عنوان مقاله:

Spatial memory-enhancing effects and antioxidant activities of leaf and stem bark methanol extracts of Prunus africana in scopolamine-treated mice

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خلاصه مقاله:

Introduction: Conventional medicines for Alzheimer's disease (AD) have little efficacy and are linked to several severe effects, necessitating alternative therapy. The current study investigated the memory-enhancing effects and antioxidant activities of stem bark and leaf MeOH extracts of Prunus africana in scopolamine-induced amnesic mice. Several inclusions build up in brain tissue during AD progression and the brain clears them oxidatively. This makes the antioxidant activity a vital requirement for plant extracts that are used with great success to manage AD. Methods: In this study, for each plant extract, thirty Swiss albino mice were randomly assigned to six groups; extract-treated, reference drug control, normal control, and negative control groups. The mice were then subjected to the Morris water maze task for four consecutive days, euthanized and their whole brains were assessed for antioxidant activities. Results: The studied extracts significantly ($P < ۰.۰۱$) reduced escape latencies of experimental mice in a dose-related manner, depicting their considerable memory-enhancing effects. The extracts also displayed significant ($P < ۰.۰۱$) enzymatic and non-enzymatic antioxidant activities. Conclusion: The leaf and stem bark MeOH extracts of P. africana possess phytocompounds with spatial memory-enhancing effects and antioxidant activities.

کلمات کلیدی:

Alzheimer's disease, Donepezil, Oxidative stress, Phytochemistry, Morris water maze