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(57) Abstract :

The present invention provides a neuroprotective composition and therapeutic method involving andrographolide for effectively mitigating aluminium chloride-induced neurotoxicity, cognitive impairment, and neuroinflammation. Administered orally at 1-3 mg/kg, andrographolide significantly improves spatial memory, reduces oxidative stress markers, enhances antioxidant enzyme levels, and substantially inhibits NF κ B activation within neuronal tissues. Histopathological evidence corroborates the neuroprotective effect, indicating andrographolide's therapeutic potential against aluminium chloride-triggered neuronal damage. The disclosed invention presents a promising natural therapeutic approach for counteracting neurodegenerative conditions linked to aluminium exposure.

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