

permanent slides in the usual way, the presence in the mounting medium of the reagent used in the final step of the given procedure may be useful. The reasons why just Karo sirup or arabic gum are the relevant mounting media in the present case were not investigated.

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BOOK REVIEW

BRYANT, J. A. (ed.): *Molecular Aspects of Gene Expression in Plants*. — Academic Press, London—New York—San Francisco, 1976, 338 pp., 21 \$.

This book was published in the International Series of Monographs devoted to experimental botany as Volume 11. The consulting editor of the monographs is J. F. Sutcliffe, the University of Sussex.

The research on the organization and function of genes and their expression in plants lags behind research on bacteria and animals, especially when the molecular level is considered. Due to the need to improve the yield and quality of crops, more attempts must be made to modify the genetic control of plant cells and to regulate gene expression artificially. This requires a better insight into the biochemistry of plant genes, what is the main object of the reviewed book.

The introductory chapter (written by J. A. Bryant) deals with nuclear DNA (properties, amount, synthesis, repair, turnover) and includes data and methods on DNA extraction, base composition, thermal denaturation, buoyant density *etc.*). This chapter is followed by a section dealing with RNA structures and metabolism (D. Grierson), where data on types of RNA, RNA fractionation, DNA—RNA hybridization, synthesis of ribosomal RNA and regulation of RNA metabolism are presented. Since the gene expression is manifested by specification of the amino-acid sequence, a chapter written by C. M. Bray is devoted to the synthesis of cellular proteins (amino-acid activation, peptide chain initiation and elongation, chain termination a peptide release). The ability of plants to photosynthesize is an important feature which differentiates them from animals. The hereditary continuity of chloroplasts, containing DNA is a strong evidence that they possess their own genetic system. A special chapter written by J. A. Bryant is thus devoted to the synthesis of nucleic acids and proteins in chloroplasts (and in mitochondria). This chapter includes data on cytoplasmic inheritance. The concluding chapters describe the plant cell cycle and molecular aspects of differentiation (J. A. Bryant) and plant growth substances (A. J. Trewavas). Each chapter is accompanied by "suggestions for further reading" where the most relevant books and articles on the described topic are quoted.

The book is aimed at post-graduates, established scientists and teachers who wish to discover more on the function of plant genes or are contemplating research in this field.

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