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Enhanced neurobehavioral effects of Jadwar (*Delphinium denudatum*) aqueous fraction by implying nanotechnology based approach

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Delphinium denudatum Wall. (Ranunculaceae) is an indigenous medicinal herb popularly known as 'Jadwar' widely used in traditional Unani system of medicine for the treatment of a variety of human ailments including epilepsy. In order to increase the bioavailability, the nanophytosome of the *Delphinium denudatum* root aqueous fraction (DNP) was prepared, characterized and evaluated.

The phospholipid complex of the obtained aqueous fraction (AF) was prepared with Phospholipon 90H. The size of nanophytosomes was determined by dynamic light scattering. HPTLC fingerprinting of the AF was also performed. PTZ and ICES models were used to evaluate the anticonvulsant activity while Rotarod test, Elevated Plus maze test, and Forced swimming test were used to evaluate other neuropharmacological effects at dose level of 400mg/kg and 800mg/kg p.o.

The particle size of the prepared DNP was around 500 nm. The DNP exerted significant anticonvulsant activity as compared to control, aqueous fraction and placebo treated groups ($p < 0.001$). The DNP significantly increased the threshold current and decreased the mortality percentage against electroshock at all the doses as compared to control, conventional extract and placebo treated groups. However, there was a significant dose dependent reduction in the recovery period following the convulsions ($p < 0.001$). DNP also exhibited anxiolytic and antidepressant activity in a dose dependent manner. Furthermore, DNP did not cause any evidence of neurotoxicity till dose of 2000 mg/kg p.o. It can be hypothesized that DNP may have better access to the brain as evidenced by its improved efficacy than pure aqueous fraction.

Biography

Syed Mohammad Abbas Zaidi completed BUMS and MD (Unani) from Hamdard University, New Delhi. Currently he is working as Assistant Professor at H.S.Z.H. Govt. Unani Medical College, Bhopal. He has published 17 papers in various International/National journals, presented 5 papers abroad (USA, Iran, Malaysia, Japan and Srilanka), many papers in various national conferences across the country and got best paper award in Malaysia in 2011. He has 3 patents and is Associate member of Japan Neuroscience Society, member of editorial board of Indian Journal of Unani Medicine, referee of 3 international journals and member of ethical Committee, Clinical Research Unit, CCRUM, Bhopal.

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