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BOOK REVIEW

CELIS, J. E., GRAESSMANN, A., LOYTER, A. (ed.): TRANSFER OF CELL CONSTITUENTS INTO EUKARYOTIC CELLS. — Plenum Press, New York–London 1980. 443 pp. US \$ 45.—.

This book brings lectures of the twelve-day Advanced Studies Institute course which was held in Portugal in September 1979. Like the other volumes of this series, it includes overview articles, where special attention is paid to the novel results of the authors. The contributions of the volume deal with new methods of artificial transfer of macromolecules and cell constituents into mostly mammal cells. Of the plant problems, the Ti plasmid of *Agrobacterium tumefaciens* and its transfer to the plant cells, and the giant alga *Acetabularia* are discussed. The book shows that the progress of the techniques of the transfer of macromolecules into the eucaryotic cells, which is a necessary pre-condition of the genetic engineering, is extremely rapid.

Microinjection methods into mammalian cells in culture, amphibian oocytes and the giant cells of *Acetabularia* are routinely used. Techniques of cell fusions and subcellular fusions in mammalian cells are described. Of course, in plant protoplast fusion the progress is not less. A very important tool for the transfer of exogenous substances into animal cells and plant protoplasts are liposomes, i.e. artificial lipid vesicles, where water solution is surrounded by one or several lipid bilayers.

The volume deals with the main results achieved by the new techniques described: the genetic effects of exogenous DNA, problems of stability and fidelity of translation of exogenous mRNA and related topics.

The volume brings a great deal of novel information on the transfer of biological macromolecules and related phenomena, mostly in mammals. It can be recommended to molecular biologists and biochemists.

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