

Special Issue

Calcium Metabolism and Regulation

Message from the Guest Editors

Calcium has multiple roles in biology, including cell signaling, motor function, and bone mineralization. Regulation of calcium homeostasis includes maintenance of normal blood levels, bone mineralization and inhibition of extraosseous depositions, neuronal and muscular function, intracellular compartmentation. On a systemic level, this involves complex hormonal regulation of calcium and interconnected phosphate metabolism, prevention of mineral precipitation by a multi-factorial balance between promoters and inhibitors of calcification. On a tissue level, local activation of specific proteins and enzymes may influence mineral deposition. On a cellular and subcellular level, it comprises regulation of calcium flux via ion channels and intracellular calcium shifts, as well as interaction with calcium-binding proteins for activation of further proteins and membrane functions. This Special Issue aims to give a scope of new developments in various areas of physiological and pathological calcium metabolism and regulation, including osteogenic transdifferentiation, the formation of pathological mineral depositions, and candidate molecules for the treatment of calcifying disorders.

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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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