Special Issue

The Dynamic Gut Wall: Innovations and Future Directions in Intestinal Epithelium

Message from the Guest Editors

The intestinal epithelium is a highly dynamic tissue, crucial for nutrient absorption, immune defense, and maintaining gut microbiome balance. Its remarkable regenerative capacity, fueled by intestinal stem cells, enables rapid turnover and repair after injury. Recent advances have shed light on the molecular and cellular mechanisms governing epithelial renewal, barrier function, and interactions with the immune system and microbiota. This Special Issue aims to explore the latest innovations and future directions in studying and harnessing the intestinal epithelium's dynamic nature. Topics of interest include cutting-edge research on stem cell-based regenerative approaches, organoid modeling of intestinal physiology and pathology, advancements in gut-on-chip technologies, and emerging insights into epithelial–immune–microbiota crosstalk. We also welcome contributions on therapeutic interventions leveraging molecular pathways that regulate epithelial proliferation and differentiation, innovations in epithelial barrier restoration, and applications of bioengineered materials to emulate or repair gut function.

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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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