

Special Issue

Investigating Gut Axes: Pathophysiological Functions and Therapeutic Strategies

Message from the Guest Editors

The gut axes play critical roles in various pathophysiological processes due to their bidirectional communications with the enteric nervous system. Considering the numerous connections of the gut with other organs, the dysregulation of gut axes such as gut–brain, gut–heart, gut–liver, and gut–microbiome is implicated in the development of numerous diseases, including neurological disorders (Parkinson’s Disease, Alzheimer’s Disease etc.), metabolic syndrome, cardiovascular diseases, inflammatory bowel diseases and cancer. This Special Issue will explore the pathophysiological functions of these gut axes, highlighting their contribution to disease development and progression. It will also assess emerging therapeutic strategies targeting these pathways, such as microbiome modulation, gut-targeted drugs, and neuro-gastrointestinal interventions. Understanding the complex interplay within the gut axes offers novel insights into disease prevention and treatment, underscoring the potential of gut-directed therapies in managing a wide range of disorders.

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Deadline for manuscript submissions

20 April 2026



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/227675

*International Journal of
Molecular Sciences*
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