Book reviews

AN INTRODUCTION TO DIAGNOSTIC ENZYMOLOGY By J. H. Wilkinson. (Pp. viii + 288; 60 figures. 45s.) London: Edward Arnold. 1962.

Diagnostic enzymology is perhaps the area of chemical pathology in which the most striking recent expansion has taken place. This has resulted partly from advances in methodology and instrumentation, and partly from a deliberate search for more specific means of identifying the diseased organ. The result has been to present the clinician with a bewildering variety of available enzyme tests to choose from and to interpret, and the clinical biochemist with the problem of deciding which tests to offer so that his laboratory may provide a complete and modern service. The solution to this problem has had to be sought in original papers, in review articles dealing with particular enzyme tests, and in texts on chemical pathology as a whole: books in English devoted entirely to clinical enzymology have been very few indeed. Thus there exists a very definite gap in the literature of chemical pathology which Dr. Wilkinson's book fills admirably.

After a concise summary of the principles of enzyme chemistry, chapters follow devoted to the principal classes of enzymes of diagnostic significance—digestive enzymes, phosphatases, transaminases, dehydrogenases, glycolytic enzymes, and cholinesterases—with further chapters on enzymes in inherited metabolic disease and on a number of enzymes of at present limited applicability. These sections provide a readable account of the current status of the enzymes discussed, with in each case an up-to-date list of references. A short but interesting chapter assesses the relative merits of several enzyme tests in the diagnosis of myocardial infarction and of liver disease: many readers would no doubt have welcomed the extension of this particular discussion to include suggestions as to what range of tests a general hospital laboratory might undertake so as to provide a good coverage of other diagnostic problems also.

Dr. Wilkinson and his publishers are to be congratulated on the short interval of time which has evidently elapsed between the writing of the book and its appearance in print: such recent topics, for example, as the potential diagnostic value of lactate dehydrogenase isoenzymes are well covered. The book is attractively produced, and by modern standards, reasonably priced.

D. W. MOSS

CLINICAL CHEMISTRY IN PRACTICAL MEDICINE, 6th. ed. By C. P. Stewart and Sir Derrick Dunlop. (Pp. vii + 359; 31 figures. 27s. 6d.) Edinburgh and London: E. and S. Livingstone. 1962.

This is the sixth edition of this work by two distinguished authors. It is addressed to the senior student, the house physician, and the practitioner, and there can be no doubt that they would all be better doctors if they studied the book. There is a criticism to be made. In the early days chemical pathology was largely empirical: the result of a

particular investigation gave a high result in this condition and a low result in that. This edition has not always got away from this attitude as much as existing knowledge would permit; what the student or the doctor needs is an understanding of the biochemical and physiological disturbances which cause the abnormal results.

Some changes in detail would improve the undoubted excellence of the book. The word 'base' is used in a strictly correct way but will confuse some medical readers who are not chemists: it would be better to avoid the word. On pages 178 and 179 the word 'hepatogenous' is used on two occasions with slightly different meanings. In the chapter dealing with the thyroid gland and the basal metabolic rate, the latest work on the calculation of the body surface, the probable relation of the basal metabolic rate to the lean mass rather than to the body surface, and the Robertson-Reid standards are all ignored. The effect of age on the normal ranges of some investigations is not referred to.

A valuable feature of the book is the presence of a section on simple statistics in their application to chemical pathology.

This section would be improved by completely omitting any mention of the probable error and by some explanation of the standard error, some understanding of which is essential to the comprehension of the use and misuse of statistics in medical journals today.

About an eighth of the book is devoted to an appendix on methods, including some which are purely haematological. This appendix is introduced because of the needs of certain courses in Edinburgh. The book would be better—and presumably cheaper—without the appendix.

The book is to be recommended. The price is the same as for the previous edition.

ARTHUR JORDAN

UREMIA By George E. Schreiner and John F. Maher. (Pp. xvi + 487. 73 figures. 128s.) Springfield, Illinois: Charles C. Thomas: Oxford: Blackwell Scientific Publications. 1961.

The title of this book 'Uremia' might lead the possible reader to think of it as dealing with a narrower field than it does. The definition of uraemia given (p. 15) is 'a generalized symptom complex due to a dynamic imbalance between the organism's current metabolism and the appropriate renal functions. It is marked by aberrations in the volume and composition of body fluid, pathology in several important membranes, and an array of pathophysiological mechanisms, still in the process of being defined'.

The contents are divided into five sections: (1) An introduction, discussing what is uraemia, and the role of haemodialysis in the understanding of clinical uraemia, (2) the biochemical changes occurring in uraemia, (3) the pathology and clinical effects on various organs, (4)

complications, including infections and their treatment with antibiotics, and (5) treatment.

The book is written largely from the standpoint of the user of the artificial kidney, and an enormous amount of information is collected which is invaluable in this context and is of very considerable interest to anyone concerned with renal disease in any way.

