

Special Issue on **Natural Products Targeting Redox-Inflammatory Signaling in the Management of Neurodegenerative Diseases**

CALL FOR PAPERS

Oxidative stress results from an imbalance between the production of reactive oxygen species (ROS) and the innate ability of the biological system to detoxify the overproduced ROS and reactive intermediates. Oxidative stress and subsequent inflammation together contribute to protein misfolding, glial cells activation, mitochondrial dysfunction, and subsequent inflammation that lead to neuronal death. Thus, alteration in redox-inflammatory signaling is implicated in the initiation and progression of Alzheimer's, Parkinson's, and other neurodegenerative diseases. Numerous therapeutic agents are available for the treatment, though. However, the perplexing mechanism of oxidative stress and inflammation provides maneuvers as therapeutic targets for the future therapeutics.

Since ancient times natural products have been used against different diseases including neurodegenerative diseases. In recent years, there are a number of natural derived molecules that have been shown to be effective in neurodegenerative diseases by targeting oxidative stress and inflammatory pathways. Natural compounds derived from medicinal plants, animals, and marine organisms appear effective against neurodegeneration due to remarkable biological and pharmacological properties and are likely to be translated into clinical benefits. There are numerous natural products that protect neurons against cell death, and they may be promising in preventing neurodegeneration. These could be due to their ability to maintain redox homeostasis and inflammation. Therefore, investigating the mechanisms by which natural compounds protect against neurodegenerative diseases may be of great therapeutic benefits in neuroprotection.

Investigators are invited to submit original research papers as well as review articles exploring pharmacological and molecular mechanisms of natural compounds targeting oxidative stress and inflammation in neurodegenerative diseases.

Potential topics include but are not limited to the following:

- ▶ Prevention of neurodegenerative diseases by natural compounds
- ▶ Mechanisms of natural compounds targeting oxidative stress and inflammation in neurodegenerative diseases
- ▶ Computational studies of natural compounds targeting neurodegenerative diseases
- ▶ Bioanalytical studies of natural products targeting neurological diseases
- ▶ Role of natural compounds targeting enzymes or receptors in manipulating the redox signaling in neurodegenerative diseases
- ▶ Role of natural products against the protein misfolding and mitochondrial dysfunction in neurodegenerative diseases

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/omcl/nptr/>.

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First Round of Reviews

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