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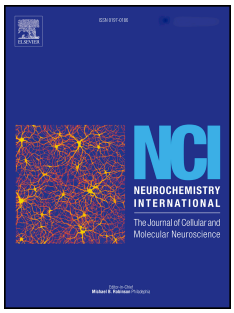

4-Hydroxyisophthalic acid from *Decalepis hamiltonii* rescues the neurobehavioral deficit in transgenic *Drosophila* model of taupathies

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4-Hydroxyisophthalic Acid from *Decalepis hamiltonii* Rescues the Neurobehavioral Deficit in Transgenic *Drosophila* Model of Taupathies

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Abstract

Oxidative stress is one of the major etiological factors implicated in pathogenesis of neurodegenerative diseases. Since neurons are more sensitive to oxidative damage there is an increasing interest in developing novel antioxidant therapies, especially herbal preparations due to their safety profile and high efficiency. In this regard, the neuroprotective potential of a novel antioxidant compound, 4-hydroxyisophthalic acid (4-HIPA) isolated from aqueous extract of *Decalepis hamiltonii* roots was examined using transgenic *Drosophila* model of taupathy expressing wild-type and mutant forms of 2N4R isoform of human microtubule associated protein tau (*MAPT*). Taupathy model flies showed cognitive deficits in olfactory memory and