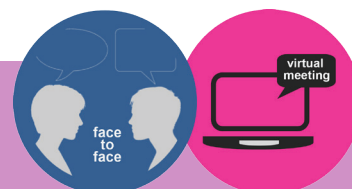
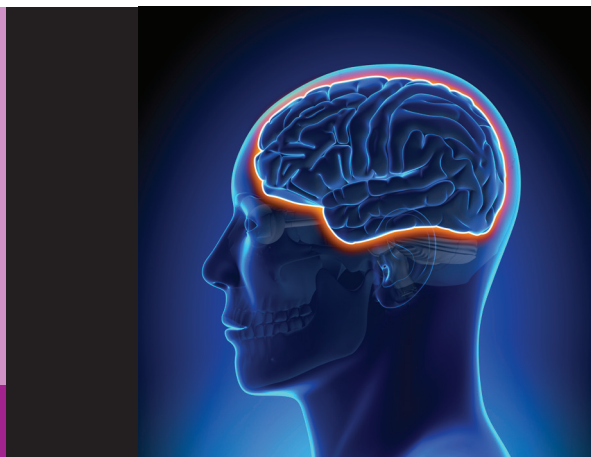
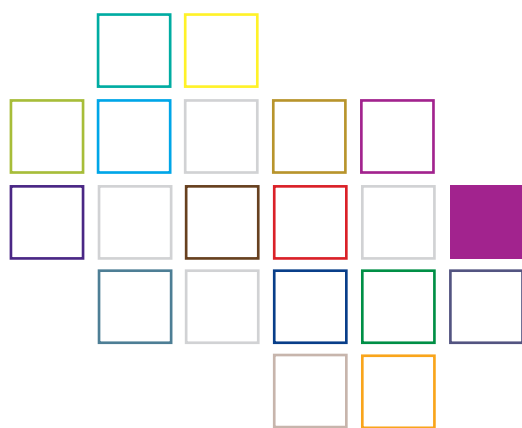


Latest Advances in R&D on LNPs for RNA Drug Delivery



06 - 07 May 2025
Cologne, Germany

Course no. 7052



Research and Development

Target group

The course is intended for all scientists involved in the research, development and manufacture of Lipid Nano Particles (LNPs).

Hybrid event
take part live online
or on site in Cologne!



A seminar organised by the APV focus group Drug Delivery

Objectives

LNPs (Lipid Nanoparticles) have revolutionized the targeted delivery of nucleic acid. Following their groundbreaking role in COVID-19 vaccinations and hepatocyte-targeted therapies (Onpattro®) as current product examples, the field of LNPs is poised for further exploration. Academic and industrial R&D are now facing the challenge to further profit from and elaborate this breakthrough and find new applications for the LNP technology. The course addresses the latest progress made in the preclinical and clinical R&D on these nanoparticles, including production, stability, analytical and *in-vivo* delivery strategies. In addition, the course informs on the increase of understanding of the relation between LNP structure/composition and PK, tissue distribution, efficacy and toxicity. Top experts in this field from leading academic institutes and industry will review these aspects in detail, share their knowledge and findings, and provide a comprehensive overview of the state-of-the-art and prospects in LNP research.

Organizing committee

- Prof. Gert Storm, Utrecht University, NL and National University of Singapore, SG
- Dr. Andrea Engel, Evonik Health Care, Birmingham, Alabama. US
- Dr. Simon Geissler, Merck Healthcare, Darmstadt, DE
- Dr. Peter van Hoogevest, Pharmanovation Consulting, Rheinfelden (Baden), DE

Course leaders



PD Dr. Peter van Hoogevest
PHARMANOVIATION, Rheinfelden, DE

Peter van Hoogevest, is a pharmacist by training (Utrecht University, NL), who got his PhD degree in biochemistry 1984 at the same University. In 1994 he received the degree of Privatdozent (adjunct professor) in pharmacy at the University of Basel, Switzerland. From 2012 till 2021 he was Managing Director of the Phospholipid Research Center, Heidelberg and Head of the Scientific Department (including the Development Department) of Lipoid GmbH, Ludwigshafen am Rhein, Germany). He runs from 2021 on his own consulting business PHARMANOVIATION, based in Rheinfelden (Baden) , Germany.



Prof. Gert Storm
Utrecht University, NL

Gert Storm is a (bio)pharmaceutical scientist specialized in Targeted Drug Delivery/ Nanomedicine. He currently keeps a visiting professor position at the Department of Surgery of the National University of Singapore. He is em-professor at the Department of Pharmaceutics of the Utrecht University (Utrecht,NL) and the Department Advanced Organ Bioengineering and Therapeutics of the University of Twente (Enschede, NL). He is (co-)author of about 700 publications (H-index 129, Google Scholar, December 2024), and since 2014 every year in the Highly Cited Researcher lists of Clarivate Analytics (Researcher ID: O-8696-2016).



Programme

Tuesday, 06 May 2025

14:30 – 18:30h

Coffee break and registration

Introduction

LNPs as nucleic acid carriers in immunotherapy.

Prof. Gert Storm, Utrecht University, NL/National University of Singapore, SG

1. LNP structure, composition

Approaches for advanced quality control of pharmaceutical mRNA nanoparticles: size, structure, composition

Dr. Heinrich Haas, Johannes-Gutenberg University Mainz, DE

Microscopy techniques to elucidate composition, structure and function of lipid nanoparticles.

