



## Nrf2 and Heme Oxygenase: Two Players of the Same Game. Lights and Shadows

Guest Editor:

**Dr. Valeria Pittalà**

Department of Drug and Health  
Sciences, University of Catania,  
95125 Catania, Italy

Deadline for manuscript  
submissions:

**closed (31 December 2023)**

### Message from the Guest Editor

Nuclear factor erythroid 2-related factor 2 (Nrf2) is a cytoplasmic evolutionary conserved protein responsible for cytoprotection in case of oxidative stress. Oxidative imbalance triggers Nrf2-induced transcription of several antioxidant factors, including heme oxygenase-1 (HO-1). Heme oxygenase-1 in turn by degrading heme is a source of protecting catabolites, such as carbon monoxide and bilirubin with antioxidant and cytoprotective properties. Hence, Nrf2 and HO-1 have evolved as promising drug targets for the treatment of oxidative stress-based diseases. At the same time, recent research trends highlighted their detrimental role in different types of tumours, suggesting their modulation or inhibition as a novel approach in anticancer therapy.

This Special Issue aims to collect original papers and reviews focused on the modulation of Nrf2 and HO-1 in order to shed light on their drugability in the treatment of pathologies related to an imbalanced oxidative cell status as well as cancer. Special attention will be devoted to papers helping to clarify shadows and lights of these two targets.





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 and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry)

## Contact Us

---

*International Journal of Molecular  
Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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

mdpi.com/journal/ijms  
ijms@mdpi.com  
X@IJMS\_MDPI