

compound reported by Foye, *et al.* (1, 2), as 2-mercaptoethylthiocarbamic acid is actually the zwitterion of 2-aminoethyltrithiocarbamic acid. This structure is consistent also with the radioprotective activity shown by the material, since the very similar zwitterions of 2-aminoethylthiosulfuric acid and related compounds also are known to possess significant activity as radioprotectants (3, 4).

(1) Foye, W. O., Duvall, R. N., and Mickles, J., *THIS JOURNAL*, **51**, 168(1961).

(2) Foye, W. O., and Mickles, J., *J. Med. Pharm. Chem.*, **5**, 846(1962).

(3) Holmberg, B., and Sorbu, B., *Nature*, **183**, 832(1959).
 (4) Kaluszyner, A., Czerniak, P., and Bergmann, E. G., *Radiation Res.*, **14**, 23(1961).

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Received January 18, 1963.

Accepted for publication February 18, 1963.

This work was supported by the U. S. Army Medical Research and Development Command, Department of the Army, under Contract No. DA-49-193-MD-2174.

Book Notices

Inorganic Chemistry. By LOUIS K. SHARP. The Williams and Wilkins Co. (exclusive U. S. agent), 428 East Preston St., Baltimore 2, Md., 1962. viii + 339 pp. 15 × 23 cm. Price \$8.

The author has designed this book to meet the requirements of students of pharmacy, medicine, and allied sciences by limiting the discussions of elementary chemistry and concentrating on those subjects of particular importance to medicinal and pharmaceutical chemistry students. The author has increased the treatment of inorganic compounds handled by workers engaged in research and analytical procedures, though not actually used as medicaments, which have particular methods of preparation and purification or peculiar hazards or disposal problems associated with them. The volume is divided into two parts: Part I is concerned with fundamental material and Part II contains factual material on the elements and compounds used as medicaments or as tools in analysis and research.

Elements of General and Biological Chemistry. An Introduction to the Molecular Basis of Life. By JOHN R. HOLUM. John Wiley & Sons, Inc., 440 Park Avenue South, New York 16, N. Y., 1962. ix + 470 pp. 14.5 × 23 cm. Price \$5.95.

The molecular basis of life is the general theme of this textbook designed for students who, though not intending to become chemists, will profit from an awareness of the molecular basis of life in their chosen occupations. This book is not a general introductory view of general chemistry; it singles out certain processes of life at the molecular level and treats the selected topics in some depth.

Scientific Research in British Universities and Colleges 1961-62. Department of Scientific and Industrial Research, State House, High Holborn, London, W.C. 1, 1962. U. S. agents: British Information Services, 45 Rockefeller Plaza, New York 20, N. Y. xvii + 622 pp. 13 × 21.5 cm. Price \$6.50.

This paperback volume provides an extensive listing of scientific research in progress in British universities, university colleges, and associated institutions as well as research being conducted in

the colleges of advanced technology in England, Wales, Scotland, and Northern Ireland during the 1961-1962 academic year. One hundred and sixteen institutions are included. Under the listing for each institution are brief, title-like descriptions of the projects under study in the various departments along with a list of workers supervising the research. The book is well indexed—a name index, a topic index, and a subject index. In all, the indexes cover about 165 pages of the volume.

Immunoassay of Hormones. Edited by G. E. W. WOLSTENHOLME and MARGARET P. CAMERON. Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1962. xii + 419 pp. 14 × 20 cm. Price \$10.75.

This book is volume 14 of the Ciba Foundation Colloquia on Endocrinology covering a symposium in which 28 scientists, representing both immunologic and endocrinologic thought, participated. The symposia dealt with the complex problem of detection and assay of hormones by immunochemical means. Major topics included in the contents of the volume are: Growth hormone, Insulin, Glucagon, Thyrotropin, Corticotropin, Gonadotropins, and Prolactin. The papers presented and the general discussion which followed the papers should represent an up-to-date review of the status of work in this area. As with previous volumes, author and subject indexes are included.

The Opium Alkaloids. By DAVID GINSBURG. John Wiley & Sons, Inc., Interscience Division, 440 Park Ave. South, New York 16, N. Y., 1962. 111 pp. 15 × 23 cm. Price \$6.50.

This book covers selected topics in the field of opium alkaloids and is written to be particularly useful in teaching graduate students. It gives examples of how complex structural problems and extraordinary chemical transformations are solved. In addition, it gives pertinent data regarding structural elucidation and the chemistry of the alkaloids. The book is divided into six major groupings entitled Morphine and codeine, Thebaine, The synthesis of morphine, Stereochemical considerations, The biogenesis of morphine, and Papaverine. A subject index is appended permitting ready access to the contents.