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Implement of *in vitro* techniques for achievement and production of anti-depressant agents from calli cultures of two *Hypericum spp*.

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H America. *Hypericum sinaicum* is growing in a small area in Sant Katrina in Egypt and listed as endangered and rare plant. The important of *Hypericum* plants as a medicinal plant is mainly due to the presence of hypericin and hyperforin compounds which use as a natural treatment for mild to moderate depression. Promising protocol for callus production from different explants from these plants was established. Whereas, MS medium fortified with 2.25 μ M of 2,4-D and 0.55 μ M of Kin gave the best results. The descending order of callus formation frequencies 95.13, 85.18, 79.31, 71.25, 65.12, 50.4 was recorded with root, leaf and stem explants of *H. perforatum* and *H. sinaicum*, respectively. The highest accumulation rates of hypericin and hyperforin (μ g/g dw) were recorded with *H. perforatum* followed by *H. sinaicum* using TLC and HPLC techniques.

Biography

Hussein S Taha has received his PhD in Cairo/ Egypt University during the period of 1999. Currently, he is working as Prof., in National Research Centre. He has successfully completed his Administrative responsibilities as. Consultant of Genetic Engineering and Biotechnology in the Patent Office, Academic of Scientific Research and Technology (May, 2002 to May, 2007). His research has included many studies and investigations about production of pharmaceutical active compounds and *in vitro* propagation of medicinal and economic plants using different plant biotechnology and genetic engineering techniques. Based on this research and fellowship training he has received several awards and honors, such as Encouragement Prize for National Research Center in Agricultural Science 2002/2003 and scientific excellence prize for National Research Center in Agricultural Sciences 2011/2012. He is an expert reviewer for journals like *Scientia Horticulture and Forestry Medicinal Plants Research*, African Journal of Pharmacy and Pharmacological Research. He has authored about 75 research articles/books. He is a member of International Society Horticulture Science (ISHS), Egyptian Society of Genetics and Arab Society for Medicinal Plants Research.

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