

## Special Issue

# The Nrf2 Pathway: Regulation, Functions, and Potential Applications

### Message from the Guest Editors

The Nrf2 pathway, a master regulator of redox homeostasis discovered in the mid 1990s, is an integrated cellular response for electrophiles and thiol reactive compounds. In addition to its activation by environmental electrophiles such as quinones, diverse mechanisms of Nrf2 activation have been reported. The Nrf2 pathway has a wide variety of functions, such as defense against oxidative stress and electrophilic toxicity, carcinogenesis protection, tumorigenesis, anti-inflammation, stem cells regulation, anti-aging, reducing mechanical stress and organelle stress (autophagy, endoplasmic reticulum, mitochondria), protection against brain and skin injuries, and so forth. At present, drug discovery targeting the Nrf2 pathway has been explored extensively.

In this Special Issue, we widely recruit original articles that describe new discoveries in the Nrf2 pathway in any relevant topics, such as physiological functions, gene regulation, activation mechanism, drug discovery, evolution, human diseases, protein structure, and genome. We also welcome review articles and commentaries.

---

### Guest Editors

Prof. Makoto Kobayashi

Prof. Dr. Ken Itoh

Prof. Dr. Andreas Von Knethen

Prof. Dr. Mi-Kyoung Kwak

---

### Deadline for manuscript submissions

closed (31 December 2019)



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/22411](https://mdpi.com/si/22411)

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

[mdpi.com/journal/  
ijms](https://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



[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)



## About the Journal

### Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* 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, and molecular biophysics. *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. José L. Quiles  
Department of Physiology, Institute of Nutrition and Food Technology  
"Jose Mataix", Biomedical Research Center, University of Granada,  
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

---

### 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, CAPus / SciFinder, and other databases.

#### Journal Rank:

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