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An improved micropropagation method for *in vitro* and *ex vitro* rooting of Mexican anxiolytic plant *Galphimia glauca*

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A procedure for rapid rooting and micropropagation of *Galphimia glauca* has been developed in this study. *Galphimia glauca* is a traditionally used plant in Mexico since decades for the treatment of nervous system disorders. Our study showed an improved rooting system and overall micropropagation procedures. During micropropagation of *Galphimia*, four different media combinations were employed such as 1) MS and IAA- indolacetic acid, 2) IBA- Indole-3-butyric acid, 3) ANA 1-Naphthaleneacetic acid and 4) KN- kinetin. The combination of MS + IBA and MS + ANA showed the best results with plantlets of 1.5 cm long in 14 days. To grow roots, four different media combinations were tested with different phyto-regulators, where two combinations showed significant root formation. They were IBA+NAA with 45% of root formation and the other one was IBA + ANA with 30% root formation. These plantlets were transplanted to small pots with a mixture of Peat Moss, Tezontle ortoperlita and Vermiculite for better aeration and root growth. Furthermore, plantlets were kept in a small incubation chamber with 50% of humidity and 24°C of temperature for 4 weeks and then were transferred to a commercial size green house. As per our knowledge, this is the first report of complete micropropagation and acclimatization of this important medicinal plant species of Mexico.

Biography

Rubi Orbe Briones is an undergraduate student of Biotechnology Engineering at Monterrey Institute of Technology, recipient of High Academic Achievement Program Award, has a specialization in Molecular biology. She recently obtained Diploma of Six Sigma from the Arizona State University. She is an International member of Cancer Prevention and Support Association, Australia and founding member of CancerCom in Mexico. Her research interest lies in agro-biotechnology and phyto-pharmacology. She has received "Outstanding Achievements" award from our Biotech department this semester.

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