B-30: *In vitro* propagation of *Munronia pinnata* (Wall) Harms. through leaf callus

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Munronia pinnata (S: Binkohomba, San: Bunimba) is a rare medicinal plant, belonging to the family Meliaceae. The entire plant is widely used in the Ayurveda system of medicine in Sri Lanka, specially in the treatment of malarial fever, fever, dysentery and purification of blood.

M. pinnata is a very small hardy shrub with 5-15 cm long unbranched stem. Pinnate leaves are rather crowded on the short stem. In Sri Lanka *M. pinnata* grows in rocky places such as Ritigala, Sigiriya, Maturata, Balangoda, Lunugala, Wellawaya, Botale etc. As a result of continuous destruction of forest cover *M. pinnata* a valuable medicinal plant became rare. There is no commercial scale cultivation of *M. pinnata* due to poor seed production and low viability. There is no practice of using stem cuttings. Compared with the other medicinal plants, its market price is very high.

Introduction of micro-propagated medicinal plant stocks to fields will conserve the existing stocks in wild, and will increase the herbal resources which are used in Ayurveda medicine.

In the present study we demonstrate the successful development of plantlets from leaf callus of *M. pinnata*. The effects of Naphthalene Acetic Acid (NAA) (1.25-4.5 mg/l in combitlation with Benzyl Amino Purine (BAP) (1.25-4.5 mg/l) on Murashige & Skoog (MS) medium were investigated to assess the induction of callus from leaf explants of *M. pinnata*. Cultures were performed at 25 - 27°C under complete dark and 24 h light for 4 weeks. The best response for callus induction and growth was found on medium containing 4.5 mg/l NAA and 1.25 mg/l of BAP, in complete dark. Callus cultures were transferred to light after 4 weeks. Within 3-4 weeks, tiny green shoots were formed on the callus followed by the formation of green bud-like structures. Growth of the tiny shoots of *M. pinnata* is increased with the medium changing. Shoots were well developed in the MS medium supplemented with 2 mg/l BAP and 0.1 mg/l Indole Acetic Acid. The best rooting was obtained in MS liquid medium with 1.0 mg/l Indole Acetic Acid and 1.0 mg/l Indole Butyric Acid with 1-2 months time period.

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