The majority of hospitals, however, do not possess an artificial kidney, and one of the great difficulties is the decision when to refer a patient with anuria or oliguria to a special centre: if cases are referred too soon, any centre will quickly become jammed but if referral is postponed, some treatable patients may die before dialysis can be performed. I have not been able to find the criteria the authors accept as necessitating transfer, and to the general physician this would be of the greatest value.

The section on treatment is very short, comprising only some seven pages, and tabulates the various factors which may need attention during the treatment of uraemia; but neither there, nor in the rest of the text, is sufficient detail given for the practical handling of some of the therapeutic measures suggested.

Notwithstanding these criticisms, the book would be of wide interest, if it were not for the price, £6 8s., which puts it out of the reach of most.

E. N. ALLOTT

FUNGI AND FUNGUS DISEASES A symposium of the Section of Microbiology, the New York Academy of Medicine. Edited by Gilbert Dalldorf. (Pp. x + 335; illustrated. 96s.) Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 1962.

The symposium of which this book is the permanent record ranged widely and comprehensively over the whole field of medical mycology. The contributors include most of the leading American workers, with one from each of five countries outside the United States, including Britain; a notable absentee is a representative of the flourishing and important school of Japanese mycologists.

Problems of mycological taxonomy, differentiation, classification, and physiology are among those dealt with, as are the aetiology, immunology, and treatment of fungous diseases; there are also chapters on genetic recombination, and on the structure and constitution of pathogenic fungi. Segretain, of the Institut Pasteur, contributes a valuable chapter on relatively infrequent fungus pathogens. Lavalley gives a comprehensive account of *Mycetozoa*. Seeliger contributes a long and helpful review of the serology of fungous infections and gives good, albeit cautious, advice on the use of serological techniques as diagnostic aids. The chapter by Gordon, on the application of the Coons fluorescent technique to the differentiation and classification of yeasts, will interest all those working in this expanding field. The possibility of immunization against superficial infections is dealt with by Huppert, and vaccination against systemic infections by Levine; both of these chapters give an excellent review of the literature. In the chapter on therapy, cryptococcosis is authoritatively dealt with by Littman and coccidioidomycosis by Winn.

The book is well produced and illustrated in black and white. It can be strongly recommended to the increasing

number of morbid anatomists and microbiologists who are interested in medical mycology, and who are more and more likely to be faced with knotty problems of mycological diagnoses.

H. I. WINNER

PROCEEDINGS OF THE 7TH INTERNATIONAL CONGRESS OF MICROBIOLOGICAL STANDARDIZATION (Pp. vii + 556; illustrated. 130s.) Edinburgh and London: E. & S. Livingstone. 1962.

The general microbiologist will be relieved, on studying this volume of 556 pages of Proceedings of the 7th International Congress for Microbiological Standardization, to find that very little of it is about standardization. It comprises, in fact, a large number of short papers on various aspects of the devising, production, testing, and control of immunizing agents used as prophylactics for man and animals; and of diagnostic serological products.

There are a number of papers dealing with the philosophy and methods of standardization, including a stimulating presidential address by A. A. Miles endeavouring to restrict the use of the word 'standardization' to its proper sense. There are also a number of papers on the methods used by the international laboratories for preparing and maintaining the standard preparations.

The remaining papers are grouped under various topics and include: adventitious agents in virus vaccines, sterility testing (with a broadside from H. Proom on the ill-conceived requirements of some authorities), staphylococcal antigens and antibodies, B.C.G. vaccine, field investigations of new and old vaccines, and antiviral agents.

Among the papers noted as being of special interest were the following: a discussion of differential rate methods for selective inactivation of viruses (C. W. Hiatt); a useful bacteriological test method for sterilization equipment (C. G. Hedén and H. Markkula); assay of leucocidin (G. P. Gladstone *et al.*); assessment of immunizing agents in man (T. M. Pollock); and field investigations of typhoid vaccine (W. C. Cockburn). And certainly any other reader would find a different selection also of interest.

But, this said, one must doubt whether this form of publication is to be encouraged; and one must inquire whether the good papers could not better be published in one or other of the standard journals (as many certainly have been or will be in any case). Papers in the present volume will usually be found only by the persistent seeker for there is no contents list giving their titles, no subject index, and even the running headings on the text pages refer to the topic rather than the particular paper (and the two are commonly only tenuously related). But perhaps it may be assumed that those who will pay £6 10s. must be persistent seekers.

R. E. O. WILLIAMS

MENTAL ILLNESS AND THE AGEING BRAIN By J. A. N. Corsellis. (Maudsley Monographs 9.) (Pp. 76; figures. 30s.) London: Oxford University Press. 1962.

There has been extremely little reliable work on the relationship of cerebral abnormality with the ageing brain and with mental disorders of any sort. It is therefore of great value that an author of experience such as