



Organoids: A Novel Approach to Biological Research and Modeling

Guest Editors:

Dr. Giuseppe Pettinato

Beth Israel Deaconess Medical
Center, Harvard Medical School,
Boston, MA, USA

Dr. Giuseppe Ietto

Department of Medicine and
Innovation Technology (DiMIT),
The University of Insubria, Varese,
Italy

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Message from the Guest Editors

Organoids represent a pivotal advancement in the fields of regenerative medicine and disease modeling. By applying cutting-edge bioengineering technologies, we can now recreate in vitro cell structures that closely mimic real organs—commonly referred to as organoids. This innovative approach has already led to the development of several bioengineered tissues that have reached clinical trial stages and provided in vitro models for a variety of diseases. These models offer an unprecedented opportunity to investigate the molecular pathways involved in pathogenesis with greater precision. Despite the significant progress made, challenges remain in enhancing the fidelity of organoids to fully replicate the complexity of in vivo organs, particularly in recreating multicellular structures. In the upcoming Special Issue of Bioengineering on "Organoids: A Novel Approach to Biological Research and Modeling", we will present the latest breakthroughs in regenerative medicine, stem cell technology, bioengineered tissues, and disease modeling. Leading experts from around the globe will share their contributions to this rapidly evolving and critical field of scientific research.





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Prof. Dr. Anthony Guiseppi-Elie

Department of Biomedical
Engineering, Texas A&M
University, College Station, TX
77843, USA

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Bioengineering Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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