

## Special Issue

# Updates of Stem Cell Applications in Bone Tissue Engineering

### Message from the Guest Editor

Bone tissue engineering is a cutting-edge approach in regenerative medicine and dentistry that utilizes scaffolds, integrated cells, and bioactive growth factors to promote the healing and regrowth of bones. Stem cells, such as iPSCs, BM-MSCs, UCB-MSCs, ADSCs, MDSCs, and DPSCs, have recently gained considerable interest. This is because they possess unique biological abilities to transform into osteogenic progenitor cells in vitro. These progenitor cells have the capacity to generate bone and repair bone defects in vivo. Hence, it is crucial to develop efficient and sophisticated strategies to effectively guide the differentiation of stem cells towards the osteogenic lineage in vitro and thoroughly analyze their characteristics in vivo. This could reduce the potential of spontaneous differentiation into non osteogenic lineages and enhance the abundance of specialized osteogenic progenitor populations for potential application in tissue engineering therapies. We invite you to submit original research and review articles investigating various aspects of utilizing different types of stem cells in studies relevant to bone tissue engineering.

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### Guest Editor

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### Deadline for manuscript submissions

closed (30 November 2025)



## Cells

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*Cells* has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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