

Special Issue

Reactive Oxygen Species as Cellular Messengers in Aging and Age-Related Diseases

Message from the Guest Editor

Reactive oxygen species (ROS) were first perceived as toxic by-products of normal metabolism. Today, ROS are known to also serve as important signaling molecules that modulate different physiological and pathological processes. The type of ROS generated, its reactivity, diffusion distance, and the vicinity of the molecular target determine whether the signal will be translated further. ROS serve as both intracellular and intercellular messengers and may thus also orchestrate the fate of the surrounding cells. A shift in the equilibrium within the redox system can either promote cellular adaptation or impair the physiology of the cell. Throughout an individual's lifetime, ROS-induced cellular damage accumulates and contributes to the aging process and the development of age-related diseases. Among the oxidative stress-induced age-related diseases are cardiovascular disorders, neurodegenerative disorders, metabolic syndrome, and cancer. This Special Issue aims to bring together original research and review articles related to the role of ROS as cellular messengers in both the physiology and pathophysiology of aging. We look forward to your contribution.

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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