Prof. Roland Brock, Radboudumc, Nijmegen, NL

2. Formulation, analytics and large-scale manufacturing

Comprehensive characterization of the thermostability of mRNA-LNPs"

Dr. Rein Verbeke, University Gent, BE

Coffee break

LNP-production for mRNA-vaccines, therapeutics and for gene-editing – proof of concept for a versatile process.

Dr. Andreas Wagner, Polymun Scientific Immunbiologische Forschung GmbH, Klosterneuburg, AT

Formulation Technology for Lipid Nanoparticle Production

Dr. Matthias Luebbert, Knauer Wissenschaftliche Geräte GmbH, Berlin, DE

3. Endosomal escape

Non-viral gene delivery vectors: endosomal escape of genetic cargo.

Prof. Inge Zuhorn, Groningen University, NL

Networking dinner

Wednesday, 07 May 2025

08:30 – 13:30 h

4. PK en tissue distribution of LNPs (healthy and diseased situation)

Approaches to characterize and predict mRNA-LNP pharmacokinetics and biodistribution".

Prof. Patrick Glassman, Temple University, Philadelphia, USA

A Comparison of CRISPR-Cas9 mRNA and RNP Delivery via Lipid Nanoparticles

Prof. Enrico Mastrobattista, Utrecht University; NL

5. Limitations of LNPs (e.g. toxicity) and alternatives

Overcoming the Delivery Barrier: LNP Technologies Enabling Nucleic Acid Delivery Beyond the Liver

Dr. Dominik Witzigmann, NanoVation Therapeutics; Vancouver, CA

Multi-inflammatory impact and power to crown with spike protein: plausible causes of the adverse effects of mRNA-LNP-based anti-COVID-19 vaccines

Prof. Janos Szebeni, Semmelweis University Budapest, HU

Coffee break

Lessons learned from two decades of immunological characterization of nanoparticles in the NCL assay cascade.

Dr. Marina Dobrovolskaia, NIH

6. Therapeutic applications – as drugs and in vaccines

LNP technology enabling vaccines, immunotherapy, and gene editing

Prof. Roy van der Meel, Eindhoven University of Technology, NL

Immunotherapy of cancer of LNP-delivered nucleic acids

Prof. Raymond Schiffelers, UMC Utrecht, NL

7. Industry and IP landscape/prospects;

Roadmap from Discovery to Early Development – an Industry Perspective

Dr. Marianne Ashford, Astra Zeneca, Macclesfield, UK

Concluding discussion

Dr. Peter van Hoogevest, Pharmanovation Consulting, Rheinfelden (Baden), DE

Sandwich lunch and farewell

Registration online on our homepage or by email to anmeldung@apv-mainz.de



Location

INVITE GmbH
Otto-Bayer-Straße 32
51061 Köln
Germany

Registration fee

Industry 1590 EUR
Authority/University 795 EUR
Students* 220 EUR

(free of VAT according to § 4,22 UStG)

Coffee breaks, luncheons, dinner and electronic proceedings included.

Registration

APV-Geschäftsstelle
Kurfürstenstraße 59
55118 Mainz/Germany
Phone: 0049 6131 97 69 0
E-mail: anmeldung@apv-mainz.de
Web: www.apv-mainz.de

You will receive a confirmation of your registration with the invoice.

Hotelreservation

Participants should make their own hotel reservation.

We recommend booking platforms such as [hrs.com](https://www.hrs.com) or [booking.com](https://www.booking.com)

Date

Course no.: 7052
from 06 May 2025 14:30 h
to 07 May 2025 13:30 h

* Limited places for full time students available; written evidence must be submitted.

Latest Advances in R&D on LNPs for RNA Drug Delivery, 06-07 May 2025, Cologne, Course no. 7052

Registration

As soon as you have found a seminar of your interest, it is very easy to register for it via e-mail or online. We will process your registration promptly and certainly are available for any questions that may arise.

Registration confirmation

After your registration was successfully processed, you will receive a confirmation.

Before the event

A few days before the event starts, you will receive important information about the seminar, such as time, date, addresses etc.

After the event

You will receive a certificate confirming your participation. Furthermore, we would like to ask you to fill-in our evaluation sheet to make sure we get better every time.

Follow-up

After the event, we are open to receive any suggestions and critique that might arise during the seminar and will certainly help you with further questions you may have.

Declaration of consent in respect of data protection

By registering for this seminar, I agree that the APV uses my data for the purpose of processing the order and provides me with all relevant information.

I also agree that APV may contact me for the purpose of exchanging similar information by email or post.

Your data will not be shared with third parties. You have a right of withdrawal at any time without giving reasons.

All other information can be found in our privacy policy (www.apv-mainz.de/en/imprint/data-protection-statement/).

 Pay via invoice pay via credit card (Visa, MasterCard, Amex)
(You will receive further payment information with the invoice) Online participation only On site participation

* Mandatory

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Verfahrenstechnik e.V. | International Association for
Pharmaceutical Technology and Industrial Pharmacy
Gemeinnütziger wissenschaftlicher Verein

APV-Geschäftsstelle
Kurfürstenstraße 59
55118 Mainz/Germany

Phone: 0049 6131 97 69 0
E-mail: info@apv-mainz.de

www.apv-mainz.de/en