Special Issue

Central Role of Mitochondrial Oxidative Stress in the Pathophysiology of Disorders

Message from the Guest Editors

Mitochondria are the main sites of cellular oxidation and energy conversion, and most cellular ATP is produced by oxidative phosphorylation. Mitochondrial functionality is also maintained by the so-called mitochondrial quality control, which includes processes such as mitochondrial biogenesis, dynamics, and mitophagy. Since mitochondria are considered the main source of reactive oxygen species (ROS) production in cells, impairments in bioenergetics or any mitochondrial quality control process are often accompanied by elevated ROS and oxidative damage. Therefore, mitochondrial dysfunction and ROS production are involved in the pathophysiology of primary mitochondrial diseases, neurodegenerative disorders, cardiac insufficiency, diabetes mellitus, and aging, among others. In this Special Issue, we aim to contribute to a better understanding of the pathophysiology of different pathologies characterized by mitochondrial dysfunction and reveal novel therapeutic approaches for these disorders. We look forward to your contributions to this Special Issue.

Guest Editors

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Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to Biomedicines, be it original research, review articles, or developing Special Issues of current key topics.

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