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Byly zkoumány cytogenetické znaky dvou kmenů tkáňových kultur tabáku a byla objasněna jejich morfogenetická potence. Kmen I byl způsobilejší diferenciace a organogenese než kmen II. Vzniklé rostliny byly analysovány a byla sledována morfologická variabilita jejich vegetativních a reproduktivních orgánů. Tyto variabilita byla provázena vysokou hladinou aberací během meiose a nestálou aneuploidií.

BOOK REVIEW

Protoplastes et Fusion de Cellules Somatiques Végétales. — Colloques Internationaux du C.R.N.S No. **212**, Paris 1973. 550 pp. 160,50 FF.

The attention focused on this colloquium entirely devoted to the problems of isolation and cultivation of plant protoplasts (40 contributors, 130 participants), as well as the unusualy short time required for publishing the proceedings at a high standard of quality gives evidence of the deep concern of scientists with these questions.

The book is divided into titles corresponding to the sections of the colloquium. The first section was devoted to the problems of isolation of protoplasts from plant organs and tissue cultures. The findings concerning the mechanism of enzymatic isolation of cells and protoplasts contribute to the understanding of the chemical composition and the ultrastructure of the cell membrane.

The papers falling under the second section dealt with the conditions of the *in vitro* culture of protoplasts, *i.e.* the factors inducing *de novo* synthesis of the cell membrane, cell division, formation of colonies of unorganized tissue or regeneration of organs in protoplasts of different origin. Regeneration of whole plants was achieved in *Nicotiana tabacum* (TAKEBE *et al.*, CARLSON *et al.*,), *Daucus carota* (REINERT *et al.*) and *Petunia* (HESS *et al.*).

In the last section termed "Introduction of genetic information into protoplasts and fusion of somatic plant cells" protoplasts were evaluated as objects enabling us "... to broaden the base of genetic variability in plants" (COOKING). Attention was paid to incorporation of (bacterial and plant) DNA and (virus) RNA, as well as to intra- and interspecific fusion of protoplasts. Appropriate conditions of incubation and characters making possible an identification of hybrid protoplasts and cells were searched. A highlight of this section was the success of Dr. CARLSON and his coworkers in obtaining hybrid individuals of *Nicotiana glauca* × *langsdorfii* by fusion of somatic protoplasts which are obviously identical with hybrids obtained from sexual crosses.

A record of the discussions is given along with the papers. Several informative communications concerned with animal tissue cultures permit the reader to approach the reported results in a more comprehensive fashion.

The reproduction of the illustrations is of high quality. The book furnishes not only fundamental literature for workers in the field of tissue cultures but represents also a source of general information for physiologists and genetists.

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