

## GENETIC FIDELITY STUDIES OF *HOLOSTEMMA ADA-KODIEN* SCHULT.– A VULNERABLE MEDICINAL PLANT

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**Abstract:** *Holostemma ada-kodien* a species indigenous to India and popularly known as Jivanti, is a twiny, laticiferous perennial medicinal shrub belongs to the family Asclepiadaceae. The occurrence of *in-vitro* culture stress might results instability of the genome in tissue cultured plantlets and hence these plantlets have to be subjected to assessment of genetic fidelity using DNA based molecular marker in *in-vitro* regenerated *H. ada-kodien* plantlets. The nodal explants responded satisfactory in terms of growth related traits when inoculated in the MS medium supplemented with KIN (1.50 mg/l) + NAA (0.50 mg/l). When screened with 12 Random Amplified Polymorphic DNA (RAPD) primers, it produced clear reproducible and scorable bands. All banding profiles from *in-vitro* raised plants were monomorphic and similar to that of the mother plant. This study is of high significance as these could be commercially utilized for large scale production of true-to-type plantlets in *H. ada-kodien*.

**Keywords:** *Holostemma ada-kodien*, *In-vitro* propagation, Genetic fidelity, RAPD marker

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