therefore inevitable that the book would have to undergo extensive revision. It is now confined largely to the technical aspects of the subject and has been improved by considerable reorganisation. There are three more contributors, and many chapters have been fundamentally rewritten.

Although the book covers clinical microbiology, it is in fact heavily biased towards public health work and microbiology in the food industry and veterinary medicine, which inevitably results in the inclusion of many methods and species of little interest to the hospital microbiologist. A lack of clinical experience is also sometimes apparent, for example, *Proteus vulgaris* and not *Proteus mirabilis* is said to be a frequent cause of urinary tract infections, and the increasingly common infection of this site by micrococci as distinct from *Staphylococcus epidermidis* is not mentioned. At £9.50 the book is expensive, and clinical microbiologists may be reluctant to pay this for a book containing so much which does not concern them, but it will be a useful addition to the bookshelf of any laboratory, particularly those concerned with public health.

PAMELA WATERWORTH

Heparin. Chemistry and Clinical Usage. Edited by V. V. Kakkar and D. P. Thomas. (Pp. xv + 376; illustrated; £9.50.) London: Academic Press. 1976.

In his foreword, Professor Sol Sherry states that this monograph represents the edited proceedings of an international heparin symposium held in London in July 1975. The volume is more than a group of related research papers. It is an organised collection of comprehensive and up-to-date reviews together with a reasonable sprinkling of carefully selected original papers. The book is printed in off-set style with hard covers and has been published in a relatively short period of time. Needless to say the 50 or so contributors are recognised experts in their fields. The first section is on the chemistry of heparin and contains chapters on its chemical and crystalline structure, different molecular forms, and an important chapter on standardisation. The next section on heparin and coagulation contains a notable review on the biochemistry of prothrombin activation as well as contributions on the action of heparin, heparin and platelets, and

lipoprotein lipase and heparin. A useful chapter on streptokinase, a little out of context, is also included. Finally, there are two substantial sections on the clinical use of heparin and clinical trials. These sections contain much of interest, including chapters on the control of therapy, treatment of venous thrombosis and pulmonary embolus, and the use of heparin in disseminated intravascular coagulation and renal disease as well, of course, as on the low-dose regime in surgical prophylaxis. The editors are to be congratulated on their excellent choice and the contributors for producing what is in effect a textbook on heparin. Although expensive, by present-day standards it represents very good value for money.

A. L. BLOOM

Mechanisms in Bacterial Toxinology. Edited by Alan W. Bernheimer. (Pp. xi + 263; illustrated; \$19.00.) New York: London: Sydney: Toronto: John Wiley. 1976.

Dr Bernheimer concedes that it may not be possible to transform a large number of disconnected facts and hypotheses into a small number of far-reaching principles. He adds to the complexity by embracing a wide assortment in his term 'toxinology', but he gives us a stimulating selection of growing points. These range from authoritative discussions on diphtheria toxin, cholera enterotoxin, and other enterotoxins to a careful review of microbial phospholipases and thoughtful considerations of the actions of bacterial products at cell membranes and in the skin. The limulus test for endotoxin is evaluated, and the antitumour activity of certain streptococci is speculatively and provocatively discussed.

J. G. COLLEE

Practical Immunology. Edited by Leslie Hudson and Frank C. Hay. (Pp. xvi + 298; £6.50.) Oxford: Blackwell Scientific Publications. 1976.

This book will be of value to students and supervisors engaged in elementary courses in immunological techniques; it is unlikely to have a much wider appeal. In covering such a vast field the authors had to be selective. However, the technology they chose for detailed description is clearly presented. Many sections are introduced with well-explained theoretical considerations. The text deals largely with the mouse as the experimental prototype

but it would have been helpful if the modifications for use with human tissue had been included. Thus clinicians will find this book of little value since it gives only passing reference to immune deficiency, hypersensitivity states, recognition of organ-specific antibodies, the monitoring of immunosuppression, and tissue typing. These considerations were probably not the authors' intent, nevertheless the title (Practical Immunology) is a little deceptive; possibly 'Elementary Immunological Techniques' would have been more appropriate.

A. B. KAY

Rheology of Blood in Diagnostic and Preventive Medicine. An Introduction to Clinical Haemorheology. By Leopold Dintenfass. (Pp. xiv + 396; illustrated; £13.50.) London: Butterworth. 1976.

Dr Dintenfass believes that rheological phenomena should be understood by those who are interested in the diagnosis and prevention of both cardiovascular and malignant disease. He describes the blood viscosity changes in these conditions in very great detail and relates viscosity to blood groups. There are also short sections on haematological disorders with descriptions of sickle-cell anaemia and macroglobulinaemia. A useful appendix on instrumentation is included.

This book will be of particular interest to research workers since it includes numerous graphs and tables of results. The author raises many points which rheologists will debate and his monograph will serve as a useful stimulus.

J. M. ENGLISH

Color Atlas and Textbook of Tissue and Cellular Pathology. 5th English edition. By Walter Sandritter. (Pp. xviii + 301; illustrated; £19.50.) London: Lloyd-Luke (Medical Books). 1976.

