

Myricanol Derivatives and Uses Thereof for the Treatment of Neurodegenerative Diseases

Researchers at the University of South Florida have developed therapeutic compositions of myricanol derivatives for the treatment of neurodegenerative diseases associated with the abnormal accumulation of protein tau.

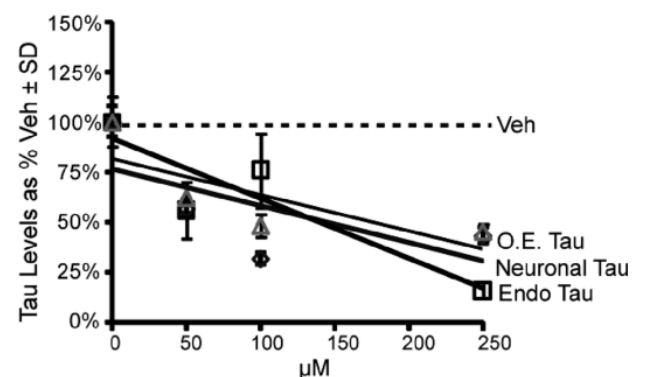
The intracellular aggregation of abnormal protein tau is a major pathologic feature of many neurodegenerative diseases collectively referred to as tauopathies. Tau normally functions to stabilize microtubules in neurons. However, its unwanted aggregation is characteristic of more than 15 neurodegenerative diseases including Alzheimer's disease and Parkinson's disease. Presently, the development of tauopathy therapeutics focus primarily on agents that prevent the aggregation of tau proteins. However, new research shows that agents that degrade or destabilize tau intermediates, clear abnormal tau from cells, or otherwise reduce intracellular tau levels may be a more promising therapeutic approach.

USF researchers have found that myricanol derivatives may be an effective treatment option for many neurodegenerative diseases and tauopathies including Alzheimer's disease, Parkinson's disease, and other neurodegenerative diseases. This derivative has been shown to reduce aberrant overexpressed microtubule associated tau protein levels in HeLa cells. Myricanol is a known chemical compound that is isolated from the root barks of the *Myrica* species. Many *Myrica* species are edible and have been used in folk medicines for many years, proving themselves as a natural and safe treatment option.

ADVANTAGES:

- Causes significant reductions in tau accumulation
- May treat a variety of tauopathies
- A natural treatment option
- Compounds exhibit low toxicity and don't alter GADPH levels

Novel Method of Treating Neurodegenerative Diseases



HeLa-C3 Cells Show Decreased Tau Levels when Treated with Extracted Myricanol

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