BOOK REVIEWS

TOBACCO. EXPERIMENTAL AND CLINICAL STUDIES. By P. S. Larson, H. B. Haag and H. Silvette. Pp. xii + 932 (including Index). Bailliere, Tindall and Cox Ltd., London, 1961. 160s.

This is a remarkable volume. Its authors are two professors and a visiting professor of pharmacology at the Medical College of Virginia, and they have dedicated the volume to their wives with ". . . admiration for their incredible patience." The dedication is well deserved. The scope, as the subtitle suggests, is confined to the laboratory and the patient. There is no discussion of the agricultural and industrial aspects of the subject, although much of medical interest might be discovered by examining the sociology of tobacco. Within their chosen limits, the authors have set out to be comprehensive, and they seem to have succeeded. There are 109 pages of references, at about 60 per page. The original printing omitted McArthur to McVay and these are inserted as an extra page. Brief inspection did not show other inaccuracies, and showed a much wider reading of world literature than is sometimes apparent in American works. In the text the well-known facts about nicotine are all collected and fully documented. So is a good deal of material of more doubtful value, such as the use of a chamber pot filled with burning coals and tobacco as a treatment for piles. Whether the fumes of nicotine provide more effective treatment than simply sitting on hot coals is not discussed, but it is expressly not the purpose of this book to adjudicate. The treatment has been reported; here is the reference. In a few years time, this sort of book will be unnecessary, because an adequately programmed computer will be able to extract whatever information is required from its stores. However the output of the computer is unlikely to be as elegant and dignified as this 930 page double-column volume. For anyone who wants to find all the literature on medical aspects of tobacco, it will be invaluable. Anyone who wants discriminating guidance will find his time endlessly wasted, if only because there are so many amusing by-ways to pursue when all the clinical and experimental opinions are gathered in one compendium.

MILES WEATHERALL.

PROCEEDINGS OF THE FOURTH INTERNATIONAL CONGRESS ON CLINICAL CHEMISTRY. EDINBURGH, 1960. Pp. xvi + 212. E. and S. Livingstone, Ltd., Edinburgh, 1961. 35s.

The present volume contains the full text of the papers read at the four plenary sessions together with short abstracts of a catholic array of communications. The main function of the latter is to provide a useful forewarning of their eventual appearance as full papers in the literature. In contrast the detailed accounts of the symposia and their discussions are self-contained chapters and present valuable reviews of the selected topics.

In the session devoted to plasma protein turnover in disease, McFarlane surveys the use of isotopes in clinical research on proteins, being mainly concerned with problems of permissible doses of radioactive isotopes, the choice of amino-acid, the isolation of the labelled protein and the calculation of rates of synthesis and catabolism. Schwartz and Jarnum contribute a critical account of turnover studies with ^{131}I—labelled proteins in various diseases such as cirrhosis, nephrosis, protein-losing gastro-enteropathy and the collagen diseases. The symposium entitled "mechanisms of urine production" includes a detailed paper by Berliner on the renal transport and excretion of potassium,

a more general treatment of modern concepts of renal function by Black and a discussion of the mechanisms of urinary concentration and dilution in the mammalian kidney by Wirz.

The third section is concerned with a subject, enzymes in clinical chemistry, that has achieved much prominence in recent years. King presents a short historical introduction and Webb produces some trenchant comments on the necessity for standardised conditions under which enzyme activities should be measured. Although it is possible to devise methods for measuring the absolute amounts of enzymes in tissues, the clinical interpretation of the results must always be empirical. Two particularly interesting and inter-related papers are by Bruns and by Wroblewski and Gregory. The first concerns the differentiation and measurement of organ-specific enzymes in serum. Here the eventual aim is to distinguish damage or perhaps even different types of damage, to specific organs from the pattern of abnormalities observed in the serum enzymes. The other paper deals more directly with isoenzymes, which are individual plasma or tissue enzyme activities which have been shown to be due to two or more similar but chemically, immunologically, and electrophoretically distinct components. Thus, the lactic dehydrogenase activity of human plasma consists of the sum of five iso-enzymes of lactic dehydrogenase. Individual human tissues, such as cardiac muscle and liver, each have a different and characteristic iso-enzyme composition. Hence, the serum pattern of iso-enzymes in a particular patient may be characteristic of an organ or the pathological process, or both.

The remaining session consists of a group of papers dealing with congenital abnormalities of metabolism. Harris gives a useful general account of the genetic factors with special reference to serum cholinesterase. Kretchmer deals with the disorders or carbohydrate metabolism, such as glycogen storage disease, and Sobotka with those of lipid metabolism including the various lipid storage diseases and gargoylism. Beutler contributes a description of the various metabolic abnormalities of red cells and discusses the mechanism of the sensitivity of the erythrocyte to primaquine.

The book is both interesting and informative and is recommended to all those who are involved with the growing impact of basic research upon the medical sciences.

M. J. H. SMITH.