

many other more or less specialized areas of genetic research are currently being exploited in the study of neoplasia, and it is to be hoped that the example of the researchers who contributed to the 1969 Houston Symposium may lead many other geneticists to apply their knowledge and effort in this direction.

M. M. C.

The Future of Human Heredity

An Introduction to Eugenics in Modern Society

By Frederick Osborn, with a Foreword by Th. Dobzhansky. Weybright and Talley - New York 1968. Bound volume with cover; 14×21 cm; X+133 pages, including five tables and one graph, references, and index. Price: US \$ 5.95.

“The real problem which mankind will not be able to evade indefinitely is where the evolutionary process is taking man, and where man himself wishes to go”, Professor Dobzhansky stresses in his foreword. An answer to such a basic problem is attempted by Frederick Osborn, Chairman of the Executive Committee of the Population Council, and for several decades the leader of the eugenic movement in America.

A review of man's genetic past introduces the analysis of present situation: selection and survival are examined in their possible action among primitive hunters and food gatherers up to the Neolithic, around 8,000 b. C., and then among agricultural peoples up to the nineteenth century.

Recent changes in the way of life of modern industrialized societies, the spread of birth control and its effect on survival, and group and individual differentials in births, are then examined on the basis of the recent social history and development of the United States (1865-1965).

The genetic significance of such group and individual birth differentials, the frequency of defects and abnormalities, are then taken into account. Eugenic policies are reviewed and proposals put forth.

On account of increased expectation of life (as a result of the largely decreased early mortality) and birth control, a “relaxation” of selection is forecasted, due to “an increase throughout the population in the frequency of mutated genes responsible for serious hereditary defects and abnormalities, and this will be followed in due time by an increase in actual defects”. Such an apparently justified statement would, not necessarily be shared by any population geneticist. Nor would anyone easily agree on the author's speculations about the possibility of building up “superior races”, consisting in “those who breed most from their own superior stocks and least from their poorest stocks”.

P. P.

Gene Activity in Early Development

By Eric H. Davidson (New York). Academic Press - New York and London 1968. Second printing, 1969. Bound volume: 15×23 cm; XI+375 pages including 15 tables and 102 illustrations. Bibliography of 600 items; author and subject index. Price not indicated.

This book provides a review of the current state of knowledge on the gene function in the programming and operation of early development. It is divided into four parts.

Part 1, “Gene Activity in Early Embryogenesis”, deals with the theory of variable gene activity on cell differentiation, onset of genome control in embryogenesis, early molecular indices of differentiation, RNA synthesis in the early embryo, early informational RNA, and maternal template RNA.

Part 2, “Cytoplasmic Localization and the Onset of Differentiation”, is essentially concerned with the phenomenon of localization, its experimental evidence, its demonstrations in regulative embryos, and its interpretations.

Part 3, “Gene Function in Oogenesis”, reviews such topics as the origin and differentiation of the female germ line, oocyte

genome function, accessory cell functions in oogenesis, gene activity in the oocyte nucleus (synthesis of ribosomal and of informational RNA), and cytoplasmic DNA.

In Part 4, "Immediacy of Gene Control and the Regulation of Gene Activity", the following subjects are finally dealt with: very long-lived gene products, moderately long-lived informational RNA and rapidly decaying template RNA, rapidity of variations in gene activity in differentiated cells, bacterial repression-derepression systems, and gene regulation systems in differentiated cells. Some hypotheses are finally examined on the nature of genomic regulation in differentiated cells.

The book is illustrated by numerous diagrams, photomicrographs, radioautographs, etc., and completed by a 600-items-rich bibliography, and by author and subject indexes.

Biochimie Métabolique - Volume 2

Energétique Cellulaire. Biosynthèses

(Metabolic Biochemistry - Volume 2: The Cell Energetics. Biosyntheses)

By Pierre Louisot (Lyon). Simep Editions - Lyon 1969. Paperback: 21×27 cm; VIII+238 pages, including a large number of tables and illustrations. Price not indicated.

The book is made up of two main parts, one dealing with the cell energetics, the other with the main biosyntheses.

In the first part, cell energetics, the following subjects are examined: Krebs cycle, respiratory chain, and oxidative phosphorylations. In the second part, biosyntheses, the main biosynthetic processes are reviewed, with respect to the three classes: glucides, lipids and proteins.

The biosynthesis of proteins, including a review of regulative processes, covers such subjects as DNA: its role, its duplication, and its functional expression, i.e., mRNA;

ribosomes and polysomes; tRNA and activation of aminoacids; the actual biosynthesis of a polypeptide chain; as well as the genetic code, the processes of enzyme adaptation, induction and repression, and the notions of structural and regulatory genes, and of repressor vs. operator and operon.

The book is completed by a final section on the biosynthesis of heterocyclic compounds (purines, pyrimidines, and porphyrins), and by an appendix on the application of isotopic methods in metabolic biochemistry.

A clear and concise style and the largely successful editorial presentation, typical of the Simep manuals, contribute in making this a very valuable book. Although its many subdivisions make it rather easy to locate any subject, the addition of a subject and author index would have no doubt increased the book's value.

The Ribosome

By A. S. Spirin, L. P. Gavrilova (Moscow). Volume 4 in the series, "Molecular Biology, Biochemistry, and Biophysics", edited by A. Kleinzeller (Philadelphia), G. F. Springer (Evanston), and H. G. Wittmann (Berlin). Springer Verlag, Berlin-Heidelberg-New York 1969. Bound volume: 17×25 cm; X+161 pages; 7 tables and 26 illustrations. Chapter references and subject index. Price: DM 54 (US \$ 14.90).

This monograph provides a formulation of a generalized representation of the structure and function of ribosomes, on the basis of an analysis of modern trends in the field. It was mainly aimed to summarize the extremely scattered experimental data presently available, thus making at least some of the concepts outlined serve as a stimulus for further research, although no attempt was made to cite all the literature on the subject.

After a general introduction, reviewing such basic processes as protein biosynthesis; coding, storage and replication, and transfer