Special Issue

The Antioxidant Effect of Melatonin on Mitochondrial Network

Message from the Guest Editor

Mounting evidence has indicated that oxidative stress contributes to the development of several diseases. Mitochondria are dynamic organelles that are involved in the regulation of various cellular functions. Mitochondrial ROS can affect fission and fusion both under physiological and stress conditions. The ROS produced by the respiratory chain inside mitochondria could be involved in fission. This phenomenon, called mitoptosis, helps to maintain the mitochondrial morphology and function, eliminating ROS-producing mitochondria. There are many molecules that potentially work as free radical scavengers; however, melatonin has an advantageous position that other antioxidants do not have. In fact, melatonin directly or indirectly limits oxidative stress. Moreover, the protective effects of melatonin on mitochondria depend on its accumulation in these organelles. However, the underlying mechanism through which melatonin regulates the mitochondrial network is still to be investigated. The aim of this Special Issue is to collocate original research in order to spread new knowledge to a broader audience of this journal.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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