

Special Issue

Organic, Inorganic and Natural Molecules in Biomineralization

Message from the Guest Editors

Mineralized “hard” skeleton tissues have unique biomechanical properties to support a body’s weight and movement, and are a source of essential minerals required for critical body functions. Skeletal tissues regulate the levels of the inhibitory organic and inorganic molecules controlling the process of mineral crystal formation and its growth, several organic molecules being essential in the formation of mineralized microstructures, while matrix proteins have acidic regions for the binding of calcium ions in CaCO₃ crystals and interaction domains for other organic molecules. The identification of these molecules, their molecular pathways to control their levels, as well as their possible interactions with the extracellular matrix, can contribute to the development of diagnostic tools and treatments of osseous diseases.

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