

Special Issue

Frontiers in the Evolution and Engineering of Cellular Transporters and Receptors

Message from the Guest Editors

Cellular transporters and receptors provide essential mechanisms for regulating living systems, yet surprisingly little research has gone into either their origins or ways to modify their properties in order to improve or alter their functions. We perceive the questions of origins and engineering of transporters and receptors to be linked problems because the same basic techniques are likely to be needed to investigate how the first, simple proteins evolved to transport molecules or messages across cell membranes as needed to generate novel variants with new functionalities. The purpose of this volume is to bring together investigators who have been working on these problems, whether from a theoretical, experimental, or engineering perspective, in order to develop a sense of what has been accomplished so far, how much remains to be explored, and ways in which natural evolutionary processes and engineering approaches can be integrated to create new possibilities.

Guest Editors

Prof. Dr. Robert Root-Bernstein

Department of Physiology, Michigan State University, East Lansing, MI, USA

Prof. Dr. Shuguang Zhang

Laboratory of Molecular Architecture, Molecular Machine Group, Massachusetts Institute of Technology, Media Lab, Cambridge, MA, USA

Deadline for manuscript submissions

closed (20 July 2022)



Life

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.0
Indexed in PubMed



mdpi.com/si/79917

Life
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
life@mdpi.com

mdpi.com/journal/

[life](https://life.mdpi.com)





Life

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.0
Indexed in PubMed



[mdpi.com/journal/
life](https://mdpi.com/journal/life)



About the Journal

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

Prof. Dr. Lluís Ribas de Pouplana

Institute for Research in Biomedicine (IRB Barcelona), The Barcelona
Institute of Science and Technology, 08028 Barcelona, Spain

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, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biology) / CiteScore - Q1 (Paleontology)