Special Issue

Cell Assay Chips and Applications

Message from the Guest Editor

Microfluidic cell assay chips, distinguished by their precise micro-environment control, minimal reagent consumption, and scalability, have emerged as cutting-edge technology in cell biology. Recently, microfluidic cell assay chips have showcased their prowess in diverse areas encompassing drug screening, 3D cell culture, cell migration, cell–cell interactions, single-cell analysis, and molecular profiling, including transcriptomics and proteomics, as well as clinical diagnostics. In this Special Issue, we aim to collect innovative microfluidic engineering solutions that offer unique functionalities in cell and molecular biology, cost-effective manufacturing approaches for technology dissemination, and the automation and integration of high-throughput assays and readouts. Beyond device advancements, we also welcome novel applications of these cell assay chips, spanning drug discovery, investigations into cancer and infectious diseases, studies of stem cell research and neuroscience, point-of-care diagnostics, the development of organ-on-a-chip models, and environmental monitoring.

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