Special Issue

Advances in Microfluidic Technologies for 3D Cell Culture, Organ-on-a-Chip, Regenerative Trials and Translational Medicine

Message from the Guest Editor

This Special Issue of *Micromachines*, titled "Advances in Microfluidic Technologies for 3D Cell Culture, Organ-on-a-Chip, Regenerative Trials and Translational Medicine", showcases transformative innovations in microfluidic technologies, revolutionizing biomedical research and clinical applications. Its contributions focus on 3D cell culture systems mimicking physiological environments, organ-on-a-chip platforms replicating human organ functions, and their roles in regenerative medicine and translational trials. Its scope spans novel microfluidic devices, biomaterials, and integration with stem cell therapies, alongside advancements in disease modeling, drug screening, and personalized medicine. Contributions highlight scalability, reproducibility, and regulatory challenges, bridging laboratory breakthroughs to clinical impact. By supplementing the existing literature, this collection of work offers cutting-edge insights into biofabrication and microphysiological systems, driving the future of precision medicine.

Guest Editor

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Editor-in-Chief

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