

Special Issue

Harnessing Protein Design and Engineering for Therapeutic Applications

Message from the Guest Editors

Protein engineering, a cornerstone of molecular biology and biotechnology, plays a crucial role in tailoring proteins for diverse applications, particularly in therapeutics. This Special Issue explores the latest advancements in protein engineering methodologies aimed at optimizing protein properties for therapeutic interventions. This Special Issue presents studies that engineer therapeutic proteins and improve therapeutic protein stability, affinity, specificity, and pharmacokinetics. The contributions of this Special Issue highlight the multifaceted approaches employed, including rational design and directed evolution methods, augmented by computational techniques such as artificial intelligence. In addition, the field of chemical protein synthesis has reached a level in which large proteins, with different posttranslational modifications are now accessible, opening new horizons in chemical biology and medicinal chemistry. We welcome original manuscripts and reviews that shed light on protein engineering, protein synthesis, and design and its implications for therapeutic innovation.

Guest Editors

Dr. Julia Shifman

Department of Biological Chemistry, The Alexander Silberman Institute of Life Sciences, The Hebrew University of Jerusalem, Jerusalem 91904, Israel

Dr. Norman Metanis

Institute of Chemistry, Casali Center for Applied Chemistry, The Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Jerusalem 91904, Israel

Deadline for manuscript submissions

31 January 2026



Biomolecules

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/198310

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

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





Biomolecules

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed



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



About the Journal

Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

Editors-in-Chief

Prof. Dr. Peter E. Nielsen

Department of Cellular and Molecular Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Blegdamsvej 3C, DK-2200 Copenhagen, Denmark

Prof. Dr. Lukasz Kurgan

Department of Computer Science, Virginia Commonwealth University, Richmond, VA 23284, USA

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, MEDLINE, PMC, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Biochemistry)