

Special Issue

ROS in Aging and Age-Related Disease

Message from the Guest Editor

Reactive oxygen species (ROS) are a natural byproduct of aerobic cellular metabolism. At physiological levels, ROS regulate multiple cellular processes including cell signaling and host defenses, and are kept in check by enzymatic and non-enzymatic antioxidants. When the levels of ROS overwhelm antioxidant defenses, oxidative stress ensues, resulting in oxidative. The involvement of ROS in aging was first proposed by Harman's "Free Radical Theory of Aging" in 1956, according to which aging and aging-associated diseases are the result of the accumulation of oxidative damage throughout the lifespan. Harman further refined his theory in 1972, highlighting the role of mitochondria as not only the primary cellular sources of ROS but also their primary target. We invite you to contribute original research as well as review articles to this Special Issue aimed at critically examining the potential of pharmacological and non-pharmacological antioxidant therapies in aging and age-related diseases at the molecular, cellular, biochemical, and physiological levels, as well as clinical, pre-clinical, and translational research in the field of anti-aging antioxidant therapies.

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.

Editor-in-Chief

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