Book reviews


This is a collection of procedures used in the author's laboratory for the detection of inherited metabolic diseases. The range of tests offered is impressive. Topics include the amino acidopathies, storage diseases, the galactosaemias, Wilson's disease, the Lesch-Nyhan syndrome, immunodeficiency disorders, and inborn errors of the red cell. Balance is uneven. For example, storage diseases are thoroughly treated in 116 pages while immunodeficiency disorders rate only three pages and genetic disorders of hormone metabolism are not mentioned at all. This is inevitable. Growth in this field has been so rapid that it is now neither possible nor desirable for a centre to offer up-to-date tests right across the board.

A book on biochemical methods should be more than a collection of procedures. It should reflect the views of the author on the relative merits of methods given, caution against traps for the unwary, against pitfalls and artefacts, and tell us which methods can readily be set up and which are better left to specialists. Reference should be made to clinical situations in which a given test is likely to yield useful and valid information. On all these counts this book has little to offer. However, it contains a large number of sound, well-established methods (also a few that are obsolete), and can be recommended as one of the books, but certainly not as the only book, to be consulted by those wishing to extend the range of services offered by their laboratory in this field.

J. STERN


This book is a collection of 10 essays on the catecholamines. Eleven authors contributed and there is remarkably little overlap.

Five essays are on the normal biochemistry and physiology of the catecholamines. They deal with the metabolism and release of the amines, their involvement in intermediary metabolism and the regulation of hormone secretion, and the significance of the catecholamines as transmitter substances.

These chapters are readable, comprehensive, and succinct. Together they form a splendid summary of the advances of the last 20 years or so.

The other five chapters deal with clinical and pathological aspects of the catecholamines. There are inevitably chapters on phaeochromocytoma, on hypertension, and on diseases of the autonomic nervous system. A further chapter, which will interest clinical chemists, is on the catecholamines and hyperthyroidism.

The standard of writing is generally extremely high, but just occasionally there are troughs, particularly in the clinical section of the book. The temptation to deduce general laws from limited clinical experience is great. I found a couple of places where the authors had not resisted it.

Typographical errors are few. However, I found a single but serious error in the text where the word defective had been substituted for effective. This, of course, completely changed the meaning of the sentence. The error ought to have been picked up by the author at the proof-reading stage.

This is a beautifully produced book, which contains a great mass of information. It is a bargain at £7.50.

R. ROBINSON

Antifungal Compounds (2 volumes). Edited by Malcolm R. Siegel and Hugh D. Sisler. (Pp. 616 (vol. 1), 664 (vol 2); S.Fr. 175 (vol. 1), S.Fr.205 (vol. 2)). New York: Marcel Dekker. 1978.

The 41 authors who contribute to these two volumes provide a useful and comprehensive review of antifungal compounds although in such a rapidly changing field many advances have been made since publication.

The majority of the chapters are concerned with fungal diseases of plants and especially plants cultivated as a source of food for man. The biological-biochemical-ecological approach helps to clarify the problems facing workers involved in the control of fungal disease. The relevance of clinical biochemistry is, however, very limited. A single chapter in volume 1 is devoted to fungicides in medicine and does not deal in depth with the therapeutic agents discussed. The second volume, while providing information on the action of fungicides on plant pathogens and their effect on experimental animals, is likely to be of little direct value to a clinical biochemist.

The editors have brought together valuable information of antifungal compounds but it is of principal value to the plant pathologist and mycologist.

R. Y. CARTWRIGHT


This book deals with the biology of cholesterol and the part it plays in some disease processes. The central theme is the role of the sterol in preserving the integrity of mammalian cell membranes.

There are 14 chapters in the book. These fall naturally into two parts. The first is concerned with the digestion, absorption, transport, and storage of cholesterol in several animals, including man, together with sections on its biosynthesis, excretion, and the action of anticholesterol drugs. This part serves as the introduction to the second, which is concerned with the possible role of cholesterol in atherosclerosis, cancer, gallstone formation, and some diseases of the nervous system.

