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IN VITRO PROPAGATION OF *OBREGONIA DENEGRII* FRIČ. (CACTACEAE)

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Abstract

The possibility of establishing an efficient *in vitro* technique for propagation and conservation of the endangered cactus, *Obregonia denegrii* Frič., was investigated. Disinfested seeds were incubated on filter paper wetted with distilled water; otherwise seeds were soaked in 1.4 μM of GA_3 or in distilled water (control), then disinfested and placed on solid MS medium. In the first experiment, seeds germination reached a maximum value of 72% after 28 days. Compared to control (22%), GA_3 treatment significantly increased germination rate (85%) just after 7 days. Four week-old seedlings were subcultured on MS medium supplemented with different plant growth regulators. After 4 months the growth index was 1.62 in presence of 10.7 μM of NAA and 0.74 with 4.4 μM of BAP. MS medium containing 4.4 μM of BAP and 10.7 μM of NAA was used as control in the further experiments. Shoot multiplication was investigated for different explants (longitudinal dissections of apical explants, single tubercles, apical, basal and radical explants) on different variants of MS medium with 1 mM of putrescine, 10.2 μM of $AgNO_3$ or 12.1 μM of CPPU. Independently from substrate composition, multiple shoot formation from areoles was achieved from longitudinal dissections of apical explants and single tubercles. CPPU gave the highest number of shoots/explant (5.0) followed by putrescine (2.4), $AgNO_3$ and control treatment (1.1). The callus proliferation was evident only on 36.8% of explants cultured with CPPU while the spontaneus root formation (33%) was observed in medium containing putrescine.

Key words: CPPU, germination, micropropagation, *Obregonia denegrii,* putrescine, silver nitrate

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