Special Issue

Structural Biology: Mechanisms, Technologies, and Insights

Message from the Guest Editors

Understanding the relationship between protein structure and biological function remains central to modern life sciences. Recent advances in structural biology, particularly cryo-electron microscopy (cryo-EM), NMR spectroscopy, HDX-MS (Hydrogen/Deuterium Exchange Mass Spectrometry), and integrative methods, have offered unprecedented and detailed insights into protein dynamics and allosteric mechanisms. These tools reveal not only static snapshots but also conformational landscapes that underpin molecular recognition, signaling, and catalysis. In parallel, the integration of structural data with functional assays and computational modeling has greatly expanded the impact of the field. This Special Issue aims to showcase cutting-edge research in structural biology and mechanistic discoveries and insights. We welcome original research articles, perspectives, and reviews that address fundamental principles or translational advances. Topics of interest include, but are not limited to, conformational dynamics, structure-guided drugs, antibody design, macromolecular assemblies, and new frontiers in cryo-EM, NMR, and HDX methodology.

Guest Editors

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Message from the Editor-in-Chief

Life (ISSN 2075-1729) is an international, peer-reviewed open access journal that publishes scientific studies related to fundamental themes in life sciences. Some papers are published individually, while others are submitted for inclusion in special issues with guest editors. You are invited to contribute a research article, essay, or a review to be considered for publication.

Editor-in-Chief

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