

necessarily be selective and limited in depth. For the most part the authors have achieved an admirable balance in the topics they cover; they give an adequate and in many cases a stimulatingly written introduction to many subjects, from which point students can go directly to the original papers. There is a marked emphasis on the currently popular molecular genetics and the coding problem; but there is a corresponding deficit in areas that certainly merit more attention than they get. For example, flagella and cilia are barely mentioned; the elegant synthesis of electron microscopic and physicochemical studies on tropocollagen also received scant attention. Any other reviewer would doubtless object to the exclusion of other topics, but such criticisms are almost inevitable on a book of modest size covering so broad a field.

The emphasis on very current research such as the coding problem will perhaps date the book rapidly, but the authors have nevertheless achieved a very clearly written and exceedingly well-illustrated summary of a substantial part of the field of molecular biology. A few of the electron micrographs suffer from low contrast, but it is not clear whether the fault lies with the original choice of micrograph or with the reproduction process. Most of the structural formulae are illustrated as space filling models that are well reproduced.

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Wistar Institute Monographs

The Thymus. A symposium, Philadelphia, Pa., April 1964 (*Wistar Inst. Monogr. No. 2*). Vittorio Defendi and Donald Metcalf, Eds. Wistar Institute Press, Philadelphia, 1964. viii + 145 pp. Illus. Paper, \$5.

The thymus has been, for a long time, a stepchild of research. Not even a chapter was devoted to it in some of the great monographs on internal secretion. But this situation is now being corrected by the very intense research work that is going on. The object of this volume, and the purpose of the symposium on which it is based, is to help research by summing up our present knowledge about the function of

the thymus. It is very gratifying that the volume was published in a relatively short time (only 4 months) after the symposium was held.

As one of the editors, Defendi, states in his preface, emphasis has been placed on the lines which "at the moment seemed to be the most significant for the understanding of the thymus function." Although the function of the thymus is still a mystery, it is becoming increasingly clear that the gland produces cells with special immunological competence, and, at the same time, also produces some humoral factor. The volume gives a fairly clear picture of the present status of our knowledge with respect to this area, and it will be helpful to researchers working in this field as well as to those who want to enter it.

The book contains 12 articles: R. Auerbach discusses the function of the embryonic thymus; S. L. Clark, Jr., the penetration of proteins and colloidal materials into the thymus from the blood stream; G. J. Thornbecke and M. W. Cohen, the immunological competence and responsiveness of the thymus; R. E. B. Billingham and W. K. Silvers, some biological differences between thymocytes and lymphoid cells; D. Metcalf, functional interactions between the thymus and other organs; H. A. Azar, J. Williams, and K. Takatsuki, the development of plasma cells and immunoglobulins in the neonatally thymectomized rats. R. Wilson, K. Sjodin, and M. Bealmar report on thymus studies in germ-free mice. Sensitized reactions in thymectomized animals were discussed by B. H. Waksman, recovery of immunological responsiveness in thymectomized animals by thymus grafting, by J. F. A. P. Miller, and the role of the thymus in carcinogenesis by V. Defendi and R. A. Roose. Remarks about thymocytes were made by W. L. Law, T. A. Dunn, N. Trainin, and R. H. Levey. The discussions that followed the lectures are illuminating.

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New Books

Biological and Medical Sciences

The Cytoplasm in Heredity. D. Wilkie. Methuen, London; Wiley, New York, 1964. 123 pp. Illus. \$3.50.

Diagnostic Virology. G. D. Hsiung and J. R. Henderson. Yale Univ. Press, New Haven, Conn., 1964. 133 pp. Illus. Paper, \$4.50.

Distribution and Taxonomy of Mammals of Nebraska. J. Knox Jones, Jr. Univ. of Kansas, Lawrence, 1964. 356 pp. Illus. (order from the Univ. of Kansas, Museum of Natural History, Lawrence). 25¢.

Dynamic Clinical Studies with Radioisotopes. Proceedings of a symposium (Oak Ridge, Tenn.), October 1963. Ralph M. Kniseley, W. Newlon Tauxe, and Elizabeth B. Anderson, Eds. U.S. Atomic Energy Commission, Washington, D.C., 1964 (order from U.S. Department of Commerce, Washington, D.C.). 640 pp. Illus. Paper, \$4.50.

The Emergence of Biological Organization. Henry Quastler. Yale Univ. Press, New Haven, Conn., 1964. 95 pp. Illus. \$3.75.

Experimental Endocrinology. A sourcebook of basic techniques. M. X. Zarrow, J. M. Yochim, and J. L. McCarthy. With a chapter by R. C. Sanborn. Academic Press, New York, 1964. 535 pp. Illus. \$15.

International Review of Cytology. vol. 17. G. H. Bourne and J. F. Danielli, Eds. Academic Press, New York, 1964. 409 pp. Illus. \$16. Six papers: "The growth of plant cell walls" by K. Wilson; "Reproduction and heredity in trypanosomes" by P. J. Walker; "The blood platelet: Electron microscopic studies" by J. F. David-Ferreira; "The histochemistry of mucopolysaccharides" by Robert C. Curran; "Respiratory tissue: Structure, histophysiology, cytodynamics (pt. 2). New approaches and interpretations" by Felix D. Bertalanffy; and "The cells of the adeno-hypophysis and their functional significance" by Marc Herlant.

Isotopes in Biology. George Wolf. Academic Press, New York, 1964. 183 pp. Illus. Paper, \$2.45; cloth, \$5.50.

The Mosses of Michigan. Henry T. Darlington. Cranbrook Inst. of Science, Bloomfield Hills, Mich., 1964. 224 pp. Illus. \$12.

Die Nucleinsäuren. Eine einführende Darstellung ihrer Chemie, Biochemie, und Funktionen. Eberhard Harbers. Thieme, Stuttgart, Germany, 1964. 315 pp. Illus. DM. 68.

Outlines of a Theory of the Light Sense. Ewald Hering. Translated from the German edition (1925) by Leo M. Hurvich and Dorothea Jameson. Harvard Univ. Press, Cambridge, Mass., 1964. 347 pp. Illus. \$9.95.

Progress in Angiography. Compiled and edited by Manuel Viamonte, Jr., and Raymond E. Parks. Thomas, Springfield, Ill., 1964. 574 pp. Illus. \$29.50. Thirty-six papers presented at a meeting held in March 1963; contributors include Herbert L. Abrams, Charles T. Dotter, Benjamin Felson, Harry W. Fischer, Owings W. Kincaid, J. Stauffer Lehman, Russell H. Morgan, Donald L. McRae, Olle Olsson, Robert A. Schobinger, F. Mason Sones, Jr., Israel Steinberg, Juan M. Taveras, Donald Altman, Robert J. Boucek, Agustín Castellanos, Sr., Francisco A. Hernandez, William P. Murphy, Jr., Leonard S. Sommer, and Manuel Viamonte, Jr.