



Symmetric and Asymmetric Cellular Membranes

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Message from the Guest Editor

The structure and function of cellular membranes remains among the most challenging areas in both the life and physical sciences. Cellular membranes are complex assemblies that play an active role in many cellular functions. Many of these membrane functions rely on a diverse scaffold of lipids, sterols, proteins and carbohydrates; all of which organize both in the plane of the membrane (laterally) and across the leaflets of the membrane (transversely). Of recent years, the investigation of trans-membrane symmetry (or lack thereof) has become a topic of widespread interest. Probing symmetries within cellular membranes has proven a necessity due to the ubiquity of trans-bilayer asymmetry in natural cell membranes. Understanding the membrane -- its structure, its dynamic behavior and its function -- relies on cutting edge experimental techniques and the creativity membrane researchers from all disciplines.

We welcome contributions on any area or aspect (including experimental approaches) of symmetry/asymmetry of cellular membranes.





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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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