Special Issue

In Situ Detection in Microfluidic-Based Cell Culture and In Vitro Micro-Physiological Models

Message from the Guest Editors

Organ-on-a-chip technology with homo/heterogeneous cellular structures have been employed for studying the time-dependent cellular behavior and cell/tissue–xenobiotic interactions over extended periods. Detection of the physiological signals ex-situ, using the standard analytical tools, requires rounds of several sampling, which makes it difficult to perform long-term investigations on the same set of cells. Therefore, the integration of analytical tools within the microfluidic system would enable improved control of the cell microenvironment and precise cell assays. We are delighted to present the special issue entitled “In Situ Detection in Microfluidic-Based Cell Culture and In Vitro Microphysiological Models” that addresses this topic. This collection of articles will include the most relevant work in the integration of cell (co-)culture, monitoring tools and in situ detection from state-of-the-art contributions to critical reviews, which will highlight the new advances in this field. We invite researchers working in this area to submit full-length research papers, short communications, and review articles that meet the goal of this special issue.

Guest Editors

Dr. Qasem Ramadan
Alfaisal University, Riyadh, Saudi Arabia

Prof. Dr. Gulden Camci-Unal
Department of Chemical Engineering, University of Massachusetts Lowell, Lowell, MA 01854, USA

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Bioengineering
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
bioengineering@mdpi.com

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Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie
Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

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