



## Micro/Nano-system for Drug Delivery

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### Message from the Guest Editors

Dear Colleagues,

In the last few decades, micro and nano-scaled devices and systems have gained great attention in pharmaceutical and biomedical applications, such as in the design of micro/nanoparticles, biosensors, and microdevices to perform high-throughput in vitro drug testing. For example, micelles, liposomes, dendrimers and polymeric nanoparticles are widely used in pharmaceuticals for targeted drug delivery and cosmetics. The advantages over conventional systems are represented by an enhancement of delivery, an extended bioactivity, and also by minimal side effects. In addition, novel miniaturized live-cell microdevices recently were developed by researchers around the world to screen free drug and complex delivery systems. For example, microfluidic cell-chips resolve many issues found in conventional 2D in vitro technology, providing benefits, such as reduced sample quantity and integration of 3D cell culture, physically more representative of the physiological/pathological microenvironment. To realize the full potential of these micro/nano systems, integrated platforms for preparation and testing need to be developed, offering a way to accelerate the clinical translation of novel drug delivery. Accordingly, this Special Issue seeks to showcase research papers, short communications, and review articles that focus on novel micro and nano systems used in biomedicine, nanobiotechnology and drug delivery, with a particular interest in microscale cell-chip platforms for drug screening and high-throughput experimentation.

