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In-vitro propagation, conservation and seed germination studies in Indian birthwort (*Aristolochia tagala* Cham): An endangered medicinal plant of Western Ghats of India

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Aristolochia tagala Cham. is a threatened medicinal plant of Aristolochiaceae family. It is mainly used to treat snake bites and other poisonous bites. Apart from this, it is also used to treat bone fracture, malaria, and various dermatological conditions. Due to its indiscriminate use and deforestation, its population is reducing in its natural habitat. Seed germination is low due to the presence of insufficient endosperm, which leads to low seed viability. tSince conservation of this species is crucialthis study was undertaken. Fresh seeds of *A. tagala* were collected from the Field Gene Bank of RET medicinal plants. Among different treatments, the water soaking treatment responded well with the maximum in all growth parameters like rate of germination, seedling height and seedling vigour index followed by treatment with 2%Thiourea. In tissue culture, nodal segments of seedlings were cultured on MS medium supplemented with various combinations of growth regulators like BAP, kinetin and NAA. Among different combinations, minimum days taken for shoot initiation (6.06±0.04), maximum number of shoots (3.20±0.04) and the maximum number of leaves (3.18±0.02) were obtained in treatment combination of BAP (2.0 mg/l) and NAA (0.5 mg/l). The maximum shoot length (1.98±0.02) was obtained in BAP (2 mg/l). atisfactory results after three months of *in vitro* conservation were obtained by using the combination of BAP (2.0 mg/l) + NAA (0.50 mg/l). This gave the best survival rate (100%), the maximum number of shoots per explant (2.40±0.04) and the maximum number of leaves (2.73±0.02). MS media supplemented with BAP (2.0 mg/l) + NAA (0.50 mg/l) can be used for both *in vitro* propagation and also conservation of *Aristolochia tagala* under reduced culture condition, low light intensity (2.97 $\mu m^{-2} s^{-1}$) and low temperature (10^0C).