Book Reviews

Clinical and Laboratory Approach to Metabolic Defects

Inborn Errors of Metabolism. Part 1. Clinical Aspects. 2nd edition. By David Yi-Yung Hsia, M.D. (Pp. 396+xvii; illustrated. 83s.) London: Lloyd-Luke. 1966.

Inborn Errors of Metabolism. Part 2. Laboratory Methods. By David Yi-Yung Hsia, M.D., and Tohru Inouye, Ph.D. (Pp. 244+xvii. 53s.) London: Lloyd-Luke. 1966.

The first edition of this book appeared in 1959. If the author's contention seven years ago was acceptable, that "unprecedented progress in the field of biochemical genetics has permitted, for the first time, a logical approach to the various inborn errors of metabolism in man," how much truer it is today. There has been a tremendous expansion of work in this field, aided largely by refined micro-analytical techniques and a more thorough understanding, through the use of isotopes, of the details of normal intermediary metabolism.

The change which has taken place in the intervening years is reflected in the contents of the new edition. Thus there is a new section of normal biochemical variation; less space is given to elementary biochemical genetics in order to make room for the newer information on D.N.A., R.N.A., and the basis of the genetic code. The range of metabolic defects and deficiencies is well covered, and convenient grouping under chapter headings, such as "Disturbances in Transport Mechanisms," "Disturbances in Lipid Metabolism," and "Hereditary Myopathies," will facilitate rapid reference.

In general, the same order of description is followed, where available, for each condition, namely (1) a brief historical and general introduction, (2) clinical features, (3) heredity, (4) pathogenesis, (5) diagnosis, (6) treatment, and (7) a list of selected references. Diagrams of metabolic pathways and figures of biochemical and clinical features are used to illustrate the text further and are bold and clear. When covering such a range and variety of topics it is inevitable that statements will appear to which not all workers would subscribe; under erythropoietic protoporphyria it is stated that present evidence suggests its transmission by an autosomal recessive gene, whereas, in fact, evidence favours dominance.

The second volume, as is stated in the preface, "has been designed to provide as direct an approach as possible to the detection and confirmation of the metabolic lesions described in Part 1." It is, in fact, complementary to the first volume and will be used alongside it by most investigators. To compile any handy text dealing with laboratory procedures for the identification or quantitative determination of substances or of enzyme activities demands judicious selection. The guiding principle here seems to have been selection for the greatest degree of specificity combined with rapidity, sensitivity, and availability of instrumentation. Certain specialized techniques such as chromatographic separations, electrophoresis, etc., are omitted and reference made to other texts where they are described. The result is an exceedingly useful compilation of procedures, clearly and concisely set out, but inevitably not all clinical biochemists will be satisfied with the procedures recommended. For example, it has long been the practice on this side of the Atlantic to measure porphyrins spectrophotometrically instead of fluorimetrically, thereby dispensing with the necessity to use standards (with limited keeping qualities) for comparison and also avoiding the influence of various factors upon fluorescence-intensity which are difficult to control. The actual procedures recommended for the determination in urine and stool of coproporphyrin, uroporphyrin, and protoporphyrin are not those currently used in this country and are more complicated and less satisfactory. Procedure 115 for uroporphyrin would convert any porphobilinogen present in the urine into uroporphyrin—with a variable yield of only about 15–30%.

Such criticisms should not outweigh the value of Part 2 as a whole; it is a good guide through the labyrinth of biochemical investigations which are now inseparable from scientific medicine. Additional valuable information is given in the table (pp. 222–3) which lists for 22 test materials the particulars of their preparation, dose, route of administration, and directions as to sampling for analysis. Another table (pp. 224–5) gives particulars of the determinations appropriate for a number of different diseases and the interpretation of their results; preparation of the patient is also described.

These two volumes will be welcomed by all those familiar with the first edition and should provide paediatricians and clinicians with indispensable up-to-date knowledge in a most important and rapidly expanding field of medicine. Production and printing are of a high standard. There is a good index, and an appendix provides a correlation between Parts 1 and 2 referring to the procedure number of the tests which are applicable in different conditions.

C. RIMINGTON.

Improving the Use of Drugs

Animal and Clinical Pharmacologic Techniques in Drug Evaluation. Edited by John H. Nodine, M.D., and Peter E. Siegler, M.D. (Pp. 660+xix; illustrated. £6 15s.) London: Lloyd-Luke. Chicago: Year Book Medical Publishers. 1964.

What should be done about clinical pharmacology? This volume gives one pioneering answer from the Hahnemann Medical School in Philadelphia, and it deserves serious consideration. It assembles, in 87 contributions, the lectures given in the course of clinical pharmacology started there in 1962. The course was open to those who had completed a two-year general medical residency, and was recognized by the American Board of Internal Medicine. It lasted two years, with two semesters of four hours a week, and included formal lectures, research conferences, participation in research projects in animal and human pharmacology, and clinical drug studies.

The contributors include 26 from drug firms, 24 from preclinical departments, 41 from clinical departments, and one lawyer. The book covers the whole of pharmacology, focusing on techniques used to assess drugs first in animals, then clinically. So wide a field cannot be fairly assessed here, but the contributions by S. Irwin (on variability and on screening), by B. B. Brodie (on drug distribution and fate), both leaders in their fields, are notable, and most of the other authors provide sound, brief, and meaty accounts of their subject with full bibliographies. The whole is tied together by editorial comments. Readers in this country may well find some of the jargon oppressive and disagree over detail. But the book remains remarkable; for with it alone, together with the references to which it directs the reader, any competent person willing to think could frame a sound primary procedure for evaluating, in laboratory and clinic, almost any drug. To anyone who wishes relief from ethical, sociological, economic, and political discussions about drug control, and wishes to push on with the task of using scientific method to improve the use of drugs, this can be strongly recommended; not indeed for pleasure, but for regular reference, guidance, and not infrequently stimulus.

W. D. M. PATON.

Atlases of Histology

An Atlas of Histology. By W. H. Freeman, B.Sc., M.I.Biol., and Brian Bracegirdle, B.Sc., A.R.P.S., M.I.Biol. (Pp. 140+xi; illustrated. 30s.) London: Heinemann. 1966.

Atlas of Histology. By Sam J. Piliero, Ph.D., Myron S. Jacobs, Ph.D., and Saul Wischnitzer, Ph.D. (Pp. 401+xiv; illustrated. 60s.) Philadelphia: J. B. Lippincott. London: Pitman. 1965.

Two atlases of histology have recently appeared. The one (by W. H. Freeman and B. Bracegirdle) is aimed to assist the beginner to grasp some of the essential points about the histological examination of a relatively small