

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

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Editor-in-Chief

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