Special Issue

Calcium Signaling and Transport in Health and Disease: Recent Developments and New Insights

Message from the Guest Editors

Calcium signaling and transport play critical roles in various physiological processes. Calcium ions are pivotal in mediating cellular functions such as muscle contraction, neurotransmitter release, cell proliferation and controlled death during organ development or responses to injury. Mechanotransducing calcium signals triggered by shear stress or stretch are crucial to maintaining cellular integrity and function in the bone, cartilage, vascular, and epithelial cells. Mitochondrial calcium uptake is essential for energy production and apoptosis regulation. The dysregulation of calcium homeostasis can result in a range of pathologies, including hypertension, cardiovascular and renal diseases, neurodegenerative disorders, inflammation, osteoporosis, and obesity. Calcium also plays a paramount role in cancer biology, where alterations in calcium signaling pathways can influence cell proliferation and migration. This Special Issue will highlight recent research advances in the field of calcium signaling and transport through original research, review, and communication articles, as well as brief reports.

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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