Effect of Different States of Murashige and Skoog's Media on the Growth of Hairy Root Culture in *Artemisia pallens* Wall

***Yatoo Ghulam Mohiuddin and Nathar Varsha Nitin**

Plant Tissue Culture Laboratory, Department of Botany, S. G. B. Amravati, University, Amravati-444602 (MS) India
E-mail: yatoobotany@gmail.com

Abstract—Hairy roots are transformed roots generated by the infection of higher plants with *Agrobacterium rhizogenes* and are characterized by genetic and biochemical stability, rapid growth rate and the ability to synthesize natural compounds at higher levels comparable to intact plants. In the present study, hairy roots were induced from different explants of *Artemisia pallens* by *Agrobacterium rhizogenes* strains R1601, A4 and LBA9402. After successful emergence of hairy roots in *A. pallens*, 0.1 gm of hairy roots from different hairy root clones were cultured on MS solid, semi-solid and liquid MS media for 30 days. The results showed that the biomass of the hairy roots induced from the different explants of *A. pallens* was found to be highest in MS semi-solid media, followed in MS solid media and least in MS liquid media.

Out of the different types of MS media used maximum growth of hairy roots (2.78±0.04gms/fw) was observed in semi-solid media induced from the shoot tip explants of *A. pallens* While as the minimum biomass of hairy roots (1.82±0.09 gms/fw) was observed in liquid media induced from the leaf explants of *A. pallens* after 30 days of inoculation.

Keywords: *Artemisia pallens*, Explants, Hairy roots, MS media.