

LETTERS TO THE EDITOR

unpublished results, the potency of picrotoxin solutions diminishes with increase in alkalinity above pH 7.

P. W. RAMWELL.

J. E. SHAW.

M.R.C. Unit for Research on the Chemical Pathology
of Mental Disorders,
Department of Physiology,
The Medical School,
Birmingham, 15.

March 29, 1962

REFERENCES

- Martin, E. W. and Cook, E. F. (1956). *Remingtons Practice of Pharmacy*, 11th Ed., p. 904. Easton, Pennsylvania: Mack Publishing Co.
United States Dispensatory (1955). p. 1059, 25th Ed., Editors: Osol, A. and Farrar, G. E.; Philadelphia: J. B. Lippincott & Co.
Bryan, G. and Marshall, P. B. (1948). *Quart. J. Pharm.*, **21**, 305.

BOOK REVIEWS

MEDICAL PHARMACOLOGY. Principles and Concepts. By Andres Goth. Pp. 551 (including Index). Henry Kimpton, London, 1961. 82s. 6d.

This book is written primarily for medical students and practitioners. Its aim is to present the current pharmacological knowledge with particular reference to principles and concepts and not to include all drugs related to each important compound used in medicine. This means that many chapters are short (e.g. antihistaminic drugs, 6 pages) but nevertheless they are concise and do not worry the practitioner with a mass of chemical formulae. The elements of pharmacology are to my mind clearly set out and I enjoyed reading the volume which is well printed and strongly bound. At the end of each chapter, a short set of important references directs the reader to the original studies. The main sections are devoted to General Aspects of Pharmacology, Drug Effects on the Nervous System and Neuroeffectors, Psychopharmacology, Depressants and Stimulants of the Central Nervous System, Anaesthetics, Drugs used in Cardiovascular Disease, Drug Effects on the Gastrointestinal Tract, Drugs Influencing Metabolic and Endocrine Functions, Chemotherapy, Poisons and Antidotes, and Prescription Writing. There are few mistakes (the formula for Regitine on page 113 is incorrect), but some chapter titles are open to objection, e.g. Adrenergic drugs, Cholinergic drugs and Nonnarcotic analgesic drugs, besides a section on Antidiarrheal agents. The book may be thoroughly recommended to those who are not particularly keen in finding out the mechanism of action of drugs, though its high price is a great drawback. G. B. WEST.

PHARMACOGNOSY. 4th Edition. By Edward P. Claus. Pp. 565 (including 227 illustrations, 1 plate in colour, and Index). Henry Kimpton, London, 1961. 93s. 6d.

The author states that the term Pharmacognosy literally means (p. 9) a "cognizance of pharmaceuticals" and (p. 10) defines it as "an applied science which deals with the biological, biochemical and economic features of natural

BOOK REVIEWS

drugs and their constituents". He goes on to say "modern aspects of the science include not only the crude drugs, but also their natural derivatives" and then explains that the glycoside digoxin, the alkaloid reserpine, the hormone thyroxin and other derivatives of crude drugs are "all part of the subject matter of pharmacognosy". He also includes (p. 11) "economic substances affecting the health of man and other animals" such as "allergens, allergenic extracts, antibiotics, immunising biologicals, flavouring agents, condiments, beverages, insecticides, rodenticides, and herbicides".

A general introduction deals in an interesting way with commerce and the relation of the study to Pharmacopoeias and other official publications. Evaluation is described (p. 23) as identification and determination of quality and purity. A useful discussion is given of drug adulteration and its detection, but little or nothing is said about attack by insects and other pests during storage and their identification. The method of classification adopted is based upon the chemical nature of the constituents of the drugs described, giving chapters on Carbohydrates, Glycosides, Tannins, Lipids, Volatile oils, Resins, Alkaloids, Endocrine products, Vitamins, Enzymes, Proteins, Antibiotics, Immunising Biologicals, Allergens, Pesticides. Two appendices are included, comprising (1) A Taxonomic list of Important Drugs, and (2) Powdered Drugs with Key for Identification".

For many of the more important drugs no attempt is made to give a description of the commercial article or of its powder. The matter is avoided by a brief paragraph worded as follows:—"Structure and Powder—See figs. x and y, and the U.S.P. page k. or N.F. page m." This seems to omit one of the most important functions of a textbook; the author of such a book is expected to lead the way instead of following official writings. Good original descriptions help to guide the Committees concerned with official publications and their members naturally look to standard textbooks for assistance in formulating official requirements.

