

# Reviews of Recent Books



**Ciba Foundation Symposium on Carcinogenesis. Mechanisms of Action**, edited by G. E. W. Wolstenholme and Maeve O'Connor. Little, Brown & Company, Boston, 1959, pp. 336, \$9.50.

This volume is dedicated to the memory of the late Sir Ernest Kennaway and contains papers arranged in relation to the Seventh International Cancer Congress in London. Professor A. Haddow was Chairman of the Symposium.

The scope of the papers may be indicated by a partial list of the topics: mechanism of carcinogenesis of viruses, hormones, pharmacologic approach, ionizing radiation, protein binding, metals and metal chelation, etc.

Sir Macfarlane Burnet's able summary stresses that there is no one basic mechanism, but "... a variety of ways in which chemicals, radiations, viruses and hormones can influence cellular and internal environmental processes so as to release clones of cells into abnormal and destructive proliferative activity." E. COHEN

**International Conference on the Influence of Living and Working Conditions on Health, Cannes, September 1957**, edited and published by the International Medical Association for the Study of Living Conditions and Health, Vienna, 1959, pp. 607, \$6.00.

This is a compilation of the many long and short reports presented at the conference noted in the aforementioned title. Articles appear in English, French, Russian, German and Spanish with summaries translated into all these languages. Many subjects are covered, from the effect of fatigue on the health of industrial workers to ionizing radiation and heredity.

Special attention is paid to nutrition. The conference, with representation from thirty nations, concluded that malnutrition is the world's most common disease. They recognized the need for a wide effort to promote social and economic development of the various populations in order that all may obtain adequate foodstuffs for a balanced diet. As Dr. J. DeCastro says in his summary of the nutritional papers, "We should never forget that the nutritional problem must be dealt with within the framework of regional economics."

There are certainly many interesting papers presenting uncommon views on topics which are inadequately considered today. For this reason and because the viewpoints of our colleagues in other countries are always significant, this conference report can be recommended. S. O. W.

**The Mast Cells**, by James F. Riley. E. & S. Livingstone, Edinburgh, 1959 (Williams & Wilkins, exclusive American agents), pp. 182, \$6.75.

This monograph is divided into two parts, the first dealing with the literature of mast cells. The second part is essentially a summary of the author's experiments concerning the function of mast cells and carried out primarily in cattle and rodents. They are based on observations of mastocytosis occurring in the skin of mice painted with carcinogens and of the prolonged coagulability of blood in shock, and aim to show that histamine release may play a major part in the function of mast cells. Histamine liberators, e.g., stilbamidine, anaphylatoxin or compound 48/80 were found to cause swelling, degranulation and disruption of mast cells, while some antihistamines counteracted these effects. There are differences in structure and composition of mast cells even in such closely related species as rat and mouse as evidenced by their sensibility to histamine liberators. On the other hand, not all histamine present in the body is produced by mast cells, nor do all mast cells react to histamine liberators. The author plans to trace the source of the large amount of 5-hydroxytryptamine seen in conditions associated with mastocytosis.

This brochure makes interesting reading and is a useful source of information regarding nature and function of mast cells, about which there is still much to learn, as pointed out in the foreword by Sir Henry H. Dale. The book should be welcomed by everyone who is planning to carry out original investigations along these lines. It is far from being one-sided, points to many problems without dogmaticism and still is concise and well written. An excellent bibliography concludes the book. M. SILBERBERG

**Ciba Foundation Symposium on the Regulation of Cell Metabolism**, edited by G. E. W. Wolstenholme and C. M. O'Connor. Little, Brown & Company, Boston, 1959, pp. 387, \$9.50.

This symposium had as its distinguished chairman Sir Hans Krebs, who gave the opening address on "Rate-limiting factors in cell respiration." The other papers were also by outstanding researchers. Regulation by intracellular structure, topographical segregation of controlling enzyme systems and control of respiration by energy-rich intermediates of oxidative phosphorylation were among topics discussed. Quantitative aspects of control of oxygen utilization and a comparative study of current views on probable meta-

bolic pathways of carbohydrate metabolisms were presented, as well as some aspects of hormonal effects on oxidative pathways in the liver and on mitochondria. The significance of the mitochondria for alternative pathways of electron transport was hypothesized. The Pasteur effect in relation to limiting factors in glycolysis of ascites tumor cells was described, emphasizing the importance of the availability of inorganic phosphate in limiting the rate of both lactic acid production and glucose uptake. The role of triphosphopyridine nucleotide in the regulation of glycolysis in cell-free preparations by decreasing glycolysis was reported to be enhanced by addition of liver mitochondria, which can oxidize the reduced form of the nucleotide.

