

says in his introduction, there is 'much food for thought'. How many pathologists realize that some fixatives used for electron microscope work remove 'up to 60% of the material originally present in the specimen and convert the remainder into chemically inert products'? The practising pathologist may be forgiven if he is bewildered by much of the technical data given in this book but salvation is at hand in the final chapter by Professor I. M. P. Dawson entitled 'Fixation, What should the pathologist do?'

M. S. DUNNILL

Practical Histochemistry By J. Chayen, L. Bitensky, and R. Butcher. (Pp. xiii + 271; illustrated. £3.95.) New York and London: John Wiley and Sons Ltd. 1973.

This book provides an admirable introduction to histochemical techniques. It makes no attempt to be an exhaustive text but concentrates on a few methods, extensively tested and criticized by the authors, which are explained in detailed but simple terms. The chapter on enzyme methods using cryostat sections is particularly good. There is a useful but not extensive list of references. The appendices are excellent and cover (i) the effect of fixation on enzymes, (ii) a list of chemicals used together with the names and addresses of suppliers, (iii) buffers, and (iv) a note on safety. The book represents good value for money to any trainee pathologist or technician.

M. S. DUNNILL

Practical Clinical Enzymology and Biochemical Profiling By Paul Wolf, Dorothy Williams, and Elisabeth Von der Muehl. (Pp. 580; illustrated. £7.75.) Chichester: John Wiley and Sons Ltd. 1973.

This book really consists of three sections. The first contains 25 methods of enzyme estimation and three enzymic techniques for the estimation of glucose, triglycerides, and uric acid respectively. Although the methods given are relatively commonly used, and presumably form part of the repertoire of the clinical laboratory of Stanford University Hospital, they are not necessarily the best available. The methodology of clinical enzymology still remains very much a personal choice and until recommendations are made with regard to standardized procedures, one cannot

consider the methods described as being the best.

The second section deals fairly fully, but not very critically, with the clinical interpretations of enzyme assays as well as their application in a number of clinical situations. These include neoplastic disease, obstetric and gynaecological practice, liver disease, pancreatic and salivary gland disease, reticulo-endothelial diseases, lung and heart disease, central nervous system disease, the effects of surgery, genito-urinary tract disease, bone disease, and skeletal muscle disease. The paediatric age group is also discussed, as well as enzyme abnormalities in body fluids, and enzyme histochemistry and its clinical applications. This section includes a number of quite unnecessary black and white illustrations which are frequently meaningless. One rather amusing example is a black and white picture demonstrating the occurrence of green plasma from a female donor taking oral contraceptive tablets.

The third section deals with a variety of profiles obtained by the use of an AutoAnalyzer 6/60 and an AutoAnalyzer 12/60, of the usual determinations for which these two instruments are employed. These are to be used for computer diagnosis. All the charts are faithfully reproduced including the misprint which gives the plasma uric acid in gm% where it ought to be mg%. To anyone with clinical experience, virtually each of these patterns would appear somewhat unreliable. For example, the pattern for hyperparathyroidism is shown as including a very much raised serum total calcium and an increased alkaline phosphatase. The poor computer would not be able to diagnose this disease in many of its commoner clinical presentations. It is a pity that the authors do not seem to appreciate that the laboratory does not make firm diagnoses; it can only provide important physical signs to be used in conjunction with the history, clinical examination, and other investigations. It is a good idea to have printed on the AutoAnalyzer charts those conditions which tend to give high or low values for each estimation. A useful part of this book are those few printed pages which indicate the commoner causes for high and low values of each of the 18 analyses.

In the reviewer's opinion, the book would have been much improved by omission of the biochemical profiles and the price would certainly have been more

reasonable. The enzymology is, however, sufficiently clinically orientated to be of some use to the clinical pathologist.

A. L. LATNER

Neurohumoral and Metabolic Aspects of Injury (*Advances in Experimental Medicine and Biology*, Vol. 33). Edited by A. G. S. Kovách, H. B. Stoner, and J. J. Spitzer. (Pp. xix + 666; illustrated. \$37.50.) New York and London: Plenum Publishing Corporation. 1973.

This volume records the proceedings of an international conference in Budapest in August 1971 on certain general body reactions to haemorrhage and trauma, reflecting the growing interest in traumatic pathology. The main topics were organ blood flow, fluid transfer, humoral reactions, metabolic effects, neural regulation, resistance, and adaptation. The general standard of the papers is high and the reviewer's main criticism is that none of the reports deal with injured man. A major growing point emerging is the central role of the hypothalamus in controlling and modifying various body reactions to injury. Those concerned with trauma and burns will be specially interested in this volume, but there are papers for a wider medical-scientific audience including pathologists. The book should be available in many medical libraries.

S. SEVITT

Haemopoietic Stem Cells Ciba Foundation Symposium 13 (New Series) held in tribute to J. M. Yoffey. Edited by G. E. W. Wolstenholme and Maeve O'Connor. (Pp. x + 345; illustrated. Df. 44.00; approx. \$16.95.) Amsterdam, London, and New York: Elsevier/Excerpta Medica/North-Holland. Associated Scientific Publishers. 1973.

