

Special Issue

Molecular and Tissue Engineering Approaches in Musculoskeletal Regenerative Medicine

Message from the Guest Editors

Injuries affecting the various tissues of the musculoskeletal system (articular cartilage, bone, meniscus, and tendons/ligaments) do not fully heal by themselves due to a limited or unsatisfactory ability of these tissues for spontaneous repair. While a number of clinical options are available to address such problems, none are capable to reproduce the native tissue structures and original functions in patients, showing the vital need for novel alternatives that may improve the current therapies by stimulating the reparative processes in sites of injury. In this regard, a number of molecular options may be envisaged, alone or in combination, based on the application of regenerative (differentiated or progenitor) cells, candidate genes, and biomaterials adapted for each type of tissue and disease. The goal of this Special Issue is to offer an overview of the most advanced procedures that may be used as tools to improve the healing of musculoskeletal disorders in future translational approaches.

Guest Editors

Prof. Dr. Magali Cucchiari

Center of Experimental Orthopaedics, Saarland University Medical Center, Kirrbergerstr. Bldg 37, D-66421 Homburg, Saar, Germany

Prof. Dr. Henning Madry

Center of Experimental Orthopaedics, Saarland University Medical Center, Kirrbergerstr. Bldg 37, D-66421 Homburg, Saar, Germany

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Editor-in-Chief

Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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