Somatic embryogenesis of *Gentiana* genus I. The effect of the preculture treatment and primary explant origin on somatic embryogenesis of *Gentiana cruciata* (L.), *G. pannonica* (Scop.), and *G. tibetica* (King)

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Abstract

Experiments were carried out on three selected species of *Gentiana* genus: *Gentiana cruciata* (L.), *G. pannonica* (Scop.), and *G. tibetica* (King). Using MS medium supplemented with 2,4-D and kinetin a somatic embryogenesis system of plant regeneration was developed. Induction and intensity of somatic embryogenesis as the effect of integration of the following factors were studied, specifically: seedling pre-treatment (with and without GA3 treatment), light condition (light versus the dark), and type of explant (root, cotyledon and hypocotyl). Numerous significant differences between studied factors were observed and statistically proved.