

# Special Issue on Emerging Technologies and Methods for Musculoskeletal Tissue Repair and Regeneration

## CALL FOR PAPERS

Musculoskeletal issues are the major causes of disability worldwide with high rate of morbidity; therefore, regeneration of bone and soft tissues for both musculoskeletal system injury and degeneration have recently been the key points in research and clinical area. In addition, new developing technologies, including bioprinting, biofabrication, novel medical design, and new surgery technology, become the key tool to produce the implantable scaffold and mimic bone and surgical guidance device for injury site.

For research area, in addition to potential molecular signaling and tissue engineering of musculoskeletal damage and degeneration, the developments and improvements in biomechanical theory, scaffold fabrication methodology, and emerging technique also need to be focused on for orthopaedic surgery and rehabilitation.

For clinical area, the main focus of this special issue is an innovative theory in motion preservation and new surgical procedures; both aim to improve the techniques for the tissue engineering and rehabilitation. Simultaneously, reports worldwide on the scientific basis, indications, surgical techniques, complications, outcomes, and follow-up data for promising orthopaedic procedures are called in this special issue.

Moreover, creating interactive technologies on novel bioprinting method and/or new design of scaffold for musculoskeletal tissue engineering and regeneration between biomechanical researchers, protector designers, and orthopaedic surgeons will bring new potential clinical therapies for both musculoskeletal system injury and degenerative diseases which are promising in this special issue.

Potential topics include but are not limited to the following:

- ▶ Emerging technologies including bioprinting, biofabrication, novel medical design, and new surgery technology
- ▶ Tendon TE and 3D printing
- ▶ Design and measurements of advance equipment
- ▶ Biomechanics in orthopaedic surgery and rehabilitation
- ▶ Potential molecular signaling of musculoskeletal regeneration
- ▶ Potential impact factors of musculoskeletal regeneration clinic
- ▶ Clinical research into innovations in motion preservation and new surgery technology (spine, limbs, and joint)
- ▶ Surgeons worldwide via interactive technologies and by reporting on the scientific basis, indications, surgical techniques, complications, outcomes, and follow-up data for promising orthopaedic procedures (spine, limbs, and joint)
- ▶ Clinical outcomes of advance rehabilitation for musculoskeletal degenerative diseases (bone, cartilage, and soft tissue)
- ▶ Biomechanics in orthopaedic surgery and rehabilitation

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/bmri/tissue.engineering/etmtr/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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