

the portal vein of the rat. However, the portal vein infusion using the pyloric vein cannulation overcomes several disadvantages inherent in the use of direct cannulation into the portal vein, since the latter surgery is delicate, requiring speed and accuracy to prevent excessive engorgement of the intestinal veins and acute loss of blood in the liver. The pyloric vein was selected because of its accessibility and a suitable branch of the hepatic portal vein to facilitate cannulation. The method for portal vein infusion in this communication is simple and practical as compared with that in the dog. This procedure in the rat has proven useful in drug absorption and metabolism studies. Details of these studies will be reported elsewhere.

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- (2) J. C. K. Loo and S. Riegelman, *ibid.*, **57**, 918(1968).
- (3) P. A. Harris and S. Riegelman, *ibid.*, **58**, 71(1969).
- (4) R. N. Boyes, H. J. Adams, and B. R. Duce, *J. Pharmacol. Exp. Ther.*, **174**, 1(1970).

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(7) K. S. Pelzmann and R. N. Havemeyer, *J. Pharm. Sci.*, **60**, 331(1971).

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BOOKS

REVIEWS

Amino-Acids, Peptides, and Proteins. A Specialist Periodical Report. Volume 3. G. T. YOUNG, Senior Reporter. The Chemical Society, London, W1V 0BN, England, 1971. xiv + 379 pp. 14.5 × 22 cm. Price \$6.00.

This third volume continues the annual review of the literature in the field of amino acids, peptides, and proteins, covering about 2300 papers published mostly in 1970. Under the editorship of G. T. Young from Oxford (who is called "senior reporter" in the Chemical Society's terminology), a group of 15 "reporters" summarize the developments during 1970 in 5 chapters, giving brief abstracts of the papers or mere one line notations, depending on the significance ascribed to the publication. Chapter 1 by B. W. Bycroft covers amino acids (30 pages) in a rather readable fashion. Chapter 2, "Structural Investigation of Peptides and Proteins," takes up most of the space (188 pages). It involves a number of contributors and includes extensive coverage of the work on sequencing and X-ray crystallography of proteins. Chapter 3, "Peptide Synthesis" (57 pages), by J. H. Jones opens with some statistics to document the reporter's contention that essentially all the important news on this topic can be covered by monitoring 25 primary journals. The last two chapters discuss "Peptides with Structural Features not Typical of Proteins" (47 pages) and "Metal Derivatives of Amino-acids, Peptides, and Protein" (36 pages), the latter covering the two-year period of 1969-1970.

The volume is in keeping with the high standards which one has come to expect of the "Specialist Periodical Reports." The reviewer is not expert enough to judge whether the coverage is complete but at least did not notice any major omissions. As is almost unavoidable in a compilation of a huge amount of material like this, occasional errors do creep in, although the number seems to be quite small. One picky little example (as the customary documentation that the reviewer has read the book): A table on page 13 lists among α -amino acids which have been synthesized for the first time, 5-fluorotryptophan with a 1969 reference, a compound which this

reviewer has bought as a catalog item from a commercial supplier as far back as 1963. This leads me to what I consider the main shortcoming of this type of publication. The information in the literature is strictly "reported" including many of the claims of the original authors, leaving essentially all the evaluation of the work to the reader. Since many claims take on a stronger flair of truth if they are repeated by third parties, this means that unless the reader goes back to the original literature, he may be left with some conclusions which are not as soundly based as he may think. While this referee would prefer a more critical review of the literature, the contributors usually stick to their assigned role as impartial reporters, with a few notable exceptions (*e.g.*, Jones on pages 247 and 248).

This difference in taste notwithstanding, the reviewer feels that this volume belongs on the bookshelf of every chemist and medicinal chemist who has anything to do with amino acids or their polymers since it is one of the most comprehensive sources of information in this field.

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Food Chemicals Codex, Second Edition. Prepared by the Committee on Specifications, Food Chemicals Codex, of the Committee on Food Protection, National Research Council, National Academy of Sciences, 2101 Constitution Ave., N.W., Washington, DC 20418, 1972. 1039 pp. 15 × 23 cm. Price \$20.00.

This edition, slightly larger than the first, contains 639 monographs. Monographs are provided for chemicals added directly to food to perform some desired function as well as substances

not added directly to food but which come into contact with food, such as food processing aids. Also, monographs for a number of substances that are not considered "chemical additives" in the conventional sense have been included, such as masticatory substances.

