

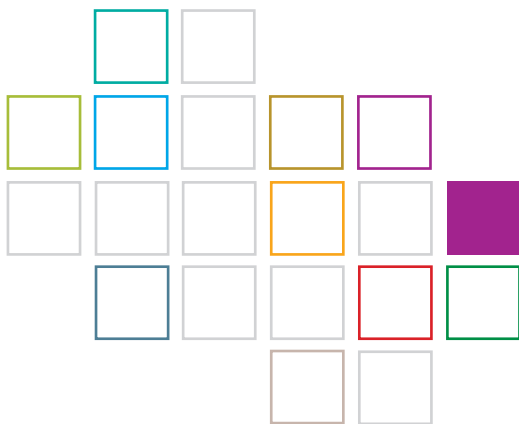
# Phospholipids, an important determinant of oral drug absorption

- How important are they for a successful development of biorelevant in vitro dissolution and permeation assays?
- How can they be used in formulation development to improve the oral bioavailability of drugs?



20 - 21 June 2023  
Malmö, Sweden

Course no. 6928



## Research and Development

### Target group

Scientists from the pharmaceutical industry and academia involved in the development, manufacture, biorelevant characterization, and quality control of oral dosage forms, as well as scientists with a general interest in the applications of phospholipids in pharmaceutical development.

In cooperation with





## Objectives

Phospholipids are excipients of natural origin that play several roles in the oral administration of drugs. With the growing number of drugs with poor water solubility, there is an increasing need for new formulation concepts that ensure effective dissolution or solubilization of these drugs in the gastrointestinal tract.

At this point, phospholipids represent interesting excipient candidates for e.g. lipid-based, co-amorphous or micellar formulations. When it comes to best predicting the in vivo drug release of poorly soluble drug candidates based on in vitro release assays, phospholipids come back into play.

Together with other physiologically relevant components, such as bile salts, their use in biorelevant dissolution media usually allows a much better prediction of the in vivo release of poorly soluble drugs from their formulations.

Finally, phospholipids also play a major role in drug absorption. As important cell membrane components, they are key determinants of the permeability of the gastrointestinal mucosa and therefore also influence the fraction of the orally administered drug dose that ultimately reaches the systemic circulation.

The aim of the workshop is to provide the participants with the latest knowledge on current phospholipid-based formulation concepts for small molecules and biological agents as well as on advanced and predictive in vitro methods for characterization of drug release and permeation.

## Moderators



**Prof. Dr. Sandra Klein**  
University of Greifswald, DE

Sandra Klein is a pharmacist by training and got her pharmacist's license and her Ph.D. from the Goethe University of Frankfurt, Germany. She was a postdoctoral fellow at Eastman Chemical Company in Kingsport, USA and since 2010 is a Professor of Pharmaceutical Technology at the University of Greifswald, Germany. Her current research is focused on developing bio-predictive in vitro models and dosage forms for special patient groups with a particular focus on the pediatric population, as well as on establishing formulation strategies for enhancing the bioavailability of poorly soluble drugs. She also has a strong interest in the development of biorelevant in vitro models for non-oral dosage forms such as complex injectables, vaginal and rectal dosage forms. She is a member of AAPS and DPhG, a board member of APV, a core group member of EuPFI, workstream lead of the EuPFI biopharmaceutics workstream and Editor-in-Chief of Pharmazie.



**PD Dr. habil. Simon Drescher**  
Phospholipid Research Center, Heidelberg, DE

After studying pharmacy at the Martin Luther University (MLU) Halle-Wittenberg in Halle, Germany, Dr Drescher completed 2008 his PhD there in the field of pharmaceutical chemistry and physical chemistry on the synthesis and aggregation behavior of bipolar phospholipids (bolalipids). He has dedicated himself to this topic at various places of work over 10 years; and finally received the Habilitation and *venia legendi* in pharmaceutical chemistry at MLU in 2017 on the topic of "Artificial phospholipids: syntheses, properties, and applications". After two semesters as deputy professor for Pharmaceutical Bioanalytics at the University of Greifswald, Germany, he joined the Phospholipid Research Center Heidelberg in December 2019, initially as deputy managing director and, since February 2021, as managing director.

Dr. Drescher's main interests are (i) the synthesis of artificial, i.e. non-naturally occurring, mono- and bipolar phospholipids, including fully synthetic and partial biochemical approaches, (ii) the physicochemical characterization of lipids in 2D and 3D assemblies and their miscibility, mainly using calorimetric methods, infrared spectroscopy, X-ray and neutron scattering techniques, electron microscopy, and mass spectrometry, and (iii) the application of liposomes for (oral) drug delivery. He is author of 60+ peer reviewed papers (h-index: 18).

