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IN VITRO REGENERATION OF THE CROATIAN ENDEMIC SPECIES *IRIS ADRIATICA* TRINAJSTIĆ EX MITIĆ

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Plant regeneration via somatic embryogenesis and organogenesis was achieved in leaf base and ovary culture of the Croatian endemic *Iris adriatica* Trinajstić ex Mitić. Callus induction from leaf base explants occurred in the dark on three media with MS mineral solution containing 4.52 μM dichlorophenoxyacetic acid (2,4-D), 4.83 μM naphthaleneacetic acid (NAA), 0.46 μM kinetin (Kin), 5% sucrose and 200 mg L^{-1} casein hydrolysate. The media differed only in vitamin and/or proline content. Calli from ovary culture were achieved on MS medium containing 45.25 μM 2,4-D. The mean percentage of callus induction from leaf base explants was 18.9%, with no significant differences between media, and 27.3% from ovary sections. All embryogenic calli were formed on MS media containing 0.45 μM 2,4-D, 4.44 μM benzyladenine (BA) and 0.49 μM indole-3-butyric acid (IBA) under low light intensity (25 μE m-2s-1). Transfer of embryogenic calli to hormone-free medium enabled the development of mature somatic embryos on the surface of 6.0% of induced calli produced from leaf base explants and 4.0% of those from ovary sections. Genotype had the main effect on plant regeneration efficiency in *Iris adriatica*.

Key words: *Iris adriatica*, leaf base culture, ovary culture, somatic embryogenesis.

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