Special Issue

3D Bioprinting for Tissue Engineering and Regenerative Medicine

Message from the Guest Editor

The emergence of 3D bioprinting technology in tissue engineering and regenerative medicine has shown great promise in recent years that represents a significant advancement in reverse engineering artificial tissues and organs. This state-of-the-art technology involves the layer-by-layer positioning of living human cells and growth factors with biomaterials (i.e., bioinks) for fabricating complex functional tissues and organs. This versatile technology has already shown enormous progress for the generation and transplantation of miniaturized tissues and creating 3D in vitro models for drug discovery and screening applications. However, there are still many technical and translational challenges that need to be addressed. These include the development of biocompatible bioinks, the vascularization of tissues, and the resolution of 3D bioprinters, among others. This Special Issue will cover recent and innovative advances in the 3D bioprinting of tissues and organs, including methodologies, bioink development, applications, technical and translational challenges, regulatory pathways and standardization, and future developments.

Guest Editor

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Editor-in-Chief

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