

- PANDEY, D. P., KANNAN, S.: Action of ABA and some cytokinins on the transport of foliar and root absorbed Rb^+ and Fe^{++} in bean plants. — *Z. Pflanzenphysiol.* **78** : 95–102, 1976.
- PATRICK, T. W., HALL, R., FLETCHER, R. A.: Cytokinin levels in healthy and *Verticillium*-infected tomato plants. — *Can. J. Bot.* **55** : 377–382, 1977.
- PITMAN, M. G., LÜTTGE, U., LÄUCHLI, A., BALL, E.: Action of abscisic acid on ion transport as affected by root temperature and nutrient status. — *J. exp. Bot.* **25** : 147–155, 1974.
- RUSSEL, R. S., BARBER, D. A.: The relationship between salt uptake and the absorption of water by intact plants. — *Annu. Rev. Plant Physiol.* **11** : 127–140, 1960.
- SAWHNEY, B. L., ZELITCH, I.: Direct determination of potassium ion accumulation in guard cells in relation to stomatal opening in light. — *Plant Physiol.* **44** : 1350–1354, 1969.
- TAIMR, L., KÚDELOVÁ, A., KÚDELA, V., BERGMANNOVÁ, E.: Effect of bacterial wilt on uptake and translocation of phosphorus, sulphur, calcium, and manganese in alfalfa plants. — *Zentralbl. Bakteriologie. Abt. II.* **130** : 367–386, 1975.

BOOK REVIEW

NOVER, L., LYNEN, F., MOTHES, K. (ed.): *CELL COMPARTMENTATION AND METABOLIC CHANNELING. A Symposium on the Structural and Functional Organization of Cells as a Prerequisite of Life.* — VEB Gustav Fischer Verlag, Jena 1980. 523 pp., 240 figs. Cloth bound, M 82.—.

The proceedings of the conference held in April 1979 in Reinhardsbrunn Castle, Thuringia (GDR), with 120 participants from 18 countries, correspond in quality and fame to other similar gatherings organized by one of the oldest world scientific societies. The selection of the lecturers was guided by the effort to confront findings of experts working with the most different model objects, both procaryonta and eucaryonta, but with the same aim — to deepen the knowledge of cell biology. The study of the mechanisms of cell compartmentation — as documented in a convincing form in the first lecture by prof. P. Sitte (General principles of cellular compartmentation) — certainly plays a key role in the understanding of the cell differentiation process. The fact that the topic is dealt with from various viewpoints (biochemical analyses, fine structure studies, biophysical methods of cell membrane investigation, physiological or genetic studies) represents beyond doubt a positive feature of this monograph enabling a very complex view of the problematics. On the other hand, this heterogeneity made obvious difficulties already to the editors — the division of the book content into five major sections (Survey lectures; Functional organization of metabolic chains; Metabolic and regulatory interactions between cell compartments; Compartmentation and regulation of gene expression; Role of compartmentation for cell morphogenesis and development) seems to be fairly artificial and is often accompanied by the confusion of the individual subjects — and even more to the reader in his orientation in the book. For this reason, the reader certainly will appreciate both the scientific and the didactic level of some of the contributions of the chapter "Survey lectures" (Morré, Kotyk, Hess, Parthier) or of some final chapters (Nover, Mohr, Heslop-Harrison). The reader-botanist will presumably enjoy those contributions which are devoted to the problematics of higher plants (e.g. studies dealing with plastids, phytochrome, anther development, and pollen-wall morphogenesis) — devised mainly with emphasis on confronting the findings and on inferring conclusions of general validity in biology. Most contributions include good quality diagrammatic documentation; the vast bibliographical reviews are also of great importance. Because this book presents very recent findings on the topics, and because it has been published in a short time after the conference, it will represent a valuable and very interesting review for any biologist or biochemist.

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