

indicate the degree of error is decreased, but it is evident that the deviations are such as to preclude the use of polynomials in this case.

The actual extent of error in the determination of excretion rate is more apparent when a comparison is made between rates obtained by graphical methods with those of the 4-hour polynomial equation. The graphical determination at the first hour is 63 mg.-hr.⁻¹, 43 at the second hour, and 22 at the third. The differentiated polynomial yielded values of 63, 46, and 11 mg.-hr.⁻¹, respectively. Good approximation is evident only up to the 2-hour level.

Polynomials are valid only when the curve being approximated tends to be parabolic either in its entirety or in the segments which compose it. The approximating equation to be used for

a particular curve, or sets of curves, will depend on the nature of the curve and must be selected with consideration of its shape.

Based on these observations, we suggest that polynomial approximations be utilized with caution in excretion rate determinations.

- (1) Nelson, E., and Schaldemose, I., *THIS JOURNAL*, **48**, 489(1959).
- (2) Nelson, E., *ibid.*, **49**, 437(1960).
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Book Notices

A Survey of Cardiac Glycosides and Genins. By J. HAMPTON HOCH. University of South Carolina Press, Columbia 1, S. C., 1961. 94 pp. 20.5 × 26 cm.

An exceptional reference source in a special field, this book includes tabulated information on plant sources of cardiac glycosides and genins, hydrolytic products of natural glycosides, and animal assay doses of natural and semisynthetic compounds. Structural features of compounds are grouped, and a discussion on structure-activity relationships is included.

General Pharmacology. By JEAN SICÉ. W. B. Saunders Co., West Washington Square, Philadelphia 5, Pa., 1962. ix + 593 pp. 16 × 25 cm.

This textbook on general pharmacology covers the pragmatic biochemical and pharmacodynamic properties of the major classifications of drugs. General topic headings include: Physicochemical basis of pharmacodynamics, The ions, Cholinergic agents, Cardiac drugs, Smooth muscle relaxants, Conduction anesthetics, Histamine and antagonists, Adrenergic agents, The cerebral stimulants, The Cerebral depressants, Hormonal analogs and antagonists, Anticoagulants and inhibitors, Hematopoietic agents, Radioprotective agents, Antirheumatic analgesics, Antimicrobial agents, Anthelmintics, and Insecticides. Specific and general references of varying scope are provided at the end of each chapter. The book will probably prove most useful to the beginning pharmacology student.

Curare and Curare-like Agents. Edited by A. V. S. DE REUCK. Little, Brown and Co., 34 Beacon St.,

Boston 6, Mass., 1962. vii + 103 pp. 12 × 18.5 cm. Price \$2.95.

This book reports the papers presented and discussions of the Ciba Foundation Study Group No. 12. The contents includes: The fate of curare during curarization, Influence of curare on uptake and release of neuromuscular blocking agent labeled with ¹³¹I, Drug-receptor interactions at the neuromuscular junction, Structure-action relations throwing light on the receptor; and Experimental hazards and artefacts in the study of neuromuscular blocking drugs. The discussions following each presentation as well as a general group discussion which concluded the session are reported.

Pulmonary Structure and Function. Edited by A. V. A. DE REUCK and MAEVE O'CONNOR. Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1962. xv + 403 pp. 14 × 20 cm. Price \$11.50.

This is another volume in the Ciba Foundation General Symposia series covering the various ways normal pulmonary ventilation is disturbed by disease and the effects in the alveoli. Paper topics include: Recent advances in pulmonary anatomy, Bronchial gas flow, Cellular structure and mucus activity in the bronchial tree and alveoli, Ventilation-perfusion relationship, Pulmonary gas exchange measurements using radioactive gases, Pulmonary capillary blood flow and gas exchange, Techniques used in the study of lung pathology: the anatomy of emphysema, and The degree of variation of blood perfusion and of ventilation within the emphysematous lung and some related considerations. Papers on other topics and discussions are included in the book. Author and subject indexes are appended.