

Special Issue

Molecular Biology of Osteoporosis

Message from the Guest Editor

Osteoporosis is one of the most common metabolic bone diseases. Osteoporotic fractures, which represent a *growing economic burden* on global healthcare systems, impair quality of life and increase morbidity and mortality. In health, bone homeostasis encompasses coordinated dynamic equilibrium between bone-forming cells (osteoblasts) and bone-resorbing cells (osteoclasts). Mechanical stress is crucial for bone homeostasis and decreased mechanical loading is an established cause of bone loss and osteoporosis. Osteocytes, the most abundant and long-lived bone cells, are terminally differentiated osteoblasts that have a mechanosensory role and have emerged as a master regulator of bone homeostasis. Osteocytes produce endocrine and paracrine factors, and this activity is regulated by mechanical stress as well as osteotropic factors such as, oestrogen, vitamin D and parathyroid hormone. This Special Issue explores intricate intra- and intercellular molecular signalling in bone cells in health and osteoporosis.

Guest Editor

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Message from the Editor-in-Chief

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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