Special Issue

Osteoblast Differentiation in Health and Disease

Message from the Guest Editors

Osteogenic differentiation is a complex and still poorly understood biological process regulated by intrinsic cellular signals and extrinsic micro-environmental cues. Osteoblasts are produced by the differentiation of mesenchymal stem cells through a tightly regulated multistep process, driven by several transcription factors and signaling proteins. Several local and systemic factors, including hormones, cytokines, chemokines, affect osteoblast transcriptional activities involving epigenetic factors and extracellular vesicles. Understanding the complex biological and molecular mechanisms influencing osteoblast pathophysiology is a key research topic in bone biology. The Special Issue "Osteoblast Differentiation in Health and Disease" will include a selection of original research articles and reviews on the molecular mechanisms regulating osteoblast differentiation and function, identifying new molecular players that could provide valuable therapeutic targets to prevent or reverse bone disease. Furthermore, studies on the identification of natural compounds or new drugs capable of improving osteoblast differentiation and activity are welcome.

Guest Editors

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Deadline for manuscript submissions

31 July 2026

Biology

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed

mdpi.com/si/195567

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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