

Special Issue

Mitochondrial Disorders: From Molecular Mechanisms to New Therapies

Message from the Guest Editors

This Special Issue is dedicated to investigating the crucial role of mitochondria-related molecular mechanisms in the progression and treatment of human diseases. Mitochondria, which are central to cellular energetics and homeostasis, play a key role in a wide range of pathophysiological processes, including ischemia–reperfusion injury, oxidative stress, genetic disorders, neurodegeneration, toxicological damage, and the adverse effects of pharmacological treatments. Due to their involvement in essential cellular functions, such as ATP synthesis, ion homeostasis, cell growth, redox regulation, cell signaling, thermogenesis, and cell death, mitochondrial dysfunction can lead to profound disruptions in cell viability and contribute to the onset of numerous diseases. A deeper understanding of the molecular mechanisms that regulate mitochondrial function is critical to advancing our knowledge of these conditions and developing targeted therapeutic approaches. Special focuses of this issue include the presentation of new pharmacological targets and enhancing our understanding of diseases related to mitochondrial dysfunction.

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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