

Special Issue

Probiotics and Dairy-Based Functional Foods: Impacts on Gut Health

Message from the Guest Editor

Current research elucidates the mechanisms through which probiotics and their fermentation-derived metabolites beneficially modulate the gut microbiota. These effects include the enrichment of beneficial bacterial taxa (such as *Lactobacillus* and *Bifidobacterium*) and the suppression of pathogenic species, thereby enhancing gut barrier integrity, alleviating inflammation and increasing the production of short-chain fatty acids.

Parallel studies focus on the isolation and characterization of potential probiotic strains—particularly those derived from traditional fermented foods and infant-origin *Bifidobacterium*—for their ability to inhibit enteric pathogens. Selected strains have demonstrated the capacity to produce antibacterial compounds, including bacteriocins and organic acids, that effectively suppress *Escherichia coli* proliferation and adhesion, thereby reinforcing host defenses against intestinal infections.

This Special Issue aims to collect high-quality research and reviews that explore the roles, mechanisms, and applications of probiotics and dairy-based functional foods in promoting gut microbiota homeostasis, preventing digestive disorders, and improving overall health.

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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