Special Issue

The Role of P-type ATPases in Health and Diseases

Message from the Guest Editors

P-type ATPases are a large group of related pumps that hydrolyze ATP to perform the active transport of ions or phospholipids across cellular membranes. All P-type ATPases form a transient phosphorylated intermediate at key conserved aspartate residues within the pump during a catalytic cycle. The ion pumps create electrochemical gradients that are essential for transepithelial transport, nutrient uptake and the regulation of the membrane potential and cell volume. In addition, they mediate intracellular signaling and intercellular adhesion. Phospholipid flippases regulate the asymmetric lipid distribution across the lipid bilayer and are critical for the biogenesis of cell membranes and for important processes such as apoptosis and thrombus formation.

For this research topic, we aim to present an update on the structure and function of P-type ATPases, with an emphasis on newly identified functions of well-characterized pumps, the emerging functions of less known P-type ATPases, novel experimental approaches to study these enzymes and the mechanisms of disease-causing genetic mutations.

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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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