# Role of Limonoid Compounds As Neuroprotective Agents

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## Technology description

Invention novelty
A series of compounds from the limonoid family that can be used in protecting neurons from different types of toxicity.
Unmet Need
Neurodegenerative diseases are characterized by extensive deterioration of neurons or glia. Because these cells are not easily regenerated, there is an emerging unmet medical need for a therapeutic intervention. Previous studies show that Limonoids, which can be isolated from various plants, have a wide range of biologic activities, including insecticidal, insect antifeedants, antibacterial, antifungal, antimalarial, anti-cancer, and antiviral. This invention demonstrates that the limonoids have additional therapeutic application in neuroprotection.
Technical Details
Johns Hopkins researchers have discovered a potential neuroprotectant that can treat a broad spectrum of neurodegenerative disorders such as Alzheimer’ s disease, multiple sclerosis, Huntington’ s disease, Parkinson’ s disease, AIDS related dementia, Amyotrophic lateral sclerosis, stroke, and spinal cord trauma. Disclosed herein are neuroprotective compounds that decrease induced or spontaneous neuronal or glial cell death, compositions that include the neuroprotective compounds, and methods of their use in treating a neurodegenerative condition. The neuroprotective compounds described herein are shown to promote survival of neurons and glia in response to cytotoxic challenges, e.g., oxidative stress. Cytotoxic challenges are associated with a number of neurodegenerative conditions; accordingly, the neuroprotective compounds, compositions, and methods described herein can be used to treat a variety of neurodegenerative conditions.
Data Availability:Animal data

## Advantages

Specifically protect neurons when contacted with the neurons and glia at risk.
An effective method of treating or reducing the risk of most of the neurodegenerative diseases.
High neuroprotective efficacy compared to other known neuroprotective agents such as Resveratrol.

## Institution

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