

Special Issue

Microfluidic Tools for Advancing Cancer Research

Message from the Guest Editors

Microfluidic technologies have emerged as an enabling tool for accurately monitoring and profiling the complex and heterogeneous cellular and molecular activities of diverse cancer and immune cells at molecular, cellular, and tissue levels. For instance, microfluidic cell sorting, manipulation, and sensing systems have been developed to study immune and cancer cell activities and cytokine kinetics at a spatiotemporal manner. Microfluidic in vitro tumor models featuring the hallmarks of human tumor immunity and pathology are demonstrated to be a useful preclinical platform for modeling and dissecting the cancer-immune system interactions. For this Special Issue on “Microfluidic Tools for Advancing Cancer Research”, we aim to highlight the recent development of microfluidic strategies and platforms and their translational applications, such as immunoengineering, immunoprofiling, mechanobiology, cancer diagnostics, and tumor immune niche modeling, in the field of immuno-oncology.

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