Special Issue

Molecular Mechanisms of Nitric Oxide in Cardiovascular System

Message from the Guest Editor

In the cardiovascular system, nitric oxide (NO), which is mainly produced by the endothelial NO synthase isoform, is highly involved in the modulation of vascular homeostasis and cardiac systo-diastolic function through mechanisms related to calcium handling and maintaining endothelial and mitochondrial function. Furthermore, due to its ability to interact with reactive oxygen species and activate the nitroso-redox signaling pathway, NO can play a central role in the pathophysiology of cardiovascular conditions. Hence, along with other factors, dysfunction in NO bioavailability or in downstream NO-related molecular mechanisms may result in the onset of hypertension, coronary disease, atherosclerosis, heart failure, and stroke. Despite the wide range of information available on this issue, however, unanswered questions about the signaling pathways and the control of NO bioactivity still remain. Increasing knowledge about this issue could be useful from the perspective of preventive medicine and therapeutic strategies. For the abovementioned reasons, this review aims to fill these gaps on the topic.

Guest Editor

Dr. Elena Grossini

Laboratory of Physiology, Department of Translational Medicine, Università del Piemonte Orientale, 28100 Novara, Italy

Deadline for manuscript submissions

31 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/244882

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

MDPI

International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed

mdpi.com/journal/ijms

MDPI

About the Journal

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)