logical changes and ends with a brief note on methods of antigenic matching. In Chapter 4 J. F. A. P. Miller develops the thesis, by closely reasoned argument based on experimental observations, that thymic function constitutes part of an immune surveillance mechanism which eliminates antigenically distinct classes of tumour cells before they can multiply and spread. The old, vague idea of the existence of natural immunity to cancer is given a new and firmer basis with evidence of its dependence on integrity of the thymus.

Chapter 5, 'The geographic pathology of atherosclerosis' by W. B. Robertson; chapter 6, 'Electron microscopy of thrombus formation' by J. E. French; chapter 7, 'The pathogenesis of atherosclerosis: a reassessment of the thrombogenic hypothesis' by T. Crawford, share a common interest denoted in the titles. Chapter 5 is a somewhat discursive, detailed account of methods in use for assessing prevalence and extent of the arterial lesion, the results and pitfalls in interpretation. Chapter 6 is a close-knit description of the ultrastructure of platelets and thrombi. It is encouraging to find that the classical observations made by light microscopy are extended rather than refuted. Crawford's analysis is masterly.

Chapter 8 is a review by Fenton Schaffner and Hans Popper of electron microscopy of human liver disease. This is a clear, detailed, guided tour of the ultrastructure of the human liver in health and disease. The authors feel that electron microscopy has so far proved more helpful in the elucidation of pathological processes than precise diagnosis of liver disease.

The last chapter, 'Immuno-fluorescent localization of the hormone-like human placental factor in normal and abnormal syncytiotrophoblast' by J. Swanson Beck and A. R. Currie is an instructive account of the successful application of immunofluorescence to a problem in functional histology.

All the authors have given extensive bibliographies. The book is well worth possessing both for the broad survey of modern trends and for reference. It is highly recommended. An attractive feature throughout is the absence of a didactic attitude and its replacement by detailed discussion.

I. DONIACH

TISSUE AND CELLULAR PATHOLOGY Colour Atlas and Textbook 2nd ed. By W. Sandritter and W. B. Wartman. (Pp. xviii + 298; 492 figures. 168s.) Chichester, Sussex: John Wiley & Sons Ltd. 1967.

This book is perhaps best described as a guide and an aid to the student taking the usual practical class in histopathology. There are brief pithy comments on the pages opposite the photomicrographs, most of these being in colour. Also included are a number of electron photographs and, thanks to their quality and good accompanying notes and diagrams, they form a palatable dose of the new technique. For too long pathologists have let themselves be dissuaded by our ivory-tower biologists from using the electron microscope on human tissue. Once this technique is improved so that people short of time can exploit its possibilities, once there is wide availability of low EM-magnifications so that we

can correlate the new with the known, we might well see a second century of fact finding in pathology, and even the electron microscope itself may benefit as the light microscope certainly has done from the utilitarian demands of pathologists.

This book, the original German version being by Professor Sandritter of Giessen, has many excellent plates, but it shows the usual curious variation in the results obtained with haematoxylin and eosin. Perhaps we are wrong in thinking that 90% of knowledge has to be transmitted in these colours. Not that the van Giesons are specially good in this production. The intracapillary and nephrotic glomeruli would surely have been better demonstrated by a good trichrome, and figs. 134A, 474, and 483 have obviously gone wrong. Lymphoma, Burkitt's, is indexed as page 227 but is not there. Nor is there any mention anywhere of neoplasms of striped muscle. Neither neuroblastoma nor nephroblastoma is mentioned although RNA messenger is mentioned twice, in one place not on the indexed page. Still this is a brave book.

The few light-microscopy photographs in black and white are adequate for their purpose, but compare unfavourably with the remarkably fine photography in Professor Pierre Dustin's 'Leçons d'Anatomie Pathologique Générale' (Brussels, 1966). One must also add that Professor Curran's Colour Atlas of Histopathology gives more and excellent colour illustrations at a much lower price, although it provides less guidance and less script. The script of this book has been translated by Professor Wartman of Chicago, and personally I cannot but believe it an accurate and conscientious translation. But, it is telegraphic and likely to prove tough reading for the easy going student. It could be a tonic and test piece for the young graduate re-entering histopathology, and not least if he had to assist in teaching students.

The lesions illustrated are those we know but the comments have their differences, and it is certainly valuable for the young pathologist not yet able to read German, to meet the German point of view. As Professor Wartman writes in his preface, 'for the student and teacher alike, it is valuable to know that there are different ways of looking at many angles of medicine. Too often, the student is unaware that different viewpoints are not only possible but actually exist'. Translation from a foreign language can snap the chains of the familiar and commonplace; perhaps it profits a man more if he himself break the fetters?

A. C. LENDRUM

THE CLINICAL PATHOLOGY OF INFANCY Edited by F. W. Sunderman and F. W. Sunderman, Jr. (Pp. xiv + 565; illustrated. \$26.50.) Springfield, Illinois: Charles C. Thomas. 1967.

This book is the sixth in a series of volumes produced under the auspices of the Association of Clinical Scientists, Philadelphia, and comprises the edited proceedings of a seminar on the clinical pathology of infancy held in Washington: the date is not stated.

The aim of the book is to give details of laboratory investigations for diseases of infancy and childhood that

are not currently found in the textbooks of clinical pathology.

