MICROPROPAGATION OF *Chirita zeylanica*: AN ENDEMIC HERB

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Chirita zeylanica; an endemic herb possesses a greater potential of being an ornamental pot plant. Currently, collecting plants from its natural habitat resulting in extinction. Therefore, this study was designed to develop a micropropagation protocol for *C. zeylanica*. Callus and shoot multiplication were tested with two explants *i.e.* leaves and nodes. Different combinations of growth regulators were tested after supplementing the MS medium. Callus initiation media were composed by varying the concentrations and combinations of IAA (0, 0.5 mg/l), 2,4-D (0, 1.0, 1.5 mg/l) and TDZ (0, 0.5, 1.0 mg/l). Shoot initiation media for micro-propagation was prepared by varying the concentrations of BAP (0, 1.0, 2.0, 5.0 mg/l). The shoots were multiplied in a medium containing BAP (1.0, 2.0 mg/l). Direct shoot initiation was observed in all combinations of IAA and TDZ, without differentiating into callus. Higher numbers of shoots ($p<0.05$) were regenerated at 2.0 mg/l BAP, four weeks after establishment and quantitatively, 10 or more shoots than 2.0 mg/l BAP. Accelerated and effective multiplication was observed at 2 mg/l BAP concentration that produced higher number of shoots and leaves at four weeks after establishment. *C. zeylanica* was effectively propagated and multiplied using 2 mg/l BAP. Effective organogenesis directly from nodes are possible. Significant bottleneck was no callus, hence mass scale regeneration by sub-culturing callus was not possible.

Keywords: BAP, *Chirita zeylanica*, Multiplication, Shoot initiation