

Special Issue

Anti-Inflammatory and Anti-Oxidative Bioactive Compounds in Diet and Their Applications

Message from the Guest Editor

Chronic inflammation and oxidative stress contribute to non-communicable diseases like cardiovascular disease, diabetes, neurodegenerative disorders, and cancer. Dietary bioactive compounds—polyphenols, carotenoids, and omega-3 fatty acids—can modulate inflammation and reduce oxidative damage, offering potential for disease prevention and health promotion. They work by scavenging free radicals, modulating signaling pathways, regulating gene expression, and interacting with the gut microbiota to maintain cellular homeostasis and reduce disease risk. Research focuses on identifying, characterizing, and applying these compounds in functional foods, nutraceuticals, and personalized dietary interventions. This Special Issue invites original research and reviews on the mechanisms, efficacy, and applications of anti-inflammatory and antioxidative bioactive compounds in the diet, including molecular studies, animal research, human clinical trials, and population-based approaches. The aim is to advance the understanding and translational potential of dietary bioactives in promoting health and preventing chronic disease.

Guest Editor

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Message from the Editorial Board

Nutrients is an on-line open access journal that was first published in 2009. *Nutrients* adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of *Nutrients* has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

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