organoids

an Open Access Journal by MDPI

Intestinal Organoid

Guest Editor:

Dr. Toshio Takahashi
Suntory Foundation for Life Sciences, Bioorganic Research Institute, Kyoto 619-0284, Japan

Deadline for manuscript submissions:
closed (31 August 2023)

Message from the Guest Editor

Dear Colleagues,

Intestinal organoids, which were first established in 2009, have emerged as a powerful in vitro tool for studying intestinal biology given their morphological and functional similarity to mature tissues. At present, technological advances in cultured organoids derived from adult-tissue stem cells have allowed for the long-term culture of intestinal stem cells (ISCs) with self-renewal and differentiation potential. Of note, a single ISC can also generate three-dimensional organoids without any Paneth cells or an ISC niche such as the epithelial niche or stromal niche. The potential to form organoids from crypts is attributed to the presence of ISCs. On the other hand, the intestinal villi consist of fully differentiated cells and hence cannot form organoids. However, the intestinal epithelium can de-differentiate and function as an alternative source of ISCs upon tissue damage and stress conditions such as inflammation and tumorigenesis. In this Special Issue, we elaborate on the advantages of intestinal organoids in different applications, and the key priorities in intestinal organoid engineering for the coming years.

organoids

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Süleyman Ergün
Institute of Anatomy and Cell Biology, University of Würzburg, 97070 Würzburg, Germany

Message from the Editor-in-Chief

Functional human 3D tissue models are attractive platforms for disease studies, drug development and toxicity testing. They serve as a bridge between cell cultures, animal models and clinical trials. Such models are called organoids. Numerous scientists worldwide are currently researching the generation of new complex organoid models and improving culturing conditions to handle them in a way that is reproducible, cost-effective, and easy. Achieving this goal is still a major challenge, but the organoid field has developed rapidly in recent years, reaching a new level of complexity and playing a growing role in medical research. Organoids' goal is to create a platform to present new and exciting data covering all aspects of organoid, assembloid, embryoid, or organ-on-a-chip research.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
Rapid Publication: first decisions in 16 days; acceptance to publication in 5.8 days (median values for MDPI journals in the first half of 2024).
Recognition of Reviewers: APC discount vouchers, optional signed peer review, and reviewer names published annually in the journal.

Contact Us

Organoids Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/organoids
organoids@mdpi.com
𝕏@Organoids_MDPI