Oxidative Medicine and Cellular Longevity

Special Issue on

# Redox Status and Aging Link in Neurodegenerative Diseases 2015

# CALL FOR PAPERS

In cells there is a balance in redox state that is in large part because of the production of reactive oxygen/reactive nitrogen species (ROS/RNS) and the antioxidant systems that detoxify them. The ROS/RNS at low level have physiological roles as signaling molecules in various cellular and developmental processes. However, the increase in the production of these species and/or the decrease in the antioxidant capacity can lead to perturbation of the redox balance, causing oxidative/nitrosative stress which ultimately leads to cell death. Aging and age-related neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's are known to be associated with increased oxidative stress. Different reports have suggested that an increase in oxidative stress may lead to cognitive impairment during aging; additionally, increasing evidence also suggests that ROS may act as signaling molecules in processes underlying cognition. Understanding of the impact of impairment in the balance of antioxidant defense and ROS/RNS generation as common factors in aging and neurodegenerative diseases, as well as the mechanisms that are involved, will lead to a better comprehension of several processes related to aging and neurodegeneration biology.

Since developments in this field have been rapid, we invite investigators to contribute original research articles as well as review articles that address the progress and current standing in this vast field of biology.

Potential topics include, but are not limited to:

- Recent advances on the impact of oxidative stress in neurodegenerative disorders and aging
- Proteins target involved in the signaling of redox status in the aged brain
- Experimental models and molecular mechanism of neurodegenerative diseases
- Antioxidants as a tool to investigate the mechanism of neurodegenerative diseases
- Pharmacological or dietetic interventions for neurodegenerative diseases and aging
- Current strategies to reduce the development of oxidative stress in neurodegeneration and aging
- Role of inflammatory mediators in free radical generation in the brain, aging, and neurodegeneration
- Prophylactic approaches: preconditioning, postconditioning, and their application to fight brain disorders

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/omcl/redox15/.

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