

Vol. 2, the central and more complete one, consists of five main parts: (1) Genetics—from Mendel's Laws to the modern concepts of the gene's structure and mechanism of action; (2) Reproduction and development in Metazoa—gametogenesis, fertilization, comparative embryology; (3) Comparative anatomy of Vertebrata; (4) Ecology; and (5) Evolution—including the origin of man.

Vol. 3 finally deals with all main problems of human embryology—from germ cells to morphogenesis—and histology, providing a detailed description of the different tissues.

### Growth, Disease and Ageing

By Philip R. J. Burch (Leeds). Oliver and Boyd. Edinburgh 1968. Bound volume with cover; 14 × 22 cm; VIII + 214 pages, including numerous graphs. Price 63 s. (approx. \$ 8.00).

Two new and extremely important theories are examined and worked out in this book.

The first theory, introduced by Burwell in 1963, proposes that growth in mammals be centrally regulated by the lymphoid system: some class of small lymphocytes would stimulate symmetrical mitosis in certain target cells.

The second theory, proposed by Burnet in 1959, proposes that autoimmune diseases be the result of a central breakdown in self-tolerance: a "forbidden-clone" would originate as a result of a mutation in a mesenchymal stem cell, and the mutant cells would produce cellular or humoral autoantibodies; hence, the disease.

On account of these two concepts, a unitary theory of growth and disease is proposed, relating the physiological phenomena of growth-control and cellular differentiation to a number of pathological phenomena, including cancer, cardiovascular diseases, diabetes, schizophrenia, and autoimmune (or "autoaggressive", as the author suggests to call them) diseases.

The book will be of a large interest to all biologists and physicians, but especially to immunologists and geneticists.

### Regulatory Functions of Biological Membranes

Edited by Johan Järnefelt (Helsinki). Elsevier Publishing Company. Amsterdam-London-New York 1968. Bound volume with cover; 17 × 23 cm; VIII + 312 pages; 59 tables; 190 black-and-white illustrations. Price Dfl. 55.00 (approx. \$ 15.00).

Here are the Proceedings of the Sigrid Jusélius Symposium on Regulatory Functions of Biological Membranes held in Helsinki on November 6-9, 1967, with the participation of numerous specialists of different fields.

The following topics are dealt with by the different articles: molecular structure and function of cellular membranes; molecular organization of mitochondrial cristae; structure and function in membranes of photosynthetic systems; membrane lipids; lipid-protein interactions in cellular membranes; nuclear magnetic resonance studies of biological membranes; adenine nucleotides and membrane conformation; the excitability and cooperativity of biological membranes; enzymic reaction mechanism in the utilization of nucleoside triphosphates; control of glycolysis; the salt pump of animal cell membranes; oxidative metabolism and aldosterone regulation of sodium transport; metabolic effects associated with the stimulation of sodium transport by aldosterone; fractionation of rapidly labelled RNA from toad bladder tissue; synthesis of proteins and nucleic acids in brain cortex slices; the prostaglandins: co-ordinated formation of membranes and biosynthetic activity during growth and development; osmotic coupling in ion translocation; ammonium ion uptake by chloroplasts, and the high energy state; energy control of substrate utilization in mitochondria; inorganic pyrophosphate as energy donor in photosynthetic and respiratory structures; binding of brothymol blue by mitochondrial membrane components; effect of some naturally occurring polyacetylenic compounds on mitochondrial metabolism.

Numerous and well commented high magnification (up to 1 000 000 x) electron micrographs complete this beautifully produced book.