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COGNITION IMPROVING EFFECTS OF CLERODENDRON PHLOMIDIS LINN. BARK EXTRACT IN MICE

H. Joshi¹, K. Megeri²

¹Pharmacology, Sarada Vilas, Mysore, ²Biotechnology, Karnatak University, Dharwad, India

Normal ageing is known to deteriorate memory in human beings. Oxygen free radicals, the harmful byproducts of oxidative metabolism are known to cause organic damage to the living system, which may be responsible for the development of Alzheimer's disease in elderly. Clerodendron phlomidis Linn. (Verbenaceae) is known as Agnimantha in sanskrit. Bark of the plant is used in treating various nervous disorders. In the present study C. phlomidis was investigated for its potential as a nootropic agent in mice. The aqueous extract of the C. phlomidis (100 and 200 mg/kg, p.o.) was administered for 6 successive days to both young and aged mice. Exteroceptive behavioral models such as elevated plus maze and passive avoidance paradigm were employed to evaluate short term and long term memory respectively. Scopolamine, diazepam were used to induce amnesia in mice. To delineate the mechanism by which C. phlomidis exerts nootropic action, its effect on brain acetyl cholinesterase levels were determined. Piracetam was used as a standard nootropic agent. Pretreatment with C. phlomidis (100 and 200 mg/kg, p.o.) for 6 successive days significantly improved learning and memory in mice. It reversed the amnesia induced by scopolamine, diazepam and natural ageing. It also decreased the acetyl cholinesterase levels in the whole brain. The bark of C. phlomidis can be useful in treatment of cognitive disorders such as amnesia and Alzheimer's disease.