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Cell Microarrays

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Message from the Guest Editor

Cell microarrays derived from microarray technologies represented by DNA microarrays are an alternative to traditional cell-based assay. They are very effective tools for high-throughput screening of large numbers of test samples, such as drug candidates, intracellular functional molecules, etc. In addition, miniaturization reduces reagent consumption and the number of cells required. After the first proposal of cell microarrays in 1990s, recent developments created by technologies of MEMS, biomaterial, and surface chemistry have supported its application as a drug development tool, including drug discovery, toxicology, stem cell research, and potentially therapy.

This Special Issue invites original articles that introduce recent research developments and emerging trends in cell microarrays or invites review articles that organize traditional research as well. We accept a wide range of research related to cell microarrays. Specifically, we welcome MEMS technologies for patterning microarrays, surface chemical technologies using hydrogel and PEG, transfection of functional molecules from substrate to cells, electrochemical approaches, expansion of cell arrays to immobilized cell arrays, 3D cell arrays, tissue arrays, and micro-physiological system.