World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:10, No:01, 2016

# In Vitro Micropropagation of Rosa damascena Mill

**Authors :** Asghar Ebrahimzadeh, Sattar Malekian, Mohammad Ali Aazami, Mohammad Bagher Hassanpouraghdam

**Abstract :** Roses are of main ornamental flowers worldwide. Rosa damascena Mill., besides being an ornamental plant, has major pharmaceutical, cosmetic and fragrance applications. Traditional propagation methods of the plant are using suckers, cutting and grafting. In the present experiment, we used the different explants (leaf section, petioles and nodal cutting) for the optimization of this high-valued ornamental from a native clonal plant. Diverse explants were acquired from mature plants during the growing season and were planted on MS medium supplemented with different hormonal combinations. 70% alcohol and sodium hypochloride were utilized for the surface sterilization. For proliferation, BAP and BA (1-5 mg L-1) and NAA (1-2 mg L-1) were tested. The highest proliferation rate was afforded from MS medium supplemented with 1.5 mg L-1 BA and 5 mg L-1 BAP. Callogenesis from leaf samples and petioles was the best with 1/2 MS medium enriched with 1mg L-1 BAP and 4 mg L-1 2,4-D. Rooting was occurred with the highest frequency in a medium containing 0.1 mg L-1 IBA.

**Keywords :** Rosa damascene, micropropagation, petiole, IBA, BAP
**Conference Title :** ICABBBE 2016 : International Conference on Agricultural, Biotechnology, Biological and Biosystems Engineering
**Conference Location :** Paris, France
**Conference Dates :** January 21-22, 2016