

ORIGINAL ARTICLE

**COMPARATIVE STUDY OF RATE OF CALLUS INDUCTION OF
RAUWOLFIA SERPENTINA**

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Abstract: *Rauwolfia serpentina* [*Rauwolfia serpentina* (L.) Benth. Ex Kurz.] has been the subject of research for its pharmacologically active natural constituents namely monoterpenoid indole alkaloids especially reserpine. The plant is vegetatively propagated because of poor seed viability and low germination rate. Therefore *in vitro* propagation of *Rauwolfia serpentina* is essential for the production of life supporting alkaloids, to satisfy the growing commercial demand of the plant and decrease the load on the wild population by conservation of this endangered plant. In the present study, we are reporting indirect morphogenesis of *Rauwolfia serpentina* in different combinations of plant growth regulators and indirect organogenesis mediated shoot regeneration of *Nicotiana plumbaginifolia* for comparison of its callus induction and proliferation rates with *Rauwolfia serpentina*.

Key words: *in vitro* propagation, morphogenesis, organogenesis, callus, growth regulators, *Rauwolfia serpentina*, *Nicotiana plumbaginifolia*