



Gene Therapy with LNPs, Possibilities, Limitations, New Strategies

Guest Editors:

Dr. Jason Duskey

Nanotech Lab, Te.Far.T.I.,
Department of Life Sciences,
University of Modena and Reggio
Emilia, 41125 Modena, Italy

Dr. Ilaria Ottonelli

Nanotech Lab, Te.Far.T.I.,
Department of Life Sciences,
University of Modena and Reggio
Emilia, 41125 Modena, Italy

Deadline for manuscript
submissions:

31 October 2024

Message from the Guest Editors

Dear Colleagues,

In recent years, the utilization of lipidic nanoparticles for gene therapy has been widely investigated after the success of the COVID-19 vaccine. Notwithstanding the incredible opportunities offered by the application of lipid nanoparticles in gene therapy, several issues need to be addressed. In fact, the use of mRNA or siRNA might seem advantageous due to their cytoplasmic target, but these molecules are highly unstable. DNA, on the other hand, exhibits greater stability against formulation stresses; however, it requires nuclear delivery, which poses extensive difficulties.

In this Special Issue, we plan to collect research articles and reviews that demonstrate how researchers are addressing the current limitations of gene therapy with LNPs. The scope of this Special Issue includes, but is not limited to, the following:

- Novel LNP formulative strategies;
- Innovations or new insights regarding the lipidic composition of LNPs;
- Analysis of the intracellular trafficking of LNPs;
- Delivery of mRNA, siRNA, pDNA, as well as other genome editing tools such as Cas9;
- Innovative strategies for genome editing;
- Advanced characterization methods for LNP morphology.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Patrick J. Sinko

Department of Pharmaceutics,
Ernest Mario School of
Pharmacy, Rutgers University,
Piscataway, NJ 08854, USA

Message from the Editor-in-Chief

Pharmaceutics (ISSN 1999-4923) is an online open access journal on the science and technology of pharmaceutics and biopharmaceutics. The scientific community, the wider community and the general public have unlimited and free access to the content as soon as a paper is published; this open access to your research ensures your findings are shared with the widest possible audience. Please consider publishing your impressive work in this high quality journal. We would be pleased to welcome you as one of our authors.

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, CAPlus / SciFinder, and other databases.

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

Contact Us

Pharmaceutics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/pharmaceutics
pharmaceutics@mdpi.com
X@MDPIpharma