Specifications set forth in this publication were developed with the cooperation of individual suppliers of food-grade chemicals and with industrial trade organizations.

The Food Chemicals Codex was given official recognition by the U. S. Food and Drug Administration when the "Definitions and Procedural and Interpretative Regulations," relating to the eligibility of substances for classification as generally recognized as safe (GRAS), were revised and published in the *Federal Register* on June 25, 1971.

Supplements to the Codex are issued annually and sent to all holders of the book at no charge.

Staff Review ■

WHO Expert Committee on Specifications for Pharmaceutical Preparations, Twenty-fourth Report. World Health Organization Technical Report Series. World Health Organization, Geneva, Switzerland (available from American Public Health Association, Inc., 1015 18th St., N.W., Washington, DC 20036), 1972. 60 pp. 16 × 24 cm. Price \$1.50.

This report provides a review of the work necessary relative to a general revision of the "International Pharmacopoeia," international reference standards, and new monographs. Three annexes cover 33 new monographs, amendments to manufacturing practices, and a modified method for the determination of morphine in opium, respectively.

Staff Review ■

Carbon-Fluorine Compounds: Chemistry, Biochemistry & Biological Activities. A Ciba Foundation Symposium. Associated Scientific Publishers, 52 Vanderbilt Ave., New York, NY 10017, 1972. 417 pp. 16 × 24 cm.

The proceedings of this symposium, held in September 1971, represent an interdisciplinary approach to carbon-fluorine chemistry. Topics covered in this volume include a review of the reactivity of the carbon-fluorine bond and its physical characteristics, the toxic effects of carbon-fluorine compounds (particularly the

fluoroacetates and fluorocitrates), and the role of fluoro analogs in protein biosynthesis or inhibition.

The synthesis of fluorocarbohydrates and their physicochemical properties are discussed. Of possible particular interest to the pharmaceutical scientist are the discussions of the metabolism, transport, and increasing use of NMR properties of fluoroanalogs for binding studies and structural identification of macromolecules. The involvement of fluoronucleotides in modifying nucleic acid synthesis and its relevance to virus replication are also covered.

Staff Review ■

NOTICES

Cosmetics-Perfumery Thesaurus. By HILDA FEINBERG. CCM Information Corp., 866 Third Ave., New York, NY 10022, 1972. 106 pp. 14.5 × 22.5 cm. Price \$12.95.

Bridged Free Radicals. By LEONARD KAPLAN. Marcel Dekker, 95 Madison Ave., New York, NY 10016, 1972. 481 pp. 14.5 × 23 cm. Price \$24.50.

Anaesthesia and Pharmaceutics. Edited by J. SPIERDIJK and S. A. FELDMAN. Williams & Wilkins, Baltimore, MD 21202, 1972. 144 pp. 14 × 22 cm. Price \$20.00.

Cervical Pain, Proceedings of the International Symposium held in Wenner-Gren Center, Stockholm, January 25-27, 1971. Edited by CARL HIRSCH and YNGVE ZOTTERMAN, Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, 1972. 221 pp. 17 × 25 cm. Price \$21.00.

Biochemical Regulatory Mechanisms in Eukaryotic Cells. Edited by E. KUN and S. GRISOLIA. Wiley, 605 Third Ave., New York, NY 10016, 1972. 530 pp. 15 × 23 cm. Price \$24.95.

The Therapeutic Choice in Pediatrics. Edited by W. L. BURLAND and B. M. LAURANCE. Williams & Wilkins, Baltimore, MD 21202, 1972. 228 pp. 13.5 × 21.5 cm. Price \$16.00.

Pharmacological Control of Lipid Metabolism, Advances in Experimental Medicine and Biology—Volume 26. Edited by W. L. HOLMES, R. PAOLETTI, and D. KRITCHEVSKY. Plenum, 227 West 17th St., New York, NY 10011, 1972. 357 pp. 16 × 25 cm. Price \$22.50.

Encyclopedia of Industrial Chemical Analysis, Volume 16—Mercury to Penicillins. Edited by F. D. SNELL and L. S. ETTRE. Wiley, 605 Third Ave., New York, NY 10016, 1972. 583 pp. 17.5 × 25.5 cm. Price \$35.00 subscription; \$45.00 single copy.