B-121: *In vitro* propagation of Thumbakarawila

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Thumbakarawila *(Momordica dioica Roxb.)* is a dioecious climber of the dry zone lowland jungles. The fruits of this plant are in high demand for use in a vegetable curry which is regarded by many people to be delicious. It is also an important medicinal plant. In the Ayurvedic system of medicine, the plant is used as a remedy for asthma, bronchitis, hiccough, and several other ailments. There has been a growing interest in the large scale cultivation of this plant. However, seed propagation is very difficult due to the extremely poor germinability of its seeds. Attempts to germinate seeds under laboratory conditions have also failed mostly, although a few plants have been obtained. Tissue culture, being an useful means of cloning, should enable a faster rate of multiplication of desired plant (male or female). The present work describes an effective method developed for rapid multiplication of Thumbakarawila.

Leaf axillary buds of Thumbakarawila were aseptically cultured in media based on MS (Murashige and Skoog, 1962) salts and vitamins, growth regulators, sucrose (3%) and agar (0.8% w/v). The concentration of MS salts was half the normal. Different concentrations (0.1-1 mg/1) of cytokinin (BAP or kinetin) and auxin (IBA, NAA or IAA) were used as growth regulators. All cultures were maintained under light (3,000 Lux, 16 h) at $26 \pm 1°C$

An early bud break was observed with the medium containing BAP (0.4 mg/1) and IBA (0.2 mg/1). In this medium well-developed shoots were formed from the axillary buds within 3-4 weeks of culture. At higher BAP levels (0.6-1 mg/1) and low IBA levels (0.1-0.4 mg/1) multiple shoot formation was observed. These shoots formed roots when isolated and cultured on MS medium containing BAP (0.02 mg/1) and IBA (0.2 mg/1). Roots were visible within 3-4 weeks of culture. The plants were successfully established in soil.