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# Neuroprotective Effect of Hypericum thymopsis Against Chronic Exposure to Aluminum Chloride and Alzheimer's Disease

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## Abstract

The effect of Aluminum chloride was investigated to describe the associated behavioral and brain modifications. We don't know enough about the biological chemistry of chronic and sub- acute exposure to Aluminium to be able to predict its impact on human health. Although the hypothesis of a link between Aluminium and Alzheimer's disease (AD) has been supported by several epidemiological studies. Extract of Hypericum *thymopsis* (HTE), a well known medicinal plant, is used for the treatment of depression, has been explored in the present study for its protective role against Aluminum neurotoxicity. This data suggests that HTE may be a candidate for application in neurodegenerative diseases such as Alzheimer's disease. Results of this study demonstrate that Aluminiumneurotoxicity play an important role in the development of anxiety disorders, depression and memory deficit in mice, these alterations of behavioral activities can be a cause of development of Alzheimer's disease. HTE possesses significant antioxidant activity and renders neuroprotection which was more pronounced at the dose of 200mg/ kg against Al induced neurotoxicity. Chronic administration of Hypericum thymopsis significantly improved retention in both tasks, attenuated oxidative damage, Aluminum concentration in Aluminum treated mice (p 0,05). Hypericum have neuropotective effects against Aluminum-induced cognitive dysfunction and oxidative damage.

**Keywords**: Aluminum,Alzheimer's Disease,Hypericum Thymopsis Extract(HTE) Neuroprotection,Mice