a concentration of 6.0 mcg./0.5 ml. on the standard curve.

Standardization—The experimental values for acetylcholine were standardized against known concentrations of acetylcholine chloride by utilizing a standard curve prepared from the following. A concentration of 20.0 mcg./0.5 ml. gave the following values in three samples: 0.750, 0.760, and 0.769 mμ with a mean of 0.759 mμ; a concentration of 10.0 mcg./0.5 ml. gave the following values in three samples: 0.335, 0.343, and 0.352 with a mean of 0.343 mμ; a concentration of 6.6 mcg./0.5 ml. gave the following: 0.230, 0.243, and 0.250 with a mean of 0.241 mμ; a concentration of 5.0 mcg./0.5 ml. gave the following values: 0.175, 0.187, and 0.199 with a mean of 0.189 mμ; a concentration of 4.0 mcg./0.5 ml. gave the following values: 0.134, 0.145, and 0.156 with a mean of 0.141 mμ.

The results of this analysis support the hypotheses that angiotensin-II administration causes the release of acetylcholine at neuroeffector sites in the turtle plasma and that this release is not dependent upon the presence of intact vagus innervation (7).

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BOOKS

REVIEWS

Pharmaceutical Enzymes and Their Assay. Edited by R. RUYSSEN. Universitaire Pers afd. Uitgoeverij van N. V. Universitaire Boekhandel 12. St.-Amandstraat, Ghent, Belgium, 1969. 151 pp. 15.7 × 24.5 cm. Price $11.00. (*French* and *English*)

In 1961, the Fédération Internationale Pharmaceutique created the Commission for the Standardization of Pharmaceutical Enzymes, the primary mission of which was the establishment of uniform international standards for enzymes having pharmaceutical applications.

The lack of uniformity in the methods used to express the catalytic activity of pharmaceutical enzymes prompted the Commission, as its first resolution, to adopt, insofar as is practicable, an international unit system which defines an enzyme unit as that amount which catalyzes the transformation of 1 micromole of substrate per minute (or where more than one bond of a more complex substrate is attacked, one microequivalent of the group concerned per minute) under well-defined, usually external, optimal conditions. Since a unit system of this kind requires that either new methods be developed or existing methods be modified for the assay of virtually every enzyme, the attention of the Commission has thus far been devoted largely to assay methods and the many problems associated with them.

This book is a hard-cover publication of a symposium held by the Commission at the University of Ghent in May 1968. The selected topics, which are all expertly discussed in this series of seven papers, include: (1) reactions of organofluorophosphate-sensitive enzymes; (2) assay of proteinases; (3) determination of the components of the human plasma fibrinolytic system; (4) action of streptokinase on purified human plasminogen; (5) some aspects of the biochemistry of cellulases and hemicellulases; (6) microbial enzymes and their industrial applications, and (7) assay methods of the F.I.P. Commission on enzymes. Papers 4 and 5, previously mentioned, are written in French; the rest of the book is in English.

The long seventh paper contains an excellent review of the problems encountered and the progress made thus far by the Commission toward its goal. Also discussed are the many requirements which must be met by an assay method if it is to be accepted on an international level. Included herein is a detailed presentation of the Commission's proposed methods of assay for trypsin, chymotrypsin, papain, trypsin-inhibitor, pepsin, pancreatic amylase, pancreatic protease, enterokinase, and pancreatic lipase.

The book is replete with references. Also appended is a list of reference standards (six enzymes and three substrates) available from the Commission.

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British Medical Bulletin: Control of Human Fertility. Vol. 26, No. 1. Edited by G. I. M. SWYER. Medical Department, The British Council, 97 & 99 Park St., London, England, 1970. i + 97 pp. 22 × 28.5 cm. Price $6.50.

This issue contains papers on various aspects of human fertility contributed by a rather impressive list of investigators. This compilation takes a multidisciplinary approach with several papers discussing the relative health hazards of various kinds of contraceptive methods.