This 560-page volume consists of a series of over 50 articles, of which about half are concerned with the clinical aspects of biochemical, haematological, and bacteriological investigations, and the other articles, the technical details of carrying out some of these tests. There are 54 contributors.

The chapters vary considerably and the book looks and feels like a volume of a clinicopathological journal. The standard of the sections varies greatly, and the impression gained is that people have had subjects allocated to them by the editors rather than attempts made to get laboratory knowhow contributions from the leading experts in new fields.

Technical methods are given for chromosomal karyotypes, serum aldolase, creatinin and phosphokinase, the spectrophotometer determination of O_2 saturation, calcium, blood grouping for exclusion of paternity, and of antibodies in erythroblastosis foetalis, amniotic bile pigments, serum bilirubin, sweat electrolytes, urine vanilmandelic acid, thin-layer chromatography of urinary sugars and amino acids, blood phenylalanine, urine amino acid nitrogen, urinary acid mucopolysaccharide, erythrocytic pigment kinase, and G-6-PD. There is a good index.

These methods are for tests that would be carried out normally in reference laboratories and are available in most parts of the United Kingdom. The clinical articles may be useful summaries for pure laboratory workers but would be considered superficial by most consultant paediatricians in this country.

In short, this book will be chiefly of use to the isolated laboratory and is orientated to the American laboratory situation. It is of limited, though in particular circumstances, of value here.

JOHN L. EMERY

ELEKTRONEN-MIKROSKOPISCHE ORGAN-PATHOLOGIE By H. David. (Pp. xx + 711; 200 figures. £10 2s. 1d.) Jena: VEB Verlag. 1967.

This well written and well produced book gives a comprehensive and almost up-to-date account of the results of electron microscopy as applied to general and systemic pathology. The planning of the book enables the reader first to get acquainted with the general cytopathological features of the diseased cell which forms a valuable introductory chapter, based partly on the author's own investigations of the effects of degeneration and necrosis on the ultrastructure of the cell. The structural similarity of all membranes has led to the unit membrane concept of Robertson which is disputed by Sjöstrand and by the author.

Each chapter begins with a brief summary of the normal findings accompanied by an instructive diagram of the ultrastructure of the particular organ or system, which is followed by a detailed description of embryonic, proliferative, inflammatory, neoplastic processes and of their effect on the ultrastructure of the cells.

This reviewer finds little to quarrel with but the view (on p. 278) that 'virus could be found in almost all cases' of juvenile recurrent papilloma of the larynx cannot be

accepted. It certainly is not borne out by our own entirely negative findings.

There are large numbers of illustrations, some of which were provided by other workers in this field, who will be satisfied with the high quality of reproduction. However, Fig. 91 from a laryngeal papilloma shows no evidence of virus particles.

There is evidence of wide reading reflected in the long list of up-to-date references after each chapter. It is interesting to note that some of the more recent references have apparently been added as footnotes during the final stages of publication, a useful innovation, of interest to other authors finding themselves in a similar predicament.

The style is not unlike that of English textbooks and can easily be followed. Many English terms, have in fact, been adopted in an Anglo-German form, *eg* die 'microbodies', the 'negative-staining' methode, 'feed-back' mechanismen.

This book seems to answer the question frequently asked, What is the value of electron microscopy in pathology? There is much to be gained by the pathologist through the systematic application or study of electron microscopy, as Professor David's book clearly proves.

Unfortunately the price of £10 2s. 1d. may perhaps put it out of reach of the practising pathologist interested or working in this important and ever-growing field.

I. FRIEDMANN

THE HUMAN ADRENAL CORTEX: ITS FUNCTION THROUGHOUT LIFE Edited by G. E. W. Wolstenholme and Ruth Porter. (Pp. 146; 26 illustrations. 22s. 6d.) London: Churchill. 1967.

This is a record of the meeting of the Ciba Foundation Study Group No. 27 in honour of Professor F. Verzar on the occasion of his eightieth birthday. It was held on 14 September 1966 under the chairmanship of L. J. Soffer. The contributions describe adrenal cortical function in the foetus (A. Jost), in childhood and adolescence (A. Prader), in pregnancy (P. H. Forsham), in acute surgical and medical stress (L. P. le Quesne and J. D. N. Nabarro), in chronic disease (J. C. Beck), and in old age (A. Querido). Discussions are reported verbatim. Although the book does not deal, except incidentally, with primary disorders of the adrenal cortex, it contains much of interest to the clinician concerning the background activity of the gland in health and disease, against which diagnosis of the primary disorders must be made. It is good value for those with a special interest in this field.

G. K. MCGOWAN

AUTOMATIC DISPENSING PIPETTES AN ASSESSMENT OF 35 COMMERCIAL INSTRUMENTS. 1967. By P. M. G. Broughton, A. H. Gowenlock, G. M. Widdowson, and K. A. Ahlquist. Scientific Report No. 3, prepared by the Association of Clinical Biochemists. 10s.¹

This booklet is the report of an investigation carried out on automatic dispensing pipettes for the Scientific and

¹Obtainable from The Administrative Office, Association of Clinical Biochemists, 7 Warwick Court, Holborn, London W.C.1. (Price includes postage, but airmail will be charged extra.)