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# Micropropagation of *Cyrtanthus mackenii* Hook. f. (Family: Amaryllidaceae) from tri scales

Sincy Joseph\*†<sup>1</sup>

<sup>1</sup>Nirmala College for Women (Autonomous) – Department of Botany, Red fields , Coimbatore-18., Inde

## Résumé

A successful in vitro propagation system has been developed for the valuable ornamental and medicinal plant *Cyrtanthus mackenii* Hook.f (Amaryllidaceae ) by in vitro culture of bulbs from triscales. The bulb is used traditionally as a protective charm by Irulas, a tribal community in western ghats, Nilgiris. The bulbs of *C.mackenii* were collected from Government Botanical Garden, Udthagamandalam, Tamil Nadu (India). This can be achieved through tissue culture but the technology is costly limiting its adoption. There is therefore, need to put in place interventions that will reduce the cost of production hence making tissue culture products affordable. The explants were cultured on Murashige and Skoog medium supplemented with cytokinins such as BAP (6-Benzyl amino purine), TDZ (Thidiazuron), Zeatin, Kinetin and auxins namely IAA (Indole-3-aceticacid), IBA (Indole-3 butyric acid), NAA (Naphthalene acetic acid), individually at different concentrations. A combination of TDZ and NAA in equal concentrations (1mg/l) produced a maximum of 14 bulblets. The maximum number of roots (6) and root length (49mm) were observed on TDZ (1mg/l) + NAA (1mg/l). Sucrose at various concentrations (30, 60, 90 and 120g/l) was tested to increase the size of bulblets. Increase in the size of bulblets (growth index) was noticed after three months at 60g/l concentration which gave the maximum weight of 4.2gms. The bulblets were then transferred to pots containing a potting mixture of vermiculite: soil (3:1). The regenerated plants showed 98% survival. The regenerated plantlets exhibited same morphological characters when compared to source plant.

**Mots-Clés:** *Cyrtanthus mackenii*, tri scale explant, growth regulators, sucrose, MS medium.

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\*Intervenant

†Auteur correspondant: tjsincy@gmail.com