Special Issue

Organoids and Advanced 3D Models in Biomedical Research

Message from the Guest Editor

Biomedical research faces a demanding need for the replacement of animal experiments by reliable, safe, and accurate in vitro models that fully recapitulate the structure and function of human tissues. Advances in stem cells bioengineering enabled adult stem cells (ASCs) and induced pluripotent stem cells (iPSCs) long-term culture in a 3D cellular structure named organoids. They recreate cellular architecture; are functionally similar to the tissue they are modeling and their use as models allow research without confusing influences from the local microenvironment. This Special Issue aims to disseminate state-of-the-art science around organoid model systems, covering organoids models in 3D microenvironments, genetic engineering of organoids and microphysiologic systems, as well as methods for improving organoids culture and high throughput screening. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following: disease modeling, personalized medicine, drug screening, tissue engineering, biomaterials, regenerative medicine and 3Rs.

Guest Editor

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Deadline for manuscript submissions

closed (25 January 2024)

Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/141738

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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