

Special Issue

Redox Modulation and Age-Related Diseases

Message from the Guest Editor

In recent years, the vision of free radicals' role in aging has been totally reconsidered. The classical mitochondrial theory of free radicals of aging (FRTA), postulated by Harman in 1965, pointed to radical oxygen species (ROS) as responsible for cellular aging when their production exceeded the antioxidant defenses of the body. However, recent observations in some animal models have evidenced a lack of relationship between their ROS levels and their lifespan, changing the role classically assigned to ROS in aging. Now ROS are placed in a new conceptual framework, according to which these molecules would have a signaling role by the activation of compensatory homeostatic responses. In aging, there would be an increase in ROS levels which, after exceeding a certain threshold, would lose their homeostatic function and would begin to cause or worsen cell damage. Taking this new point of view into account, evaluating how changes in redox modulation are associated with and drive age-related diseases is the new orientation of current research in this field.

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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