pharyngitis in which haemolytic streptococci cannot be demonstrated is more probably caused by adenovirus or Cocksackie virus, insusceptible to chemotherapy, than by particular types of *Str. viridans* which the authors suggest as possibly responsible. But these are small faults in a good book which is strongly recommended as a balanced presentation of the principles of rational chemotherapy. Its clear style makes it a pleasure to read.

W. A. GILLESPIE

THE IMMUNOLOGICALLY COMPETENT CELL. Ciba Foundation Study Group No. 16. (Pp. 110; illustrated. 15s.) London: J. & A. Churchill. 1963.

This is yet another example of the value of the Ciba Foundation Study Group monographs. The contents

report a one-day study group held in honour of Sir Macfarlane Burnet, O.M. Although consisting of only 104 pages of text, the amount of up-to-date information contained in it is quite remarkable. It emphasizes the remarkable way in which, thanks to modern techniques, research has been concentrated on the reaction of cells rather than individuals as a whole. As a result, many new concepts have arisen such as the functional importance of thymic elements, of lymphocytes as a whole, and of cytophilic antibody. The technique of fluorescence microscopy is most ably dealt with by Professor R. G. White, and many new and stimulating ideas are suggested. It is fitting that amongst all the interesting articles and discussion Sir Macfarlane Burnet himself should describe an excellent piece of work which aims at making a quantitative assessment of an immune response. It amounts to a homograft reaction in the hen's egg which enables one to count the number of cells capable of responding to an iso-antigenic environment. The editors and publishers are to be commended on the rapid production of material which will be so valuable both to research workers in this field, to pathologists in general, and even to senior students.

G. J. CUNNINGHAM

INTERNATIONAL REVIEW OF EXPERIMENTAL PATHOLOGY, Vol. 2. Edited by G. W. Richter and M. A. Epstein. (Pp. xi + 446; illustrated. 114s. 6d.) New York and London: Academic Press. 1963.

When the first volume of this book appeared last year it was to many pathologists an event of major importance. An annual review of this type satisfied a long-felt need and the contents of the first volume brilliantly exceeded expectation. The second annual review almost reaches the standard of the first.

The first subject dealt with is acridine orange staining of viral nucleic acids and, although at the moment of interest largely to specialists, clearly represents a labelling method of future importance to pathology. The second chapter discusses cytochemical aspects of experimental leukaemia. The third section (by Burkitt and Wright) deals with the morphology and epidemiology of the Burkitt lymphoma and it is a very valuable account, although rather overtaken by events in that experimental evidence of its viral origin is not included. There follows an invaluable discussion of the use of statistics in the aetiological study of cancer by Clemmesen. The next subject is a good survey of the biological effects of ionizing radiations. This is followed by a first-rate historical account of the study of the microscopic morphology of injured living tissue. Boyden then contributes a stimulating discussion of the cellular recognition of foreign matter. The book concludes with an account of the structure and degradation of melanin with normal and pathological tissues which contains much information probably unknown to many pathologists.

It is clearly the intention of the editors to provide a forum for original thought rather than factual surveys of the year's progress in a group of selected fields, as in other annual reviews. Their approach has been successful and the annual appearance of future volumes will be anticipated with pleasure.

W. G. SPECTOR

DISORDERS OF VOLUNTARY MUSCLE¹ Edited by J. N. Walton. (Pp. x + 628; 743 figures. 100s.) London: Churchill. 1964.

Here, in one volume, is a comprehensive account of muscle diseases. It is edited by J. N. Walton, neurologist to the Regional Neurological Centre in Newcastle²: the majority of the 26 contributors are from Britain. Although it is aimed primarily at the clinician, the book is likely to be of more interest to the general clinical pathologist than other recent works on the subject, and can be recommended to anyone in search of an up-to-date review of this fascinating, although still rather puzzling, field of medicine.