The papers are, for the most part, written to put the particular topic into a historical context, present the developments and status of the research, and provide some comments on the future directions to be taken. This particular issue should be of interest not only to scientists actively working within this field, but also to those who are interested in a technical state-of-the-art review.

Staff Review ■

Clinical Toxicology. Second Edition. Edited by C. J. POLSON and R. N. TATTERSALL. J. B. Lippincott Co., Philadelphia, PA 19105, 1969. x + 655 pp. 14.5 × 22.2 cm. Price $18.50.

The growing interest in toxicology in colleges of pharmacy as well as by pharmacists as a whole will require greater attention being given to texts and references on the subject than presently available. Publication of the second edition of the British text "Clinical Toxicology," offers some help to the teacher and student. As a text for American students it suffers from the inclusion of repeated references to medical-legal rules and interpretations which are quite appropriate for British students but extraneous and perhaps confusing to our students. The authors, however, have made it clear that the book is intended primarily for physicians who are in need of general and specific information on the clinical manifestations, treatment, and prognosis of cases of poisoning. In this respect, it can also be valuable to the pharmacist as a source book of clinical toxicology. The book is extremely easy to read and gets directly to the practical aspects of toxicity of compounds and products. Further interest is generated by including illustrative cases of poisoning which helps orient the reader to the effect of a particular substance ingested by a person. The authors do not try to cram volumes of information on a specific compound but include sufficient information which may be of extreme importance in diagnosing and treating a poisoned patient.

"Clinical Toxicology" is divided into two parts. The first and the shorter portion of the book deals with the general considerations of poisoning while the second, and in essence, the bulk of the book, reviews the individual substances generally as separate short chapters. The book can be recommended for pharmacists and physicians but only as an added source of information. As with most texts on clinical toxicology, information on toxicity of newer agents and products must be sought elsewhere. The British book will not replace the present excellent reference source, "Clinical Toxicology of Commercial Products" published by The Williams & Wilkins Company, Baltimore, Md., but may help to supplement portions of it.

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Review of Biochemistry. By NATHAN H. SLOANE and J. LYNDAL YORK. Macmillan Co., 866 Third Ave., New York, NY 10022, 1969. ix + 278 pp. 18 × 26 cm. Price: $9.95, hardbound; $6.95, paperbound.

This outline review of biochemistry prepared by Nathan H. Sloane, Professor of Biochemistry, University of Tennessee Medical Units, and J. Lyndal York, Associate Professor of Biochemistry, University of Arkansas School of Medicine, is aimed at presenting modern biochemistry in a concise, practical form covering fundamentals applicable to the health professions.

The authors emphasize in the Preface that this book "... is not a text; rather, it can be used to greatest advantage in conjunction with lecture material and assigned reading in textbooks and periodicals."

The outline form which is used throughout the book allows the reader to scan a great deal of information with minimum effort.

The book surveys biochemical methods and physiochemical principles as well as including chapters on the cell, amino acids and peptides, proteins, and enzymes. Three chapters deal with carbohydrate metabolism and chemistry. The metabolism of lipids, amino acids, and nucleic acids is covered. In the concluding chapters, aspects of genetics, hemoglobin, renal function, and vitamins are among the topics discussed.

Staff Review ■

Neurophysiological and Behavioral Aspects of Psychotropic Drugs. Edited by A. G. KARCZMAR and W. P. KOELLA. Charles C Thomas, 301-327 East Lawrence Ave., Springfield, IL 62703, 1969. xviii + 199 pp. 17.5 × 25.5 cm. Price $12.50.

This book is based on reports developed by several study groups of the American College of Neuropsychopharmacology in 1966. These reports were expanded and updated through 1968 before publication.

The work presented in this volume represents the efforts of two particular groups. The first one studied the biological effects of pharmaceutical agents—neurophysiological aspects, with five chapters being devoted to various aspects of that topic including several papers on LSD responses and behavioral changes.

The other major portion of the book contains the reports of the second group which focused on the effects of drugs on chemistry, learning, and memory.

The editors of this book have attempted to compile information from various disciplines and sources related to this topic into one volume which is relatively specific and current.

Staff Review ■