This collection of light and electron microphotographs has been compiled for medical students and those beginning a career in pathology. The photographs are, with few exceptions, good, and it is pleasant to browse through such a collection. However, in the rather full accompanying text there is little functional correlation, and the approach is excessively morphological, which is a poor beginning for junior pathologists. The book is expensive, reflecting the high

quality of production, and in these days of limited budgets I think that few will judge it a priority purchase.

G. SLAVIN

Muir's Textbook of Pathology, 10th edition. Edited by J. R. Anderson. (Pp. xiii + 1046; £13.75.) London: Edward Arnold. 1976.

This latest edition of 'Muir' has grown a little fatter (by 70 pages) and has attractive greenish photographs printed on its soft covers. There are now 15 contributors listed as responsible for chapters but many others are acknowledged in the preface. The chapter headings remain the same and so does most of the text and the illustrations. Many illustrations are slightly enlarged, to good effect, in this edition but some have become rather paler. Not all the changes in the illustrations are improvements. Fig. 1.6 in the 9th edition showed striking gangrene of the third and fourth toes but in the new edition it is replaced by a foot with all the toes dark, thus losing the striking colour difference (are the toes just dirty?). The old Fig. 1.6 now appears as 13.28 in the new edition as a case of thromboangiitis obliterans. Dr Catto's section on hypertrophy has a picture of an uprooted beech tree with hugely hypertrophied roots (pathological lessons can be widely applied?). Generally, the revisions have improved this already excellent book and it is now probably the best undergraduate textbook of pathology; by present-day standards it is not expensive.

E. A. WRIGHT

Scanning Electron Microscopy. Proceedings of the Annual SEM Symposia, 1972-1976. Edited by Om Johari and Robert P. Becker. IIT Research Institute, Chicago, Illinois. 1976.

SEM/1976/I	782 pp	\$47.50 (Set of
SEM/1976/II	708 pp	two)
SEM/1975	816 pp	\$27.00
SEM/1974	1064 pp	\$27.50
SEM/1973	789 pp	\$22.00
SEM/1972	447 pp	\$21.00

(Earlier volumes from 1968 to 1971 are also available.)

These annual volumes chart the recent progress of SEM in biological research. Each paper is accompanied by detailed reviewers' comments with authors' replies. In 1976/I alone the pathologist might find the research papers on pages 1, 31, 85, 121, 217, 225, and 315 of particular

interest, while in the 1973 volume there are 51 papers in a workshop devoted to SEM in pathology.

Specialist topics, however, do not dominate this series. There are general and tutorial papers such as Revel (1975) on the elements of SEM; Lewis and Nemanic (1973) and Bartlett and Burstyn (1975) on critical point drying; Boyde (1976/I) and Humphreys (1975) on biological specimen preparation; and Echlin (1974) on coating techniques. These, along with many others, provide authoritative technical information on the current state of the art, vital for the beginner.

The workshop on the teaching of SEM (1975) is of interest to all who use the technique. There are extensive bibliographies of SEM: the 1976/II biomedical update alone lists 1919 references.

Naturally enough, in so new a discipline, few papers as yet deal with practical diagnostic applications. The SEM may find uses in cervical cytology (p. 315, 1976/II) but is currently subject to sampling limitations, while changes reported in 'normal' breast epithelium in cases of primary breast cancer (p. 1, 1976/II) may have future diagnostic potential. By contrast, in practical forensic science (bibliography, 1976/I) SEM and x-ray analysis are now firmly established. The reviewer awaits with interest the special session on SEM as an aid to diagnosis in the forthcoming 1977 proceedings.

SEM brings a new dimension to every morphological enquiry, including clinical pathology. For anyone interested in biological structure this series makes fascinating reading: for the electron microscopist it is an indispensable reference source.

P. G. TONER

Malignant Melanoma. Clinical and Histological Diagnosis. By Vincent J. McGovern. (Pp. xiv + 178; illustrated; £16.00.) Chichester: John Wiley. 1976.

It is rare that a reviewer can truthfully state that a work is likely to prove valuable to beginner and experienced practitioner alike but this beautifully produced, well written, and copiously illustrated monograph, a credit to author and publisher, merits this opinion. Furthermore, there was need for such a monograph in what is generally acknowledged to be a difficult field in clinical histology.

The reviewer found only a few points of difference with the author. 'Malignant transformation of a purely intradermal naevus or of the intradermal component of a compound naevus has not been recorded' (p. 8) is misleading. Melanoma has been seen *in association with* all types of naevi. Malignant transformation implies the conversion of naevus cells into melanoma cells, a very doubtful event. The nature of 'benign metastasizing blue naevus', an important differential diagnosis of metastatic deposit of melanoma in lymph nodes, is not dealt with in the sketchy section on blue naevus (p. 399). Hints on therapeutics are, quite rightly, presented in the appropriate places but there is no mention at all of the role of radiotherapy, the modality of choice in the management of some phases of Hutchinson's freckle and cancerous melanosis of the conjunctiva. These matters will no doubt be put right in the second edition. One very interesting technique used by the author is the use of reticulin stains in the differentiation of naevi and melanomas.

Vince McGovern, the doyen Australian surgical pathologists, is nearing retirement, and this work is a fitting crown to a generous, creative medical life. It is an indispensable bench book.

A. LEVEN