

International Conference on

Plant Physiology & Pathology

June 09-10, 2016 Dallas, USA

Tissue culture studies on *Spilanthes acmella* Murr.-An important medicinal plant

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Spilanthes acmella Murr. was successfully micropropagated using nodal segments and apical shoot tips. The explants were cultured on MS medium supplemented with different concentrations of BAP for shoot initiation. All the concentrations of BAP alone induced shoot regeneration with varying frequency. High regeneration frequency was observed at 2 mg/l concentration of BAP in apical shoot tips (70%) and nodal segment (60%). The regenerated shoots were multiplied on MS medium with different concentrations of BAP alone and in combination with NAA and IAA. Highest frequency of multiple shoot induction (90%) was observed at 2.0 mg/L BAP + 1.0 mg/L IAA with maximum number of shoots 25 and 40 after first and second subculture. The highest shoot length (4.8 cm) was observed at 2.0 mg/L BAP + 1.0 mg/L NAA with 80% shoot multiplication. The regenerated shoots were transferred onto rooting media with different concentrations of IBA and NAA. All the concentrations of IBA and NAA produced roots with varying frequencies. High percentage of rooting (90%) was observed for 1.0 mg/L IBA and NAA at 1.0 mg/L also showed good percentage of rooting (80%). Rooted plantlets were hardened and established in pots with 100% survival rate.

Biography

A Sabitha Rani has completed her PhD from the Dept. of Genetics, CPMB, Osmania University. Her research interests are tissue culture studies of medicinal plants and Plant Biotechnology. She has published 30 research papers in national and international reputed journals. She has also presented many research papers in national and international conferences. She is the member of many academic bodies and also the member of editorial board for many research journals.

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