Special Issue

Computational Biophysics in Cellular Biological Systems

Message from the Guest Editors

Computational approaches are revolutionizing our understanding of cellular biological systems, offering profound insights into biomolecular structure, dynamics, and function. Techniques such as cryo-electron microscopy (cryo-EM) and X-ray crystallography provide detailed structural information, while molecular dynamics (MD) simulations and coarse-grained modeling shed light on the dynamic behaviors and interactions within cellular networks. These computational methods complement traditional biophysical techniques—including fluorescence microscopy and atomic force microscopy (AFM)—by enabling the real-time observation of molecular processes in live cells. Furthermore, genetic and biochemical assays integrated with computational tools reveal the regulatory mechanisms underlying cellular functions. This Special Issue explores the latest advancements in the computational biophysics of cellular systems, including how these methods uncover the intricacies of cellular function, disease pathways, and therapeutic potential.

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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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