

Special Issue

Research on Skeletal and Cardiac Muscle Regeneration Mechanisms

Message from the Guest Editor

The myogenic and cardiomyogenic differentiations of mesenchymal or other types of stem cells in vitro and in vivo are complex processes, which include cell responsiveness to various compounds and model systems, and direct or indirect interaction between cells and extracellular components, that further regulates intracellular signalling systems and tissue functioning. Despite their diversity, the regeneration mechanisms of skeletal and cardiac muscle occur within the striated muscle environment, whose primary goal is in vitro targeted regulation and subsequent in vivo translation, thereby allowing to improve muscle functioning. In order to better understand the myogenic and cardiomyogenic differentiation processes and their regulation, both in vivo and in vitro myogenic model systems are of crucial importance. Therefore, this Special Issue aims to collate papers focusing on in vivo and in vitro myogenic and cardiomyogenic differentiation mechanisms that highlight new external or internal inductors, cell types, ECM components, scaffolds and other biomodulators to improve the regeneration of skeletal and cardiac muscles and expand their further clinical applications.

Guest Editor

Dr. Daiva Bironaite

Department of Regenerative Medicine, State Research Institute Centre for Innovative Medicine, LT-08410 Vilnius, Lithuania

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