Special Issue

Recent Advances in Microfluidics and Organoids for Biomedical Applications

Message from the Guest Editor

Advances in microfluidics and organoids have revolutionized biomedicine by providing biomimetic models that overcome the limitations of traditional cell cultures and animal models. These technologies enable the precise control of microenvironments, cellular interactions, and dynamic physiological conditions, fostering breakthroughs in tissue engineering, pharmacology, toxicology, and regenerative medicine. Microfluidics allows for controlled fluid dynamics, gradient formation, and real-time cellular monitoring, making it a key tool for studying biological barriers, drug delivery, and disease modeling. Meanwhile, organoids, derived from stem cells, offer 3D tissue architectures that better recapitulate developmental processes, disease progression, and therapeutic responses. These platforms also play a crucial role in nanomedicine, supporting the development of nanoparticle-based therapies, biosensors, and advanced preclinical models. We invite contributions that explore how these technologies are shaping the future of biomedicine, the pharmaceutical industry, and translational research.

Guest Editor

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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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