Special Issue

Membrane Proteins: New Insights into Structure, Dynamics and Functions

Message from the Guest Editors

This Special Issue aims to showcase cutting-edge developments in methodologies for solubilizing membrane proteins, the application of nanodisc technologies, and the exploration of lipid–protein interactions. It will also highlight the transformative role of AI and machine learning in advancing our understanding of membrane proteins and their interactions with lipids. Furthermore, the Issue will explore the potential of synthetic and genetic tools to manipulate biological systems and provide insights into the structural and functional roles of lipids. By bringing together innovative research in these areas, this Issue seeks to advance our understanding of membrane biology and its implications for health, disease, and biotechnology. We invite original research and review papers on topics such as: novel solubilization methods for membrane proteins, advances in nanodisc technologies, synthetic and genetic manipulation of membrane protein systems, lipid composition's impact on protein structure, lipid–protein interactions, drug discovery applications, AI/ML approaches for structure prediction, and high-throughput screening tools for protein stability.

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Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open accessjournal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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