

Special Issue

Molecular Crosstalk Between Redox Signaling and Intestinal Health: The Role of Dietary Antioxidants

Message from the Guest Editors

Dietary antioxidants—including polyphenols, terpenes, organosulfur compounds, and betalains—exert protective effects in both in vitro and in vivo models of intestinal inflammation. They counteract oxidative stress, modulate NF- κ B and Nrf2 signaling, influence epigenetic regulation, and help preserve tight junction integrity. Furthermore, melatonin—a well-known antioxidant that can be administered orally either as a supplement or as phytomelatonin from plant sources—has also emerged as a potential adjunct in IBD management by regulating mucosal immunity, microbiota composition, and oxidative stress. This Special Issue will focus on the biological activity of dietary antioxidants—either as purified compounds or within plant food extracts—and their role in modulating redox signaling, maintaining intestinal barrier integrity, and counteracting inflammation. Contributions addressing molecular mechanisms, experimental evidence, translational studies, or examinations of their potential impacts on human health are particularly welcome.

Guest Editors

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About the Journal

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.

Editor-in-Chief

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