

Special Issue

Topical Drug Delivery: Challenges, Opportunities, Novel Approaches and Recent Advances

Message from the Guest Editors

Topical drug delivery refers to the delivery of drugs via skin and is considered an attractive alternative to oral and parenteral routes. Topical drug delivery has advantages, such as non-invasive delivery, bypass of first pass metabolism, prolonged duration of action, reduced dosing frequency, constant levels of drug in the plasma, reduced drug toxicity/adverse events, and improved patient compliance. However, development of a new topical product is very challenging as skin acts as a major barrier for entry of drugs and foreign materials into the body. In addition to skin, other factors, such as physicochemical parameters of the drug (solubility, molecular weight or size, and hydrogen bonding) and formulation characteristics influence the performance of a topical drug product. Several approaches have been investigated in the literature to address these challenges, which include physical methods (iontophoresis, thermal ablation, radiofrequency, etc.) chemical methods (use of permeation enhancers) and novel formulation approaches (microneedles, nano-formulations, lipid-based drug delivery systems).

Guest Editors

Dr. Santosh Aryal

Department of Pharmaceutical Sciences and Health Outcomes, The Ben and Maytee Fisch College of Pharmacy, University of Texas at Tyler, Tyler, TX 75799, USA

Dr. Pradeep Kumar Bolla

Department of Biomedical Engineering, College of Engineering, The University of Texas at El Paso, El Paso, TX 79968, USA

Deadline for manuscript submissions

closed (31 May 2023)



Biomedicines

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed



mdpi.com/si/128957

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

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





Biomedicines

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

Editor-in-Chief

Prof. Dr. Felipe Fregni

1. Neuromodulation Center and Center for Clinical Research Learning, Spaulding Rehabilitation Hospital and Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114, USA
2. Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA 02115, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q1 (Medicine (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).