

## Special Issue

# Advances and Application of Cryo-Electron Microscopy in Molecular Biology and Biomedicine

### Message from the Guest Editors

**Cryo-electron microscopy (cryo-EM)** has emerged as a powerful tool for visualizing the structures of biological macromolecules and complexes with unprecedented detail. This Special Issue aims to present the forefront of cryo-EM research, focusing on advancements that have significantly improved data quality, resolution, and throughput. In particular, the integration of artificial intelligence (AI) techniques such as deep learning algorithms has revolutionized cryo-EM data analysis, enabling more accurate and efficient interpretation of complex structures. Contributions to this Special Issue will cover a wide range of topics, including, but not limited to, sample preparation methodologies, hardware innovations, image processing algorithms, and applications in molecular biology and biomedicine. By highlighting recent breakthroughs and discussing future directions, this Special Issue seeks to inspire further innovation and collaboration in the field of cryo-EM.

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### Deadline for manuscript submissions

closed (31 March 2025)



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### Message from the Editor-in-Chief

*Biomedicines* (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

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