BOOK REVIEWS

Metabolic Pathways in Microorganisms. By VERNON H. CHELDELIN, Professor of Chemistry and Director of the Science Research Institute, Oregon State University, Corvallis, Oregon. John Wiley & Sons, Inc., New York, N. Y., 1961. 19 × 13 cm. ix and 91 pp. $3.50.

This book is taken from a series of E. R. Squibb Lectures on the Chemistry of Microbial Products, given during 1960 at the Institute of Microbiology, Rutgers, the State University of New Jersey. It might better have been entitled, "Metabolic Pathways in *Acetobacter suboxydans*," since the majority of the material presented deals with this organism. The first chapter is concerned entirely with the multitude of metabolic pathways found in *Acetobacter suboxydans*, while Chapter 2 is devoted to a very detailed discussion of the techniques, instrumentation and calculations used to determine which of several pathways of carbohydrate metabolism is functioning in the intact organism. The third chapter leaves the field of microbiology almost completely. The major part of this section reviews the data which have demonstrated that the enzymes of the Krebs Tricarboxylic Acid Cycle are located in the mitochondria of mammalian cells. The remainder of this last chapter points out the importance of the pentose phosphate pathway as a mechanism of oxidation and synthesis which can, and does, replace the Krebs cycle.

Since the book deals mainly with a general review of the tremendous amount of work done in the author's laboratory on the intermediary metabolism of *Acetobacter suboxydans*, it is unfortunate that its title was chosen to indicate a broad coverage of the general field of microbial metabolism.

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Tobacco. Experimental and Clinical Studies. A Comprehensive Account of the World Literature. P. S. LARSON, H. B. HAAG and H. SYLVETTE, Department of Pharmacology, Medical College of Virginia. xii and 932 pp. 21.5 × 28 cm. The Williams & Wilkins Co., Baltimore 2, Md. $20.00.

This giant work is the definitive monograph on the biochemistry and biological activities of tobacco, tobacco smoke and its constituents Although the authors point out that it does not represent the last word on tobacco, but only the millions of words written on the subject so far, one feels certain that the more than 6,000 articles covered up to 1959 will relieve any investigator in the field from systematically searching the literature.

This book is unique in several respects. It deals with tobacco, but the most widely used form of this plant product, tobacco smoke with its countless constituents, dominates the discussion. Of these constituents, nicotine has been the best known and most thoroughly studied, and in many chapters the description of the activity of this alkaloid overshadows that of other tobacco derivatives. Second, two of the authors, Professors Larson and Haag, essentially laid the groundwork to the text but left the synthesis of this mass of information into a logical pattern to Dr. Sylvette. This author can look back upon an experience of creative writing in a lighter vein, and this shines through the massive report of scientific data,