

Special Issue

Modeling Cancer in Microfluidic Chips

Message from the Guest Editors

Tumors are complex three-dimensional (3D) tissues that establish a dynamic cross-talk between multiple cell types (cancer cells, various stromal cells (e.g., cancer-associated fibroblasts), various types of immune cells, and vascular cells) and the surrounding matrix through complex chemical signaling. Conventional 2D or 3D culture systems, although they have the ability to conserve at least some of the acquired phenotypes, cannot imitate the cell–cell interactions and tissue-level functions, and thus fail to recreate the dynamics of the tumor niche. Cancer-on-chip systems, which are microfluidic devices, aim to recapitulate relevant features of the tumor physiology and have emerged as powerful tools in cancer research. Cancer-on-a-chip models add another dimension of physiological mimicry by allowing a perfusable system that can be integrated with vascular or lymphatic networks.

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Message from the Editor-in-Chief

Cancers is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in Open Access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

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