

Special Issue

Cardiac Tissue Engineering: From Tissue Regeneration to In Vitro Tissue Models

Message from the Guest Editors

We invite you to contribute to our Special Issue on "Cardiac Tissue Engineering: From Tissue Regeneration to In Vitro Tissue Models." Cardiac disease is a leading cause of death globally, and current treatments are inadequate. Cardiac tissue engineering offers promising solutions by creating functional cardiac tissue to replace scar tissue after infarction, and developing in vitro human heart models to study disease pathogenesis and test new treatments, overcoming limitations of animal models and traditional cell cultures. This Special Issue will showcase advancements in the field, including: identification of promising cell sources; design and characterization of biomimetic scaffolds; development of bioreactors; in vitro and in situ cardiac tissue engineering studies; in vitro cardiac tissue models; and heart-on-a-chip technology. We welcome original research and review articles. At least 10 articles will be published, potentially as a book. Your contributions will create a valuable resource for researchers and professionals. We look forward to your submissions.

Guest Editors

Dr. Elisabetta Rosellini

Department of Civil and Industrial Engineering, University of Pisa, Largo
Lucio Lazzarino 1, 56122 Pisa, Italy

Prof. Dr. Laurie Boyer

1. Department of Biological Engineering, Massachusetts Institute of
Technology, 77 Massachusetts Avenue, Cambridge, MA 02139, USA

2. Department of Biology, Massachusetts Institute of Technology, 77
Massachusetts Avenue, Cambridge, MA 02139, USA

Deadline for manuscript submissions

31 December 2025



Bioengineering

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed



mdpi.com/si/222475

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

[mdpi.com/journal/
bioengineering](https://mdpi.com/journal/bioengineering)





Bioengineering

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed



[mdpi.com/journal/
bioengineering](https://mdpi.com/journal/bioengineering)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Biomedical) Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.