



Straddling Physiology and Pathology: A Radical Control of Signal Transduction Pathways

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Message from the Guest Editors

The human body constantly gives rise to free radicals. They are standard products of processes involved in energy conservation (mitochondria) and other cell functions. Moreover, it is now increasingly appreciated that a myriad of redox-based post-translational modifications have a substantial impact on protein structure and, thus, function. When kept at bay by antioxidant systems, both oxygen and nitrogen-free radicals (ROS and RNS, respectively) can modulate channels, transporters, and many other essential cell structures involved in many, if not all, cell processes. On the other hand, when their generation exceeds the cellular-scavenging capacity, both ROS and RNS cease to contribute to the organismal homeostasis and well-being, becoming a source of harm, the extent of which depends on many factors, including the intrinsic toxicity of the generated ROS or RNS species, the time of exposure to them, as well as the status of the local antioxidant weapons.

For the present Special Issue, we have invited expert investigators to share with the scientific community their new acquisitions on the role played by ROS and RNS in cell physiology and pathology.





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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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