Special Issue

Modulation of Gut Microbiota and Oxidative Stress to Counteract or Prevent Human Disease

Message from the Guest Editors

Several recent works have emphasized links between the gut and the brain, and the gut microbiota has been shown to play an essential role in neurodegenerative disorders. Deepening understanding of how the gut–brain axis is influenced by the gut microbiota and its metabolites and which enzymes/pathways are involved could be beneficial for the design of new treatment protocols and to obtain better outcomes for certain related ailments. Natural and synthetic compounds can finely tune probiotic growth, metabolism, biofilm-producing capability, and colonization, unravelling the optimal growth conditions of different microbial species in counteracting dysbiosis, oxidative stress, inflammation, and host–probiotic interaction, positively modulating communication with the brain. In addition, on the one hand, some dietary compounds can exert anti-inflammatory and antioxidant activities, immunomodulating host response, and, on the other hand, they can exert a prebiotic effect, collectively preventing or halting dysbiosis-related symptoms.

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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