This book of 13 papers by various authors attempts to describe some of the properties of the haemopoietic stem cell. This is an elusive entity, about which there are more theories than certainties and this is therefore, a collection of ideas, not facts. It should not be considered a reference work on the haemopoietic stem cell, or even representative of majority opinion.

Stem cell morphology is discussed at some length, although the desirability of forcing an essentially functional cell

into a morphological mould must remain open to question. A major criticism is the positive identification of the haemopoietic stem cell with the cell-producing colonies in agar culture. It should be stressed that this is the belief of one group of workers only and is not supported by the findings of others.

A number of contributors deal with the control of haemopoiesis, covering factors influencing cell growth *in vitro* and their possible part in the regulatory mechanism; the kinetics of the stem cell compartment under conditions of stress and the recovery patterns of mature cell production. These papers make interesting reading and probably consider most of the admitted possibilities in this area.

As the most popular candidate for the haemopoietic stem cell has some of the characteristics of a lymphocyte, there is the inevitable discussion of the role of stem cells in immunity.

On the whole, this book deals with rather esoteric aspects of haemopoietic stem cells. Possible applications of theory and techniques are relegated to one paragraph of one paper and this is a very serious defect indeed. For those working in the field, the book may be of some interest, especially as an index of the literature, as the list of references is exhaustive. For the clinician or haematologist, its fundamental nature must render it of little value.

IAN D. C. DOUGLAS

Recent Advances in Thrombosis Edited by L. Poller. (Pp. ix + 227; illustrated. £5.50.) Edinburgh and London: Churchill Livingstone, 1973.

For whom are the 'Recent Advances' series written? For the man working in one corner of thrombosis this is an excellent review of many other aspects of thrombosis updated to early 1972. Clinical pathologists in general will find lots of interest but may not stay the course. Clinicians faced with a patient with thrombosis will find little help. And this is a criticism of the state of the art rather than the composition of this book. Thrombosis is an urgent everyday disease; we are told that there are 32 000 cases of postphlebotic leg ulcers in Sweden (pop 8013696) yet there is surprisingly little new to offer the clinician. This is in part due to the enormous difficulty of finding out exactly what goes on in real life and

the mechanisms involved: it is easier and more fashionable to study cyclic AMP in platelets or the details of fibrinogen chemistry, for example, which are well covered.

As in most multiple-author books the presentation is irritatingly varied; a broad review follows a summary of an author's personal views and work. The best chapters I thought were an excellent introduction by Owren, a discussion on platelets by the Dutch team in Leuven which offers understanding and hope but little immediate advice on therapy. Prentice and McNicol take a moderately pessimistic view of thrombolysis, and that after 15 years' work! The Fletchers enthusiastically advocate the 'exotic methodologies' of column chromatography (but don't discuss the immunology or treatment of DIC) There are chapters filling in the background on pathology and epidemiology and one, far too short, on clinical diagnosis. Inevitably there are gaps: heparin minidose, surely a most promising line, is hardly mentioned, but perhaps this counts as a recent advance in coagulation. Nevertheless a valuable book for some of us and Churchill Livingstone have done a good job.

J. R. O'BRIEN

Pulmonary Thromboembolism Edited by Kenneth M. Moser and Myron Stein. (Pp. x + 355; illustrated. £11.90.) Chicago: Year Book Medical Publishers, Inc. Distributed in the UK and Europe by Lloyd-Luke (Medical Books) Ltd. 1973.

This is a report of a symposium held in La Jolla, California, in May 1971, under the sponsorship of the American College of Chest Physicians and the University of California. An international group of scientists, all well known in the field, contribute short statements which together form a complete review of both venous thrombosis and pulmonary embolism in regard to their pathology, pathogenesis, diagnosis, and treatment. Each contribution is supported by a short reference list. Most of the sections include a summary of what was obviously a lively discussion.

As a whole the book represents a useful summary of much of the topic but its value is limited on three counts. First, all the information is available elsewhere, and at least one symposium

held later was published in 1972. Secondly, in a rapidly advancing field there is remarkably little on the prophylaxis of venous thromboembolism, surely the most important aspect. Finally, despite the high standard of presentation and the excellent reproduction of some radiographs, the price is far in excess of its value.

PETER T. FLUTE

Essays in Fundamental Immunology 1 Edited by Ivan Roitt. (Pp. 66; illustrated. £1.50.) Oxford, London, Edinburgh, and Melbourne: Blackwell Scientific Publications. 1973.

Many of those not actively engaged in immunology groan beneath the burden of attempting to keep abreast of its complexities. The essays offered in this new series should help not only the dedicated amateur but should also prove good reading for the professional. The four essays in the first edition range from consideration of the nature of the antibody-combining site by Leslie and Cohen through a study of tolerance by Nossal which, in his own words, should form a sturdy springboard for future adventures to a thought-provoking essay by Playfair on a cellular basis for autoimmunity. Finally, Mitchison considers his new-found interest—tumour immunology. As the preface claims, it is lively and readable—four short stories in the classical tradition.

A. J. S. DAVIES