

Special Issue

Molecular Mechanisms of Gastrointestinal Immunity: Balancing Homeostasis and Pathological States

Message from the Guest Editors

The gastrointestinal immune system plays a pivotal role in maintaining the delicate balance between immune tolerance and immune activation in response to food antigens, microbiota, and invading pathogens. Disruption of this balance can result in chronic inflammation, barrier dysfunction, and the onset of a wide range of gastrointestinal pathologies, including inflammatory bowel disease, colorectal cancer, and infections. Recent advances have shed light on the complex molecular pathways involved in mucosal immunity, innate and adaptive immune responses, and their crosstalk with epithelial and stromal cells. This Special Issue aims to explore the latest research on the molecular mechanisms governing gastrointestinal immunity, with a particular focus on how these mechanisms contribute to either the preservation of gut homeostasis or the development of pathological conditions. We welcome original research articles and comprehensive reviews addressing immune regulation, signaling pathways, host–microbe interactions, and novel therapeutic strategies targeting immune dysregulation in the gut.

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