The first section of the book is devoted to a consideration of modern views on the structure and function of muscle. The second section describes the changes, both structural and biochemical, which occur in disease: departments where diagnostic investigations on patients with muscle diseases are carried out will find much of use in the chapters on 'Biochemical aspects' (R. J. Pennington), 'Intramuscular nerve endings' (A. L. Woolf), and 'Pathological reactions of the skeletal muscle fibre' (R. D. Adams). The third section consists of a series of essays on the clinical and genetic aspects of muscular disease; it includes excellent accounts of 'Progressive muscular dystrophy' (J. N. Walton) and 'Polymyositis' (C. M. Pearson). The final section deals with electrical methods of investigation of neuromuscular disorders.

The use of serum creatine kinase determinations in the identification of female carriers of the genetically-determined Duchenne type of muscular dystrophy is noted in several sections of the book. At the present stage, it can be said that if in a female relative of an affected boy the serum creatine kinase is considerably greater than 3.5 units per 100 ml. (60 international units), she is almost certainly a carrier of the gene and is liable to pass on the disease to half of her sons. A normal reading does not, however, exclude the carrier state, as about a quarter of known carriers have been found to have creatine kinase values within the normal range. This is a finding with which, as clinical pathologists, we should be familiar.

HUBERT SISSONS

¹It is of interest to know, although not mentioned in the book under review, that there are a number of laboratories in this country where, with the support of the Muscular Dystrophy Group, determinations of creatine kinase are being regularly carried out for this purpose. They are: Dr. D. A. Ellis, Midland Centre for Neurosurgery, Smethwick; Miss E. Finch, The Children's Hospital, Sheffield; Dr. B. P. Hughes, The National Hospital, Queen Square, London; Dr. R. J. T. Pennington, Regional Neurological Centre, Newcastle upon Tyne; Dr. W. H. S. Thomson, Knightswood Hospital, Glasgow.

SPECTROPHOTOMETRIC ANALYSIS OF DRUGS INCLUDING ATLAS OF SPECTRA By Irving Sunshine and S. R. Gerber. (Pp. xvii + 235; illustrated. \$10.50.) Springfield, Illinois: Charles C. Thomas. 1963.

The analysis of body fluids for drugs is becoming a more important and at the same time an increasingly difficult aspect of the work of chemical pathology laboratories. At present most of the diagnostic techniques involve spectrophotometric or chromatographic methods. Drs. Sunshine and Gerber have made considerable contributions to the technical solution of some of the problems involved in the detection and identification of drugs, and this book embodies a wealth of experience in the spectrophotometric analysis of such specimens.

The volume is divided into three main sections and is introduced by an index of spectra in order of increasing wavelength of maximum absorption to facilitate the identification of unknown spectra. Chapter 1 presents the extraction procedures that Dr. Sunshine uses. Chapter 2 is an atlas of the ultra-violet absorption spectra of over a hundred drugs in O-IN H₂SO₄ and O-IN NaOH respectively, often at more than one concentration. Chapter 3 gives the infra-red absorption spectra of the compounds studied. These latter will be of little practical use at present as few laboratories can have access to recording infra-red spectrophotometers. However, the presence of these spectra in the book will be a constant stimulus to increase the technical facilities available to our laboratories. There is a useful index at the back of the book, though of course the trade names are largely American.

M. G. RINSLER

THE THEORY AND PRACTICE OF ANTICOAGULANT TREATMENT By L. Poller. (Pp. 158; 36 figures. 27s. 6d.) Bristol: John Wright and Sons. 1962.

In this book Dr. Poller gives a balanced account of the controversial subject of anticoagulant therapy. At the same time he achieves a balance between the clinical and laboratory aspects of the subject making the book useful to both clinicians and pathologists. After considering the mechanism of blood clotting and thrombosis, the various anticoagulant drugs available and methods of control, there are valuable chapters on the indications and practical management of both short- and long-term anticoagulant therapy in a variety of disorders. He advocates the use of prophylactic anticoagulant therapy in selected surgical cases. Details of laboratory techniques are given in an appendix. Each chapter has a useful summary and an adequate list of references. Minor criticisms are that some of the photomicrographs are so poorly reproduced as to be useless and the print of the captions appears unnecessarily small.

There is no doubt that much of the anticoagulant therapy practised today is either ineffective or dangerous. This book helps to make the treatment safe and effective and can be recommended to all concerned in the management of anticoagulant therapy.

D. ROBERTSON SMITH