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Stem/Progenitor Cells for Musculoskeletal Disease Modeling and Tissue Repair

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Deadline for manuscript submissions:

closed (31 May 2023)

Message from the Guest Editors

The Special Issue welcomes both original research papers and comprehensive reviews covering orthopedic applications of stem/progenitor cells, emphasizing an enhanced understanding of the mechanisms responsible for disease development and tissue regeneration.

1. Stem cell-derived organoids and tissue chips (microphysiological systems) for modeling musculoskeletal disorders and evaluating drug efficacy;
2. Molecular mechanisms underlying musculoskeletal tissue repair by mesenchymal stem cells, skeletal stem cells, and induced pluripotent stem cells;
3. Biomaterials, scaffolds, and advanced fabrication techniques that enhance the differentiation and regenerative capabilities of stem cells in musculoskeletal applications;
4. Optimization of induced pluripotent stem cell differentiation into musculoskeletal lineages;
5. Progenitor/stem cell-derived exosomes and extracellular vesicles in promoting musculoskeletal tissue repair;
6. Role of mechanical stimulation and other biophysical cues in stem cell lineage specification and musculoskeletal tissue regeneration.



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Special Issue



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