



an Open Access Journal by MDPI

Bacteriophages as Therapeutic Delivery Vehicles

Guest Editors:

Prof. Dr. Paul Hyman

Department of Biology and
Toxicology, Ashland University,
Ashland, OH 44805, USA

Dr. Christine Schneider

Department of Biology, Carroll
University, Waukesha, WI 53186
USA

Dr. Bryan Gibb

Department of Biological and
Chemical Sciences, New York
Institute of Technology, Old
Westbury, NY 11568-8000, USA

Deadline for manuscript
submissions:

closed (30 July 2021)

Message from the Guest Editors

Bacteriophages and other viruses can be considered highly evolved gene delivery vehicles that carry their genome payloads in metabolically inert virion particles between host cells. For many tailed bacteriophages, simply binding to the host cell receptor triggers a complex series of protein conformational changes that lead to the injection of the phage genome into the host cell. Other viruses rely on host cell endocytosis mechanisms that are activated upon binding of the viruses to cell receptors.

The applications of these genetically modified viruses can be quite varied including:

- Targeted delivery of toxin genes to kill cells
- Targeted delivery of genes encoding desirable traits to modify cellular function
- Gene therapy
- Phage vaccines

A related but very different use of virus particles is the attachment of toxins or other therapeutic molecules to the outside of the virus capsid, again using the receptor binding protein affinity for the cell receptor to direct the payload to the correct cells.



mdpi.com/si/46443



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Amélia Pilar Rauter

Departamento de Química e Bioquímica (DQB) e Centro de Química Estrutural (CQE), Institute of Molecular Sciences, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal

Message from the Editor-in-Chief

Because of your expertise in the field of drug sciences, I kindly invite you to consider publishing your current work, in the form of a research article or a review, in the open access electronic journal *Pharmaceuticals*.

Pharmaceuticals is characterized by an active editorial board and a dynamic editorial staff. Manuscripts are peer-reviewed and a final decision is provided to authors within 4–6 weeks after submission. Papers are published on the web immediately after acceptance. For details on the submission process or any other matter, please do not hesitate to contact us.

We hope to handle your contribution to *Pharmaceuticals* soon.

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, Embase, CAPus / SciFinder, and other databases.

Journal Rank: JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q2 (*Pharmaceutical Science*)

Contact Us

Pharmaceuticals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/pharmaceuticals
pharmaceuticals@mdpi.com