There were papers on yeast cell fermentation and enzyme induction by bacteria that developed hypotheses of feedback mechanisms, or "automatic adjustment." There is an abundance of diagrams, and equations that are necessary for understanding current theories and hypotheses. The general discussion at the end of the symposium contains a considerable amount of information on the use of the word "feedback" by biochemists; the term came originally from purely physical systems. However, perhaps a question can be raised as to whether feedback of the engineer and of the chemist can be directly compared. This reviewer felt that a knowledge of feedback of electronic circuiting might be a better prerequisite to reading portions of the symposium than a background in biochemistry. At any rate, there is no doubt that the book is the first to feature such a variety of aspects of non-hormonal regulation of cellular metabolism. It should be a provocative addition to the bookshelf of all biochemists engaged in fundamental research.

E. COHEN

**Essentials of Medicine. The Art and the Science of Medical Nursing**, 18th edition, by Charles P. Emerson and Jane S. Bragdon. J. B. Lippincott Co., Philadelphia, 1959, pp. 857, \$6.75.

This standard medical text for nurses is now in the eighteenth edition, having first been published fifty-one years ago. The book's success is no doubt due to its comprehensive coverage, clear language and numerous illustrations. The discussion of various disorders is followed by a useful section, "Treatment and Nursing Care." The book can be recommended as an authoritative reference in medical nursing.

R. S. W.

**Food, The 1959 Yearbook of Agriculture.** The U. S. Department of Agriculture, Washington, D. C., 1959, pp. 736, \$2.25.

This Yearbook of Agriculture is the latest in the series of annual volumes that have been printed for 110 years. Its sixty-five chapters and 736 pages tell much of what seventy-two nutrition experts in the U. S. Department of Agriculture, other Federal agencies and twelve colleges know about weight control, food energy, vitamins, proteins, amino acids, fats, carbohydrates, calories,

minerals, quality in food, costs, fads, habits and nutrition programs.

It has thirty-six pages of simple recipes that further the book's main theme—"for good health, eat some of the basic foods every day." Fourteen pages give questions (with answers) that many people have asked about food. One section spells out the nutritional needs of expectant and nursing mothers, infants, teenagers and young adults and people over twenty-five years of age.

Other chapters discuss grades of meat, eggs and fish; freezing, canning, storing and preparing food at home; food plans at different costs, changes in U. S. diets, learning and teaching good eating habits, school lunches and our future food supplies and needs.

Representing, as it does, authoritative opinion, the book can be highly recommended as one maintaining the well known level of excellence in previous Yearbooks.

S. O. W.

#### BOOKS RECEIVED

Books received for review by THE AMERICAN JOURNAL OF CLINICAL NUTRITION are acknowledged in this column. As far as practicable, those of special interest are selected, as space permits, for a more extensive review.

*History of the American Dietetic Association*, edited by Mary I. Barber, J. B. Lippincott Co., Philadelphia, 1959, pp. 328, \$6.00.

*Essentials of Medicine: The Art and the Science of Medical Nursing*, 18th edition, by Charles P. Emerson, Jr. and Jane S. Bragdon, J. B. Lippincott Co., Philadelphia, 1959, pp. 857, \$6.75.

*The General Foods Kitchens Cookbook*, Random House, New York, 1959, pp. 436, \$4.95.

*Principles of Nutrition*, by Eva D. Wilson, Katherine H. Fisher and Mary E. Fuqua, John Wiley & Sons, New York, 1959, pp. 483, \$5.95.

*Ciba Foundation Study Group No. 1: Pain and Itch—Nervous Mechanisms*, edited by G. E. W. Wolstenholme and Maeve O'Connor, Little, Brown & Co., Boston, 1959, pp. 120, \$2.50.

*Ciba Foundation Study Group No. 2: Steric Course of Microbiological Reactions*, edited by G. E. W. Wolstenholme and Cecilia M. O'Connor, Little, Brown & Co., Boston, 1959, pp. 113, \$2.50.

*Human Nutrition and Dietetics*, by Sir Stanley Davidson, A. P. Meiklejohn and R. Passmore, Williams & Wilkins, Baltimore, 1959, pp. 844, \$15.00.

*Klinische Radiologie des Magens und des Zwölffingerdarms*, by Pierre Porcher, Hans-Ulrich Stössel and Paul Mainguet, Georg Thieme Verlag, Stuttgart, 1959, pp. 264, DM 72 (\$17.75).

*Metabolic Care of the Surgical Patient*, by Francis D. Moore, W. B. Saunders Co., Philadelphia, 1959, pp. 1,011, \$20.00.

*Therapeutic Nutrition with Tube Feeding*, by Morton D. Pereira, Charles C Thomas, Springfield, Ill., 1959, pp. 58, \$3.75.