

Neuroprotective potentials of *Desmodium triquetrum* DC on brain aging and chemically induced amnesia in animal models relevant to Alzheimer's disease**Hanumanthachar Joshi**

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Memory loss in dementia is often the most disabling feature of many disorders, impairing the normal daily activities of the patients and profoundly affecting their families. Treatment of cognitive disorders like dementia and Alzheimer's disease has been challenging since no potential drug is available at present with proved efficacy. In the present study, nootropic activity of methanolic extract of roots of *Desmodium triquetrum* (DT) was studied in mice. Elevated plus maze and passive avoidance paradigm were employed to evaluate learning and memory. Scopolamine (0.4 mg/kg, i.p.) and diazepam (1 mg/kg, i.p.) were used to induce amnesia in mice. DT (50 and 100 mg/kg, p.o.) significantly attenuated amnesic deficits induced by scopolamine, diazepam and natural aging. Furthermore, it also reversed aging induced amnesia due to natural aging of mice. DT profoundly increased whole brain acetyl cholinesterase inhibition activity and normalized 5 HT, ACh and dopamine levels in the brain. Hence, DT might prove to be a useful memory restorative agent in the treatment of dementia seen in the elderly. The underlying mechanism of its action may be attributed to its antioxidant and acetyl cholinesterase inhibition properties.

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