Book reviews

IMMUNOLOGY FOR STUDENTS OF MEDICINE By J. H. Humphrey and R. G. White. (Pp. ix + 450; illustrated, 45s.) Oxford: Blackwell Scientific Publications. 1963.

Many people qualified more than 10 years will be grateful to the authors for this book. Immunology is no longer mainly the concern of those who prepare prophylactic vaccines or run blood transfusion services, but has invaded almost every field of medicine so that many doctors have an uneasy feeling that they need to know more about modern immunology. They are the 'students of medicine' referred to in the title. Senior medical students will also find it valuable, but it is not intended for the tyro.

The style is readable, a little, but not too, dogmatic. Important alternative theories are given but the reader is not burdened with conflicting evidence. At the end of each chapter is a list of suggestions for further reading, but no attempt is made to give a full bibliography. Technical details are only described when essential to understanding; smaller print indicates paragraphs more interesting to the specialist. The type and the numerous illustrations are clear and errors are minimal. The same species of bacteria is sometimes referred to by different names but this will doubtless be made uniform in further editions. A glossary is included to aid those unfamiliar with immunological terms.

The book is warmly recommended to all who feel they need to catch up with recent discoveries in immunology and with modern theories of autoimmune disease and immunological tolerance.

JOAN STOKES

ENZYME HISTOCHEMISTRY By M. S. Burstone. (Pp. xii + 621. illustrated. 160s. 6d.) New York and London: Academic Press Inc. 1962.

Great advances in histochemistry have been made over the past two decades, and the number of available techniques is rapidly increasing. It is, perhaps, in the special field of enzyme histochemistry that progress has been most spectacular, and in this book Dr. Burstone presents a most valuable and comprehensive review of the subject. The first of the 16 chapters deals with the techniques of fixation, embedding, the cutting of frozen sections, freeze-drying and freeze substitution. In the following three chapters, there is a general account of reagents and a discussion of the principal reactions which are utilized for the localization of enzymes in tissues. Consideration is then given in turn to phosphates, esterases, sulphatases, glycosidases, transglycosydases, proteolytic enzymes, oxidases, dehydrogenases. At the end of each chapter there are appendices, in which are described the practical details of the histochemical techniques and the methods of synthesizing various reagents. Separate chapters are devoted to the application of histochemistry to electron microscopy and electrophoretic procedures. There is also a short but interesting

discussion on the relationship between carcinostatic agents and histochemical substrates.

Dr. Burstone's book can be recommended as an outstanding compilation which will prove invaluable to research workers who wish to utilize enzyme histochemistry in their investigations. Throughout the text special consideration is given to the use of the procedures in the investigation of tumours, an approach to problems of neoplastic disease which doubtless has an important future. The illustrations are well chosen and well reproduced.

N. F. C. GOWING

PROTIDES OF THE BIOLOGICAL FLUIDS 10th Colloquium, Bruges. Edited by H. Peeters. (Pp. xi + 354; 170 figures; 42 tables. 90s.) Amsterdam, London, and New York: Elsevier Publishing Company. 1963.

This volume marks the tenth anniversary of the Bruges Colloquium. One aspect which should please the English-speaking world is the fact that an increasing number of papers are presented in English—50 out of 80 in this volume. The proceedings are divided into five sections. The opening chapter of the first section deals with cell and tissue specificity of proteins by C. P. Stewart. Considerable attention is devoted to the very topical subject of iso-enzymes with a review on the application of multiple forms of enzymes in biology. A very valuable paper on the subject of γ 1A (P_2A globulin) was presented by Heremans and his co-workers and the origin and structure of the Bence-Jones proteins was discussed by Putnam and his group. Dr. Peeters reported on the application of their electrochromatography, an adaptation of the bidimensional curtain electrophoresis in which the electrophoretic run is stopped short of the bottom of the sheet. An appropriate stain is then used for the demonstration of the separated fractions. A few papers dealt with lipoproteins, and this year only five on γ globulins, including two on the anti-Gm system. An exhaustive study of human coaguloplasmin based on urea splitting and starch electrophoresis was presented by Poulik. Proteins of the bile, gastric juice, saliva and male genital tract were the subject of the third section of the volume. An interesting study on patients on gold treatment was followed in another section by a short communication on the transport of gold in serum. The binding, inhibition, and inactivation of drugs by albumin was studied and reported by Kerp. In the chapter on techniques, usually very prominent in the proceedings, chromatographic techniques were more in evidence and new methods were reviewed. Gel diffusion methods were discussed by their originators, Porath and Flodin, and some aspects of recent techniques on acrilamide electrophoresis by Wieme and Ott. A short but important review on L.D.H. iso-enzymes staining by tetrazolium salts was presented. Illustrations, charts, and diagrams