

Special Issue

Stem/Progenitor Cells for Musculoskeletal Disease Modeling and Tissue Repair

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.

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

Guest Editors

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Editor-in-Chief

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