Book Reviews

Essentials of pharmacology. Frances K. Oldham, F. E. Kelsey, and E. M. K. Geiling. Philadelphia–London–Montreal: J. B. Lippincott, 1947. Pp xiv + 440. $5.00.

This comparatively short text is written primarily for students of medicine and allied professions. Its scope is almost entirely that of drugs presently in therapeutic use, and it follows closely the recent changes in the U. S. and British Pharmacopeias and New and Non-official Remedies; in addition, it includes information on many drugs not yet in general use. The book begins with a short, well-chosen history of the subject and, aside from a brief section on general principles, is divided into two sections. The first describes "Functional Drugs," those used primarily to modify physiological function, and the second, "Chemotherapeutic Agents," those directed against invasion by parasites and in which all the actions on the host are secondary. Considering its small size, the volume is surprisingly comprehensive, but it omits most physiological "tool" drugs such as nicotine, strychnine, muscarine, etc. There are only a few substances described that are important because of their toxicity, unless they are also commonly employed in therapy. The references are well chosen but few in number, and the book would not serve as a sufficient reference source for advanced students. The subject matter is so condensed that the student may have difficulty in following it. This is especially true of the sections dealing with autonomic drugs and with water and electrolyte metabolism. On the other hand, the proportion of the text devoted to chemotherapy and to the endocrines is somewhat larger than that customarily found and is consistent with the recent extensive developments in these fields.

The statement that "scopolamine is the most active of the belladonna alkaloids partly because of its greater solubility which permits more rapid passage of the site of action" (p. 48) suggests that solubility in water is a limiting factor in the action of these drugs, whereas the solubility of either atropine or its salts in body fluids is probably thousands of times greater than the maximum dose employed. Again (p. 76), the statement that chloral hydrate "acts rapidly because of its ready solubility" is opposed to the more general view that this drug is unusual in being a central nervous system depressant in spite of, and not because of, its high water solubility. The statement that an "oliguria may arise because of the lack of salt to aid in the excretion of water" (p. 182) is at variance with generally accepted ideas of water metabolism, although the reverse may be true. There is considerable evidence that the xanthines act on the renal tubules rather than on the glomeruli, as stated (p. 184). There are several errors in the labeling of figures and formulas, and there are some errors in the structural formulas. Obviously, the formula for myanesin (p. 52) is incorrect, as is that for the barbiturate ring (p. 81). The labeling of the chart on autonomic drug (p. 126) is very confusing and in some parts erroneous.

At a time when many of the established textbooks of pharmacology are out of date this book fills a needed place, but it is too brief to cover the usual course for medical students. Perhaps its greatest value will be in reviewing the subject for examinations or in a short course for dentists, nurses, pharmacists, or others who are less seriously concerned with acquiring an adequate background for rational therapy.

PAUL K. SMITH

The George Washington University School of Medicine

Frequency modulation. (Vol. 1.) Alfred N. Goldsmith, *et al.* (Eds.) Princeton, N. J.: RCA Review, 1948. Pp. x + 515. (Illustrated.) $2.50.

This is the 7th volume in the RCA Technical Book Series and the first on the subject of Frequency Modulation. The switch to cloth binding and the improved format entitle this series to be taken more seriously than some of the earlier volumes would have indicated. Like its predecessors in the series, the volume comprises an exhaustive collection of reprints of technical papers contributed by RCA engineers to the periodical literature. Chronologically, the coverage extends from 1936 through 1947.

The editors have grouped the technical papers under four section headings: General, Transmission, Reception, and Miscellaneous. The General section opens with Crosby's 1937 paper on "Frequency Modulation Noise Characteristics"—the best-advertised feature of frequency modulation—and two papers on the band width and energy spectra of FM signals. The following sections on Transmission and Reception include an assortment of papers on topics ranging from basic research to technology. Each major section contains some papers reprinted in full and others briefly summarized. Good editorial judgment seems to have been exercised in this compression of the relevant material of more specialized or lesser interest.

The scientist faced with the problem of initiating himself into the mysteries of frequency modulation techniques will find this symposium of great value. It falls in the necessary-but-not-sufficient category, however, since the work of RCA engineers only is included. In spite of this institutional limitation of its coverage, RCA is to be applauded for making this impressive collection of material so conveniently available.

F. V. HUNT

Harvard University