

**RESEARCH OF POSSIBLE MECHANISMS OF MORPHOGENETIC PROCESSES
SUPPRESSION IN TISSUE CULTURE, DONOR PLANTS OF WHICH WERE EXPOSED
UNDER ACTION OF CHRONIC IRRADIATION**

A. A. Konoplyova, N. M. Rasydov, D. M. Grodzinsky

The callus culture of tobacco alate (*Nicotiana alata* L.) from the plants which have been grown for the period of vegetation with the average dose rate 0,013mA/kg (the control, Kiev), 0,93, 9,3, 18,6 and 46,5 mA/kg (10-kilometer zone of Chernobyl Nuclear Power Plant) was used in the experiment. Significant reduction of shoot- and root-formation in culture in vitro with augmentation of dose loads on donor plants was marked. The possible mechanisms of suppression of morphogenesis intensity in tissue culture of irradiated plants are found out. It is supposed that under action of chronic irradiation on donor plants the ability of cells to react on phytohormonal influence is lost.