



Molecular, Cellular Mechanism of Oxidative Stress in Physiological and Pathophysiological Conditions

Guest Editor:

Dr. Stygar Dominika

Department of Physiology,
Faculty of Medical Sciences in
Zabrze, Medical University of
Silesia, Jordana Street 19, 40-055
Katowice, Poland

Deadline for manuscript
submissions:

20 September 2024

Message from the Guest Editor

Dear Colleagues,

Living organisms are constantly exposed to various environmental and biological stressors, including infection, inflammation, and chronic and civilization diseases. Oxidative stress and a diminished content of endogenous antioxidants in the body increase the vulnerability of tissues and cellular components to reactive oxygen species. The balance between antioxidant and prooxidant compounds at a molecular and cellular level represents a crucial determinant of various physiological processes. The maintenance of this balance is the primary aim of the integrated antioxidant system constructed within the living body. Under stress conditions, the antioxidant defense comprises the cumulative activity of enzymatic and non-enzymatic antioxidant systems. Understanding the physiological processes behind oxidative stress in pathophysiological conditions may facilitate the identification of individuals at risk of poor health or adverse welfare outcomes.

This Special Issue aims to collect original articles and systematic reviews addressing various aspects of the modulation of oxidative stress in living organisms.





an Open Access Journal by MDPI

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

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.

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 & Molecular Biology*) / CiteScore - Q1 (*Inorganic Chemistry*)

Contact Us

*International Journal of Molecular
Sciences* Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/ijms
ijms@mdpi.com
X@IJMS_MDPI