Special Issue

Advancements in Tissue-Engineered Muscle

Message from the Guest Editor

Muscle tissue, essential for voluntary movements, presents unique challenges in tissue engineering. Derived from myoblasts, these cells form fibers in a 3D extracellular matrix, complicating the replication of their structural, functional, and mechanical properties. Muscle tissue engineering promises advancements in regenerative medicine, bioengineering, and biomedical research, facilitating disease modeling, drug screening, and tissue repair. This Special Issue invites contributions on scaffold design, cell sources, differentiation protocols, biophysical and biochemical cues, functional characterization, and clinical applications in regenerative medicine, tissue repair, disease modeling, and biohybrid robotic systems. We seek original research, reviews, and perspectives to foster interdisciplinary progress in muscle tissue engineering. By bringing together cutting-edge research, we aim to foster interdisciplinary approaches and accelerate progress in muscle tissue engineering.

Guest Editor

Dr. Filiz Ates

Institute of Structural Mechanics and Dynamics in Aerospace Engineering, Aerospace Engineering and Geodesy, University of Stuttgart, Stuttgart, Germany

Deadline for manuscript submissions

closed (30 April 2025)

Bioengineering

an Open Access Journal by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed

mdpi.com/si/205959

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

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Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie
Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

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