The book has many good photomicrographs of the crystals of alkaloids and their salts and of other drug constituents, but no indication is given of the magnification of the pictures. There are also good photographs of some of the drug yielding plants, but sometimes the drugs derived from them are not figured, thus two pages, pp. 122 and 123, are given of good photographs of the plants yielding rhubarb, but there is no illustration of the drug itself. The drawings of the anatomical structure of drugs are often semi-diagrammatic and no magnification is given. The drawings of powders leave much to be desired; for example, powder of cascara bark (p. 116) shows stone cells and fibres bearing no resemblance to those of the drug, and the crystal cells accompanying the fibres are at a different magnification. The drawing of a transverse section of a tea leaf on p. 374 is entirely misleading; the drawing is upside down and the two epidermises are incorrectly named, while the mesophyll bears no resemblance to that of the leaf. These matters are of great importance in this book, because verbal descriptions are often omitted and are replaced by reference to the photographs and drawings.

In the section concerned with glycosides the cyanophoric glycoside linamarin (p. 182) is not named amongst the constituents of linseed although this constituent has been responsible for poisoning of cattle. When antibiotics are being described, no description or drawings are given of the organisms producing the antibiotics. It is, however, good propaganda to introduce chapters on, for example, antibiotics, and allergens, which come legitimately within the province of pharmacognosy.

BOOK REVIEWS

The book is well produced and is printed on good paper, which enhances the appearance of the 227 illustrations. The frontispiece is a beautiful coloured photograph of the inflorescence and leaves of *Rauwolfia serpentina* Benth.

T. E. WALLIS.

QUANTITATIVE METHODS IN PHARMACOLOGY. Edited by H. De Jonge. Pp. xx + 391. North-Holland Publishing Company, Amsterdam, 1961. 84s.

This volume contains the papers presented and the discussions arising at the Symposium on Quantitative Methods in Pharmacology which was sponsored by the Biometric Society and held at Leyden during May, 1960. It contains some 26 papers on quantitative, statistical methods used in pharmacological testing which are grouped under five main headings, namely, sequential analysis, standardisation of drugs, parametric and non-parametric statistical methods, drug screening and the effects of mixtures of drugs. The scope of the papers is very wide, the treatment of the subject matter is largely, but not entirely mathematical, and deals not only with routine laboratory methods, but also with clinical trials. Most of the contributions deserve separate detailed comment and it is difficult to select individual papers for special attention. Among the papers found more interesting by the reviewer, is one by J. Hajnal on sequential trials of analgesics in rheumatoid arthritis in which the author in the clearest possible style sets out the value (and limits) of sequential analysis in clinical trials. M. A. Schneiderman gives a clear and interesting description of a multistage sequential method for the screening of large numbers of natural and synthetic anti-cancer agents against a combination of the three mouse tumours; sarcoma S-180, mammary carcinoma CA-755 and leukemia L-1210. J. J. Grimshaw and P. F. D'Arcy discuss some of the difficulties met with in the biological assay of suxamethonium and other muscle relaxants, the screening of drugs which potentiate or diminish barbiturate anaesthesia, of compounds with anti-inflammatory activity, analgesics and local anaesthetics. This is a very useful contribution, the more so because it is rare for experimental laboratory workers to publish details of the manner in which they have overcome their practical difficulties—there must be a vast amount of useful information of this kind in innumerable laboratory notebooks and reports. N. Brock and B. Schneider point out the value in the assessment of drugs of using the ratio LD₅/CD₉₅ as the therapeutic index. E. J. Ariens and A. M. Simonis make a characteristic contribution on the analysis of drug-receptor interactions, and C. W. Dunnett presents an interesting theory of drug screening applicable to drugs which are either active or inactive and involving a truncated sequential method, which actually takes into account the cost of testing the drugs and of making an incorrect decision.

The book will repay reading and, for a work of its kind, is easy to read. It should find its way on to the shelves of most biologists and statisticians interested in, and there are few who can afford not to be, quantitative methods. It is unfortunately marred by a number of spelling errors and misprints, but these apart, is well produced with good figures and line diagrams. J. J. LEWIS.