Argyroudi-Akoyunoglou, J.H., Senger, H. (ed.): **The Chloroplast: From Molecular Biology to Biotechnology.** (NATO Science Series 3. High Technology. Vol. 64). - Kluwer Academic Publishers, Dordrecht - Boston - London 1999. XIV+356 pp. NLG 325.00, USD 195.00, GBP 114.00. ISBN 0-7923-5576-8.

The Volume contains the Proceedings of the international NATO Advanced Research Workshop held at the Orthodox Academy of Crete, Kolymbari-Chania, on the island of Crete, Greece from 10 to 15 August, 1998. The meeting was the sixth one in a chain of conferences on chloroplasts (Marburg 1975, Spetses 1978, Rhodos 1985, Aghia Pelaghía, Crete 1991, Marburg 1995). Similarly to the previous meetings, the aim of this workshop was to bring together experts and students interested in chloroplasts, from various countries around the world.

The book is divided into six parts entitled Structure of Photosynthetic Membrane Proteins (8 papers), Chloroplast Gene Expression/Regulation (11 papers), Chloroplast Envelope Membrane (8 papers), Pigment Biosynthesis (8 papers), Regulatory Mechanisms in Photosynthetic Unit Biogenesis/Turnover (14 papers), and Biotechnological Approaches (8 papers). The headings of the parts indicate also the main topics dealt with in the workshop: *e.g.*, the fascinating progress in the three-dimensional structure of photosynthetic units and their components, the diverse ways of regulation of gene expression, the role of the chloroplast envelope membranes in chloroplast biogenesis and import of nucleus-encoded chloroplast proteins into the plastid, the regulatory mechanisms in pigment biosynthesis and in the synthesis, assembly and turnover of the photosynthetic units, the genetic manipulation of the organelle as a tool for biotechnological applications. Each contribution is equipped with a list of references, and the whole volume with author and subject indexes.

The book is a very important up-to-date summary of what is new in chloroplast research, and the individual approach of the authors in writing the chapters stamps the character of the volume. It is a fascinating high-level reading for scientists and university students interested in plant physiology, genetic, biochemistry, and molecular biology.

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