

Regeneration and Genetic Transformation by pAB6 Plasmid of *Hyoscyamus muticus* L., (Egyptian Henbane) Using Particle Bombardment.

Abstract:

Media chemical composition effect on production of embryogenic calli and production of transformed plants from *Hyoscyamus muticus* L (Egyptian henbane) were assessed using gene gun. *Hyoscyamus muticus* L., (Egyptian Henbane) is medically and economically important plant as it contains widely used atropine alkaloids, scopolamine, hyoscyamine. Callus induction and regeneration ability from leaf of *Hyoscyamus muticus* L were examined. Effects of 7 media were evaluated on type II callus production and regeneration. T3 medium showed greater positive response in embryogenic calli formation frequency (84.95%), reflected on shoot formation frequency (7.65/explant) and produced a high root yields after transfer on the rooting medium. Transformed henbane plants were achieved by particle bombardment using plasmid pAB-6 harboring the gus and bar genes with transformation efficiency 13.4%. Total alkaloid contents were reached to 6.05% in transformed plants. It compared with untransformed plants which contained 2.95%.