

Special Issue

The Role of Dietary Polyphenols and Dietary Polysaccharides in Human Diseases

Message from the Guest Editor

Dietary polyphenols and dietary polysaccharides are bioactive compounds widely distributed in plant-based foods. They have attracted growing scientific attention due to their potential role in the prevention and management of human diseases. Polyphenols exert antioxidant, anti-inflammatory, and immunomodulatory effects, contributing to the modulation of metabolic pathways and gut microbiota composition. Similarly, polysaccharides, particularly non-starch types and soluble fibers, have demonstrated prebiotic properties and beneficial impacts on metabolic and immune responses. Emerging evidence suggests that these compounds may play a protective role in chronic conditions such as diabetes, obesity, cardiovascular diseases, and certain types of cancer. Moreover, their synergistic interactions may enhance bioavailability and biological efficacy, opening new perspectives for dietary interventions and functional food development. This Special Issue aims to gather high-quality research and reviews exploring the molecular mechanisms, clinical evidence, and innovative applications of dietary polyphenols and polysaccharides in human health and disease.

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