



an Open Access Journal by MDPI

## 3D Bioprinting for Tissue Engineering and Regenerative Medicine

Guest Editor:

### Assist. Prof. Houman Savoji

Institute of Biomedical Engineering, Department of Pharmacology and Physiology, Faculty of Medicine, University of Montreal; Principal Investigator at Research Center of Sainte-Justine University Hospital Center; TransMedTech Research Chair in 3D Bioprinting and Regenerative Medicine, Montreal, QC, Canada

Deadline for manuscript submissions:

**closed (18 June 2021)**

### 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.



[mdpi.com/si/50716](https://mdpi.com/si/50716)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Anthony Guiseppi-Elie

Department of Biomedical  
Engineering, Texas A&M  
University, College Station, TX  
77843, USA

## Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Biomedical) / CiteScore - Q2 (Bioengineering)

## Contact Us

---

*Bioengineering* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/bioengineering](http://mdpi.com/journal/bioengineering)  
[bioengineering@mdpi.com](mailto:bioengineering@mdpi.com)  
[X@Bioeng\\_MDPI](https://twitter.com/Bioeng_MDPI)