# Phospholipids, an important determinant of oral drug absorption

## Programme

Tuesday, 20 June 2023

10:00 - 17:30 h

### Welcome address / housekeeping

PD Dr. habil. Simon Drescher (Phospholipid Research Center, Heidelberg, Germany)  
Prof. Dr. Sandra Klein (University of Greifswald, Germany)

### Introduction in the use of phospholipids in pharmaceutical formulations

PD Dr. habil. Simon Drescher (Phospholipid Research Center, Heidelberg, Germany)

### The role of phospholipids in the development of in vitro assays to predict in vivo drug release

Prof. Dr. Sandra Klein (University of Greifswald, Germany)

### Phospholipid complexes in SNEDDS for increasing gastro-intestinal absorption of peptides

Prof. Dr. Anette Müllertz (University of Copenhagen, Denmark)

### Phospholipid/polymer mixtures as matrices for solid dispersions of poorly soluble drugs

Dr. Paulina Skupin-Mrugalska (Poznan University of Medical Sciences, Poland)

### Co-amorphous phospholipid drug complexes

Prof. Dr. Thomas Rades (University of Copenhagen, Denmark)

### Oral mixed micelle formulations – a novel phospholipid-based platform for safe and effective pediatric drug delivery

Dr. Frank Karkossa (University of Greifswald, Germany)

### Podiumsdiskussion

## Networking dinner

Wednesday, 21 June 2023

09:00 - 13:00 h

### Housekeeping

### Natural phospholipids as pharmaceutical excipients – experiences from the pharmaceutical industry

N.N.

### Phospholipids may boost or depress drug absorption: how to get the balance right

Dr. Ann-Christin Jacobsen (Uppsala University, Sweden)

### Evaluation of the properties of phospholipid-based nanocarriers for oral delivery using an in vitro test strategy

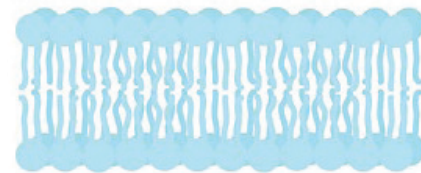
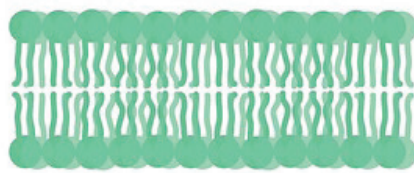
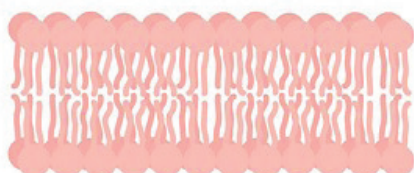
Dr. Meike van der Zande (Wageningen University, The Netherlands)

### Latest additions to the in vitro toolbox for biopharmaceutical evaluation of enabling formulations

Prof. Dr. Martin Brandl (University of Southern Denmark, Odense, Denmark)

### Summary and end of the workshop

The program is subject to change



# Registration by fax +49 6131 97 69 69 or by email [apv@apv-mainz.de](mailto:apv@apv-mainz.de)



## Location

Quality Hotel View  
Hyllie stationstorg 29  
SE-215 32 Malmö, Sweden  
web [www.choice.se/quality/view](http://www.choice.se/quality/view)  
mail [q.view@choice.se](mailto:q.view@choice.se)  
phone +4640 374100 (press 4)

## Registration fee

Industry	1490 EUR
Authority/University	745 EUR
Students*	200 EUR

(free of VAT according to § 4,22 UStG)  
Coffee breaks, luncheon, dinner and electronic proceedings included.

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

## Registration

APV-Geschäftsstelle  
Kurfürstenstraße 59  
55118 Mainz/Germany  
Phone: 0049 6131 97 69 0  
Fax: 0049 6131 97 69 69  
E-mail: [apv@apv-mainz.de](mailto:apv@apv-mainz.de)  
Web: [www.apv-mainz.de](http://www.apv-mainz.de)

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

## Hotel reservation

Quality Hotel View  
Hyllie stationstorg 29  
SE-215 32 Malmö, Sweden  
web [www.choice.se/quality/view](http://www.choice.se/quality/view)  
mail [q.view@choice.se](mailto:q.view@choice.se)  
phone +4640 374100 (press 4)

We have blocked a contingent on the special rate of **1100 SEK (~100€ incl. breakfast and reduced VAT. Reservation code: 2110GR026800**  
The rates are available until 23 May 2023.

## Date

Course no.: 6907	
from 20 June 2023	10:00 h
to 21 June 2023	13:00 h

## Phospholipids, an important determinant of oral drug absorption, 20 - 21 June 2023, Malmö, Course no. 6928

### Registration

As soon as you have found a seminar of your interest, it is very easy to register for it via fax, 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.

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