In the two subjects, more than 50% of the administered dose was excreted mainly as intact drug in the 0–48-hr. period. Both the N_1- and N_3-oxides were found in the urine of man in approximately equal quantities, totaling 4.7 and 2.6% of the dose administered in Subjects 1 and 2, respectively. The urines from two dogs receiving tablets containing a total of 1000 mg. sulfamethoxazole and 200 mg. trimethoprim (16 mg. trimethoprim/kg. body weight) were analyzed for trimethoprim and its *N*-oxide metabolites (Table II). In the two dogs, 19.0 and 29.1% of the dose were excreted as intact drug. A significant amount of the N_3-oxide was excreted by both dogs in the 0–48-hr. period, while only a trace amount of the N_1-oxide was excreted. The urines of four rats receiving 28 mg. (140 mg./kg. body weight) and 10 mg. (50 mg./kg. body weight) trimethoprim i.p. in 5% gum arabic were analyzed for trimethoprim and its *N*-oxide metabolites. Between 5 and 12% of the dose was excreted as intact drug at both dose levels. Only the N_1-oxide metabolite was found in the 0–48-hr. rat urine, totaling between 0.6 and 2.7% of the administered dose (Table III).

Schwartz *et al.* (2) studied the metabolism of trimethoprim in man, dog, and rat and found that each species excreted the N_1-oxide as a urinary metabolite; this finding was confirmed in the present study. Meshi and Sato (3) detailed the metabolism of trimethoprim in the rat and reported levels of an *N*-oxide, but they were unable to determine the point of attachment of the oxygen to either nitrogen of the pyrimidine ring. Additional information on the *N*-oxidation of trimethoprim is presented in this study. Although limited numbers of subjects and animals of each species were studied, the results suggest that the human converts trimethoprim to the N_1-oxide and N_3-oxide with equal facility, whereas N_3-oxide formation is favored by the dog and N_1-oxide formation is favored by the rat.

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BOOKS

REVIEWS

Basic and Clinical Pharmacology of Digitalis. (Proceedings of a Symposium sponsored by the Ohio State University College of Medicine, the American Heart Association, and the Central Ohio Heart Chapter). Edited by B. H. Marks and A. M. Weissler. Charles C Thomas, Springfield, IL 62703, 1972. 328 pp. 14.5 × 23 cm. Price $21.00.

The editors successfully present the work of distinguished scientists and clinicians who bring together the most recent advances in basic and clinical aspects of digitalis. In most instances, each of the 16 chapters presents a clear, readable, and succinct picture of the most important facets of digitalis glycosides. The materials throughout the book are well documented with adequate and current references (through 1971).

The application of basic pharmacological concepts to the clinical use of digitalis is the major theme of this book. The last five chapters of Part Two are particularly good and very useful for clinicians. In some instances, different views have been expressed by the authors on the same topic, but this is understandable, since all of these topics can be approached from a different point of view. Inclusion of chemical structures of various digitalis glycosides would have been helpful in following the discussions on the absorption and metabolic transformations of digitalis presented in chapters 2 and 12. However, this is a minor inconvenience since structural information is readily accessible from several reference books.

These authoritative presentations on basic and clinical aspects of digitalis glycosides deserve the careful scrutiny of pharmaceutical and medicinal chemists, practicing cardiologists, and internists, as well as academic and research specialists in cardiovascular physiology and pharmacology and all others who may be obliquely interested with digitalis.

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Amino-Acids, Peptides, and Proteins, Volume 4. Senior Reporter, G. T. Young. The Chemical Society, Burlington House, London, W1V OBN, England, 1973. 498 pp. 13 × 21.5 cm. Price £9.00.

This volume is the fourth in the series of the literature review in the field of amino acids, peptides, and proteins. The selection of the reviewers by the Chemical Society is highly commendable. Under the able leadership of Dr. Young, these specialists have done a wonderful job and have provided an indispensible service by critically reviewing the wealth of the literature during the year 1971. The present volume is divided into five chapters. The first four chapters are devoted to the detailed survey of the literature on Amino-Acids, Structural Investigations of Peptides and Proteins, and Peptide Synthesis and Peptides with structural features not typical of proteins. The fifth chapter, a short one, concerns the revision of the I.U.P.A.C.-I.U.B. recommendations for the nomenclature of amino acids, peptides, and proteins. The second chapter is, by far, the most comprehensive and provides detailed survey of the litera-