Oxidative Medicine and Cellular Longevity

Hindawi

Special Issue on

Natural Products for the Prevention of Oxidative Stress-Related Diseases: Mechanisms and Strategies

CALL FOR PAPERS

A large number of populations were affected by chronic diseases, such as neurodegenerative disease, cardiovascular diseases, obesity, and cancer. However, the exact mechanisms underlying the process of these chronic diseases remain unclear. A common feature of these diseases is extensive evidence of oxidative stress, which might be responsible for the dysfunction or death of specific cells that contributes to disease pathogenesis. Due to the fact that oxidative stress may play important roles in disease development, numerous experimental and clinical studies have been conducted to unveil the underlying mechanisms of action of oxidative stress that regulate chronic pathological status.

Recent studies show that natural compounds and/or their derived small molecules may have potential in reducing risk of chronic diseases. Those naturally occurring compounds can protect cells from oxidative stress as antioxidants, thus ameliorating various oxidative stress related diseases, such as neurodegenerative diseases, obesity, type 2 diabetes, inflammation conditions, and cancer. Despite accumulating evidence which indicates that various natural products presented in monomer or complex show potential diseases preventive capabilities, a large number of natural products yet remain underutilized and unexploited. In addition, a clear understanding of precise mechanisms of actions of natural products would shed further light into the application of natural compounds on preclinical prevention and treatment of oxidative stress related diseases.

In this special issue, we invite investigators to contribute recent original research articles both in experimental and clinical data as well as review articles, which will better help us understand the precise effects of natural compounds in various disease models both *in vitro* and *in vivo* and further explore the cellular and molecular mechanisms underlying their actions.

Potential topics include, but are not limited to:

- Extraction and purification of natural compounds from functional foods, medicinal plants, and herbs and their application on oxidative stress related diseases
- Role of natural compounds in ROS-mediated signaling and redox modulation
- Potential effects and mechanisms of natural compounds on neurodegenerative diseases, cardiovascular diseases, obesity associated diseases, inflammation conditions, and cancer through oxidative stress regulation

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

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Manuscript Due
Friday, 3 July 2015

First Round of Reviews
Friday, 25 September 2015

Publication Date
Friday, 20 November 2015