



an Open Access Journal by MDPI

## Hydrogen Peroxide in Redox Signaling

Guest Editor:

**Dr. Mikko O. Laukkanen**

Center for Experimental  
Endocrinology and Oncology  
(IEOS), CNR, Via Pansini 5, 80131  
Naples, Italy

Deadline for manuscript  
submissions:

**closed (30 June 2022)**

### Message from the Guest Editor

Reactive oxygen species (ROS) are involved in the regulation of a vast number of physiological processes as a result of the aerobic metabolism of the organisms. Mechanistically, the effect of ROS is channeled through redox signaling networks consisting of the main signaling cascades downstream of tyrosine kinase receptors (RTKs), small GTPases, and large G protein-coupled receptors (GPCRs). Hydrogen peroxide ( $H_2O_2$ ) is a well-characterized ROS produced by several redox enzymes.  $H_2O_2$  can inactivate protein tyrosine phosphatases (PTPs) by reversibly oxidizing the reactive cysteine in the active site, thereby allowing the phosphorylation of the cellular kinases at tyrosine or serine residues with subsequent activation of e.g., mitogen, growth, survival, apoptosis, and angiogenesis signaling affecting cardiovascular and tissue damage, degenerative diseases, tumorigenesis, bacterial infections, and microbiota in general.

The Special Issue is focused on the production and function of  $H_2O_2$  in redox signaling. The researchers are invited to submit review articles, original research articles, communications, and concept papers covering all aspects related to the topic of the Issue.



[mdpi.com/si/78367](https://mdpi.com/si/78367)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Alessandra Napolitano

Department of Chemical  
Sciences, University of Naples  
"Federico II", Via Cintia 4, I-80126  
Naples, Italy

## Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

## 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, FSTA, PubAg, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Chemistry, Medicinal) / CiteScore - Q1 (Food Science)

## Contact Us

---

*Antioxidants* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/antioxidants](http://mdpi.com/journal/antioxidants)  
[antioxidants@mdpi.com](mailto:antioxidants@mdpi.com)  
[X@antioxidants\\_OA](https://twitter.com/antioxidants_OA)