Special Issue

Interplay Between Metabolism, Oxidative Stress, and Cellular Signaling in Health and Disease

Message from the Guest Editors

The close relationship between metabolism, oxidative stress, and cellular signaling has been widely demonstrated in the literature. ROS produced during oxidative metabolism by the mitochondria act as secondary messengers. Based on this, the main mitochondrial fuels also act as regulators of cellular signaling through the production of ROS, as well as catabolites. From this perspective, lipids, necessarily catabolized into mitochondria, are crucial in regulating ROS production and contribute to activating downstream responses, including transcriptional factor activation (e.g., the PPAR family) and DNA damage promotion. Consequently, the cell's antioxidant resources also fall into this type of relationship, regulating intracellular ROS levels and buffering oxidative stress. This means that the signaling generated by the activation of certain pathways can be different depending on the cell type. In this Special Issue, the interplay between metabolism, oxidative stress, and cellular signaling will be considered from different perspectives, taking into account both health and disease conditions.

Guest Editors

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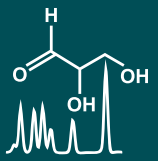

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Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

Editor-in-Chief

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