ABSTRACT

In vitro propagation of *Aptenia cordifolia*, an ornamental and medicinal plant native to South Africa, was studied to investigate the effect of PGRs on cultured explant through MS medium. Leaf and stem with nodes were selected as explant. Stem showed maximum growth, number of leaves and roots than leaves when subjected on MS medium containing different concentrations of PGR for direct organogenesis. Surface sterilization of explant was carried out by treating with 70 % ethanol (for 1 min) and 2 % sodium hypochlorite (for 10 min). The applied surface sterilization protocol was successful, and then explants were cultured on MS medium supplemented with different concentrations and combinations of PGRs. The influence of different PGRs was recorded in term of number of leaves, roots and root length of cultured explant. Among PGRs, 0.5 mg/l IAA (auxin) showed best result in form highest root, shoot and as well as flowering. Best shoot induction was observed at 1.0 mg/l BAP concentration. The plantlet regeneration was the most efficient with combination of 0.5 mg/l BAP with 1.0 mg/l IAA and 2.0 BAP with 1.5 mg/l 2,4-D in stem explant. The plantlets were successfully acclimatized to continue to grow under natural conditions.