Special Issue

Microfluidics and Bioprinting Technologies for 3D Vascularized Tissue

Message from the Guest Editor

Functional tissues and organs require a continuous supply of nutrients and oxygen, as well as waste removal. Blood and lymphatic vessels are the regulators of these vital processes and are necessary for initiating the earliest stages of development and maintaining homeostasis throughout adulthood. There have been many advances in 3D tissue engineering and organoid development over the last few decades, and it has become increasingly clear that the vascularization of these multicellular systems is necessary for their use as functionally relevant tissues and to reflect the true nature of human systems. Recent efforts have been made toward generating perfusable in vitro vasculature using microfluidics and bioprinting technologies. These new techniques are coming ever closer to generating functional tissues and have so far been used to perfuse relevant immune, hematopoietic, and tumor cells in de novo tissues-on-a-chip. For this Special Issue, I invite you to submit your latest relevant work on tissue and organoid vascularization. I very much look forward to receiving your contribution.

Guest Editor

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