# Special Issue

# Molecular Phase Transitions in Physiology and Pathology: Freezing and Precipitation in Biology

**Message from the Guest Editors**

Phase transitions, such as the freezing of water upon lowering temperature, or precipitation upon increasing solute concentration, are familiar physical phenomena. Such collective processes are also of importance to living systems. Spontaneous intramolecular phase transitions define the folding of globular proteins and maybe chromatin too; intermolecular phase transitions are the behind-the-scenes players in protein aggregations, the formation of amyloid fibrils, liquid–liquid or liquid–gel phase transitions associated with the biogenesis of membranes, as well as in membraneless organelles in the cells, with the formation of atherosclerotic plaques, blood clots, etc. The new phases can be nucleated in bulk liquid and on various interfaces and “impurities”, etc.

This Special Issue aims to provide an overview and analysis of the as-yet still limited understanding of the phase behavior in and around biological objects. Research areas may include (but are not limited to) the phase transition phenomena connected to proteins, nucleic acids, membranes, and biological liquid–liquid and liquid–gel phase transitions.


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**Deadline for manuscript submissions**

closed (25 May 2022)


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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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