

Special Issue

Bone Development and Regeneration

Message from the Guest Editor

Bone formation is orchestrated by multiple stimuli and processes and based on their embryological origin, ossification of collagenous tissues is regulated by different paths. Compared to other musculoskeletal tissues, bone has a high regenerative potential.

While several mechanisms and pathways like the WNT, BMP2 or PTH signaling pathway have been thoroughly studied, new scientific capabilities allow for a more integrative view on bone development and bone regeneration. With the revolutionary rise of the -omics field and the latest advances in cell lineage tracing models and single cell analysis, new molecular mechanisms are being elucidated and novel important players are being recognized. For example, our understanding of epigenetic processes or metabolites that control bone integrity is growing at a rapid pace.

This Special Issue provides a novel insights on bone development and/or presenting new molecular and conceptual approaches for the manipulation of osteogenesis and bone regeneration, as well as bone homeostasis. This will generate a representative picture of the latest advances in bone research and serve as a road map for where the bone field is headed.

Guest Editor

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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