Special Issue

Oxidative Stress and Mitochondria in Human Diseases

Message from the Guest Editor

Mitochondrial dysfunction, associated with a higher production of reactive oxygen species, is implicated in various human conditions, such as cardiovascular diseases, metabolic syndromes, neurodegenerative diseases, and skeletal muscle diseases. The imbalance between fusion and fission processes, alterations of the interaction with lipid droplets, and metabolic impairments produced by ferroptosis processes are some of the novel molecular mechanisms involved in mitochondrial dysfunction. This special issue aims to gather cutting-edge research and comprehensive reviews addressing related topics, such as mitochondrial dysfunction and oxidative stress biomarkers, interventions to recover mitochondrial dynamics, and molecular mechanisms associated with mitochondrial biogenesis.

Guest Editor

Dr. Alejandra Espinosa

- 1. Medical Technology Department, Faculty of Medicine, University of Chile, Santiago, Chile
- 2. Escuela de Medicina, Campus San Felipe, Universidad de Valparaíso, La Troya Esquina El Convento s/n, San Felipe, Chile

Deadline for manuscript submissions

20 December 2025



International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/206317

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





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.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

