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Organoid Platforms for Personalized Medicine

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Message from the Guest Editors

Recent advances in stem cell and developmental biology have propelled the design of three-dimensional (3D) organoids that are able to mimic different organs in vitro, including the breast, brain, intestine, pancreas, prostate, amniotic sac, liver, gastric, and optical cup. These organoid models have been shown to be able to reflect human tissue during early embryogenesis, permitting the investigation of the interactions between different cell types within the developing organ as well as the self-organization processes that lead to its functional tissue cytoarchitecture and how the organ is affected in different developmental diseases. Moreover, patient-derived organoids (PDTO), including those derived by the culture of tumor biopsies, have been shown to not only recapitulate key aspects of the disease in vitro but also be predictive of the therapy response in patients, thus constituting an elemental tool for personalized medicine.

This Special Issue will be dedicated to publishing original work and reviews using organoids in the areas of pharmacology, bioinformatics, cell and cancer biology, drug screenings, bioengineering, genetics, etc.



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Special Issue



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Message from the Editor-in-Chief

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