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BOOK REVIEW

GLUZMAN, Y., SHENK, T. (ed.): ENHANCERS AND EUKARYOTIC GENE EXPRESSION. — Cold Spring Harbor Laboratory, 1983. 218 pp. Paperback US \$ 27. — in USA / \$ 32.40 outside.

Transcription initiation represents an early and critical event in gene expression. As such, it is frequently the target of genetic regulatory mechanisms related to cellular differentiation and development, and adaptation to environmental conditions. Enhancers and regulatory elements is a relatively novel class of eukaryotic controlling DNA sequences that are capable of enhancing or activating gene transcription. They regulate the function of specific AT-rich DNA sequences called promoters which take part of inducible eukaryotic genes. The enhancer elements were originally discovered in SV 40 animal virus and were found to increase the transcriptional activity of the SV 40 promoter as well as of a variety of heterologous eukaryotic promoters. Functionally analogous regulatory sequences were later described in other animal viruses and also in genomic DNA of eukaryotic cells. The present book is devoted to the most recent advances in this field. It summarizes in the form of extended abstracts 36 contributions presented at a Conference on enhancers and eukaryotic gene expression held at the Banbury Center of the Cold Spring Harbor Laboratory on April 3–6, 1983. These abstracts include the majority of the known enhancer sequences as well as a large number of inducible promoters from virus, yeast, *Drosophila*, mouse, and human origin, and describe various experimental systems based on gene transfer and *in vitro* transcription methods enabling the DNA sequence of a molecule to be correlated with its transcriptional activity. A comparison of structure and function of enhancers and regulatory regions of different eukaryotic genes has revealed that whereas the enhancers are clearly separable from the corresponding promoters, the regulatory regions are usually closely associated with them. The book appeared as a title in the series of Current Communications in Molecular Biology and will be certainly appreciated especially by interested research workers as a condensed overview of the current more and more ingenious work in the rapidly progressing field of molecular mechanisms of transcription regulation.

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