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BOOK REVIEW

MACLEAN, N., GREGORY, S. P., FLAVELL, R. A. (ed.): *EUKARYOTIC GENES. THEIR STRUCTURE, ACTIVITY AND REGULATION*. — Butterworths, London—Boston—Durban—Singapore—Sydney—Toronto—Wellington 1983. 474 pp. Hardcover £ 48.00.

The main purpose of this book is to describe in a brief and topical fashion the present state of knowledge of the structure of eukaryotic genes and the molecular mechanisms involved in the gene expression. This publication is not a result of a symposium but experts were invited to present the “cream” (see Preface) of new information in a relatively comprehensive format. The introductory section: “Gene regulation” deals mainly with the mechanisms in which DNA and protein modifications are involved in gene regulation. The included reviews focus on the chromatin structure and superstructure, on the general properties of non-histone proteins and on DNA-modifications. The subsequent section, entitled: “The organization of chromosomes” does not deal with the structure of meiotic and mitotic chromosomes as it could be interpreted from the title, but with extranuclear genes located in mitochondria and in chloroplasts and with the structure of lampbrush and polytene chromosomes. Modern techniques of somatic cell hybridization, microinjections of cloned DNA molecules into fertilized eggs *etc.* are described in section III. The core of the book focuses on specific eukaryotic gene systems, *e.g.* transfer RNA, histone, globin, egg white protein, immunoglobulin, contractile protein, silk fibroin and keratin genes. The concluding section V reviews the structure and function of fungal and higher plant genes.

International authorities have presented here critical, stimulating accounts, which reflect the currently exciting prospects in the rapidly expanding field of molecular gene biology. This timely and informative book is warmly recommended.

T. GICHNER (Praha)