The available facts are marshalled to present logical explanations of the role of cholesterol in these pathological processes within the context of the central theme. Generally speaking, these explanations are plausible, but whether they are or not is of secondary importance compared to the stimulus that the book will give to further studies on cholesterol.

To sustain his arguments the author draws on results from rheological studies, surface chemistry, lipid enzymology, physics, and mammalian pathology. The section on the analysis of cholesterol is rather brief but is adequate if read in conjunction with either Cook or Kritchevsky's book.

The notable feature of the book is its extensive and comprehensive bibliography and author index, which together fill 159 of the pages. This section represents the results of a painstaking search of the literature and will in time prove to be as valuable to workers in this field as the text, although it is a pity that King and Rosenheim's paper giving the correct structural formula is missing from the references since it constituted a major advance in sterol chemistry. However, that
is a minor fault and will not detract from the stimulating effect of the book, which will certainly become obligatory reading for anyone working on this topic.

R. F. NUNN


This supplement to the Journal of Clinical Pathology is the report of a symposium held in November 1976. As the editors indicate, progress in hormone assays has revolutionised clinical endocrinology. The Supra-regional Assay Service has opened this field to all hospitals, and this publication supplies a wealth of information about the clinical applications, and limitations, of current knowledge about hypothalamic and pituitary hormones. After a lucid, well-illustrated description of the complex anatomy of the hypothalamus and pituitary, further chapters deal with hypothalamic-pituitary physiology, pituitary hormone purification, and cytochemical assays. The sensitivity and biological specificity of this latter technique are well illustrated by reference to corticotrophin and thyrotrophin. Disorders of gonadotrophin and prolactin secretion are succinctly presented, and there are reviews on the clinical applications of thyrotrophin-releasing hormone and gonadotrophin-releasing hormone, including therapeutic uses of the latter.

The disappointing use, as yet, of these releasing hormones as hypothalamic-pituitary function tests is pointed out in several chapters. The well-established use of growth hormone in the treatment of growth hormone deficiency is described, and there is a concise summary of the clinical features and management of 150 patients with acromegaly seen at the Middlesex Hospital over the last 10 years. The merits of transphenoidal surgery are presented although the surgical expertise is not widely available at present. The relatively neglected posterior pituitary received just one paper at the symposium. Progress here has been limited by the lack of good assays for vasopressin. Some of the problems are presented, and that these are recognised implies that clinically useful assays may not be too far away.

Although, in terms of its title, the symposium is not comprehensive—there is no discussion of pituitary-dependent Cushing’s syndrome, and a session devoted to the complex endocrinology of puberty would have been useful—in the main, the topics that are presented are good summaries with up-to-date bibliographies. It remains to be seen how quickly the information becomes outdated in this rapidly expanding field, but for its modest price this supplement is excellent value as a summary of current knowledge. It will be a first-line referral source for any laboratory offering advice and interpretative comment on hypothalamic-pituitary function to clinical colleagues.

J. S. HARROP


Mucus appears early in evolution and is present in man in a multiplicty of roles and locations. The First International Symposium on Mucus (at the University of Surrey in 1976) and its proceedings published last year showed the need for a summary of current knowledge. This publication, forms the data base of the 1978 symposium and its successors, and is in the tradition of the lucid statements which the British Medical Bulletin is known for.

Leading specialists cover the histology and biochemistry of the secretory cells, the chemical structure and biosynthesis of the glycoproteins, their physiological functions, and pharmacology. Separate chapters deal with the mucus of the bronchial tree, the gastrointestinal and female genital tract, and of meconium and relate their normal functions to clinical problems (infection, gastrointestinal disease, cystic fibrosis, infertility, and birth control). Lynne Reid and J. R. Clamp write to clarify the confusing nomenclature that has accumulated around the subject. The introduction by Sir Francis Avery Jones should not be skipped; it explains, summarises, and puts into perspective indications of future lines of research appearing throughout the text.

This is an authoritative account of a fascinating subject and should be widely read.

A. I. TÁRNOKY