

- TRAVIS, R. L., KEY, J. L., ROSS, C. W.: Activation of 80S maize ribosome by red light treatment of dark-grown seedlings. — *Plant Physiol.* **53** : 28–31, 1974.
- YANG, C.-P. H.: Photosynthetic independence of the high irradiance response, anthocyanin synthesis, in young seedlings. — *Doctoral Dissertation, Columbia University* 1976.
- YANG, C.-P. H.: Action of red and far red light on ribosome formation in cabbage seedlings. — *Biol. Plant.* **23** : 214–219, 1981a.
- YANG, C.-P. H.: Comparison of the action of light on ribosomal RNA synthesis in cabbage and mustard seedlings. — *Biol. Plant.* **23** : 421–426, 1981b.

BOOK REVIEW

DE GREEF, J. (ed.): PHOTORECEPTORS AND PLANT DEVELOPMENT. — Antwerpen University Press 1980. 631 pp.

The book contains seventy six proceedings of the Annual European Photomorphogenesis Symposium, held in Antwerpen in July 1979, written by one hundred and thirty people actively working in the field of morphogenesis. The first part introduces the problem of morphogenesis and brightly surveys the history of the research in the field of morphogenesis within the last twenty years. The next two chapters deal with characterization of photoreceptor pigments and methodology of their detection.

The fourth chapter contains seventeen contributions on light control of plastid development. The role of single receptive systems (phytochrome, blue light receptor and protochlorophyllide) in regulation of chlorophyll content is discussed. Their effects on the level of protochlorophyll(ide) — chlorophyll(ide) photoconversion as well as on the level of activity of enzyme(s) synthesizing delta-aminolevulinate are dealt with. Formation of new chloroplast structures during deetiolisation was also studied.

The next chapter contains contributions on photocontrol of metabolic activity, especially on activation of nitrate reductase, transcription and translation during fern spore germination, peroxidase activity with regard to floral induction, induction of ascorbate oxidase, betalain synthesis, biopotential changes and ATP content. The following contributions are devoted to photo-regulation of seed germination. The attention of next contributions is focused on photocontrol of endogenous levels of cytokinins, on IAA and ABA contents during release from correlative inhibition, on ethylene production as well as on light effects on the action of regulators exogenously applied (GA₃, cytokinins).

Five contributions deal with the mode of action and early effect of phytochrome. Photocontrol of vegetative growth and flowering is the main problem of the next eleven contributions. The role of both mechanisms — day-time and end of day — in internode elongation is discussed. J. Gressel and coworkers bring new results indicating that plumule is not as passive in perception of flowering photoinduction as was previously considered. The last chapter containing three contributions deals with light effects and biological rhythms. A. O. Klein excellently reviews this problem.

The book summarizes a lot of new results of experimental work. Some of them can give rise to new hypotheses, others show that the validity of some presumptions is to be revised. This excellent collection of recent results should be an obligatory reading for everybody working in photomorphogenesis.

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