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In *vitro* propagation of *Chirita moonii* Gardner.; an endemic Sri Lankan shrub with potential as ornamental plant

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Floriculture industry is becoming a profitable agri-business throughout the world. Sri Lanka can make a significant mark in the business if floristic wealth of the country is utilized in a sustainable way. *Chirita moonii* is one such species which is endemic to Sri Lanka with potential as ornamental plant. Emphasis was given for using tissue culture technique for mass propagation of the species since initial planting material needed to establish cultures are small leading to minimal damage to plants in the wild. Three different explants; namely leaf, inter node and node were tested for callus initiation; while nodes were tested for micropropagation studies. Murashige and Skoog (MS) medium was used as the basal medium for all experiments. Callus initiation media were composed by varying the concentrations and combinations of IAA, 2,4-D and TDZ. Shoot initiation media for micropropagation were prepared by varying the concentrations of BAP. Cultures were maintained at 26 ± 2 °C temperature, 75% relative humidity and 16 hour photoperiod under fluorescence illumination. No callus was obtained from any of the treatments. All leaf explants were contaminated and inter-nodal sections showed no response even after 8 weeks, but the nodal sections responded by producing shoots in both callus initiation medium and shoot initiating media. Medium containing 0.5 mg/L TDZ was superior to media containing BAP in shoot initiation. The shoots were multiplied in a MS medium containing 5.0 mg/L BAP. The leaves of *in vitro* shoots produced new shoots when they touched the multiplication medium. Those shoots were separated and multiplied in the same medium. The shoots were tested for rooting in half-MS media in the presence and absence of NAA. Root induction was faster and higher in the presence of 0.5 mg/L NAA. Root initiation was also observed from leaves when they touched the medium containing NAA.

Key words: IAA (3-Indoleacetic acid), BAP (6-Benzylaminopurine), 2,4-D (2.4-Dichlorophenoxyacetic acid), NAA (1-Naphtheleneacetic acid), TDZ (1-phenyl-3-(1,2,3-thiadiazol-5-yl)urea)