Computational Modeling of Kinetics in Biological Systems

Guest Editor:

Dr. Ron Elber
Oden Institute, The University of Texas at Austin, Austin, TX 78712, USA

Deadline for manuscript submissions:
closed (15 August 2021)

Message from the Guest Editor

Biological systems respond to changes in the environment, such as the depletion of ingredients, temperature reduction, increase in light intensity, and many other transient variations using timely molecular actions. The speed of cellular responses is critical for living systems. It depends on the rates of physical and chemical processes, making the study of the dynamics of these systems particularly relevant for life. Diffusion and searches in crowd environments, enzymatic reactions, signaling, translocation, organization, and reorganization of biological matter are a few examples of biomolecular dynamics that shape cellular life and are frequently conducted at conditions far from equilibrium. Computer simulations in molecular biophysics and biochemistry have considerable potential to shed light on these complex phenomena. Enhanced sampling techniques for molecular kinetics in biology expanded considerably in the last decade and are currently mature enough to produce useful and consistent models for atomic and molecular scale biology. Computational studies of the kinetics of biomolecular events are the focus of the current issue.

Special Issue

Editor-in-Chief

Prof. Dr. Lluís Ribas de Pouplana
Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology, 08028 Barcelona, Spain

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, AGRIS, and other databases.
Journal Rank: JCR - Q1 (Biology) / CiteScore - Q1 (Paleontology)

Contact Us