

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