



INFLUENCE OF CYTOKININS AND AUXINS DURING MICROPROPAGATION IN *CELASTRUS PANICULATUS* (MALKANGNI)

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ABSTRACT: *Celastrus paniculatus* Willd. (Malkangni) is a woody climber belonging to family Celastraceae distributed throughout the country in the tropical and subtropical regions. It is a well-known herbal drug used in ayurveda and unani system of medicines. Seed oil and leaves are used for enhancing memory, in tuberculosis, skin diseases, preventing greying of hair, arthritis etc. Present investigation was conducted to develop micropropagation method for the production of quality planting material of *C. paniculatus*. The effect of different cytokinins on establishment of culture and shoot multiplication was investigated. Maximum number of shoots (7.27) were observed on MS semisolid medium supplemented with 1 mg l⁻¹ BA whereas maximum shoot length (3.44 cm) was noted on 2 mg l⁻¹ Kn during culture establishment. During shoot multiplication, maximum shoots (8.20) and maximum shoot length (4.62 cm) was achieved on a combination of 2 mg l⁻¹ BA+ 1 mg l⁻¹ Kn. *In vitro* rooting of 100 % was obtained on half strength MS semisolid medium supplemented with all the three concentrations of NAA (0.5 mg l⁻¹, 1.0 mg l⁻¹ and 1.5 mg l⁻¹). The *in vitro* rooted plantlets were successfully hardened and acclimatized and transferred to field conditions. Thus, a micropropagation methodology for *Celastrus paniculatus* was developed.

Keywords: Auxins, *Celastrus paniculatus*, cytokinins, micropropagation

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INTRODUCTION

Celastrus paniculatus Willd. belonging to family Celastraceae is a large, woody, unarmed fruit-bearing climbing shrub that is now gaining importance due to its immense medicinal properties contained in its various parts. *Celastrus paniculatus* is mentioned in ayurvedic medicine as "Tree of life". It is commonly known as Malkangni, Kangani, Sphutabandhani, Jyotishmati,

Svarnalota, Intellect tree, Black-Oil tree and Climbing-staff plant. Ayurveda suggests that it stimulates the intellect and promotes memory hence Ayurveda identifies it as Jyotishmati (Deodhar and Shinde, 2015). Ancient traditional medicine system has administered this plant as a remedy for many health disorders such as cognitive dysfunction, nervous system disorders, skin diseases, paralysis, leucoderma, and