



Universität  
Münster

Conference programme

# Novel formulation strategies for poorly water-soluble drugs

**February 9<sup>th</sup> – 11<sup>th</sup> 2026**

University of Münster / Germany



## Conference Day 1 - 09 February 2026

11:00 Registration

13:00 **Welcome Session**

Prof. Dr. Denise Steiner (University of Münster) and Dr. Cornelia D. Sonntag (Galenus Foundation)

### Scientific Session 1 – Nanoparticulate formulations

13:15 Keynote Lecture: **Nanocrystal drug product development in the pharmaceutical industry: Risks, screening strategies, and implementation challenges**

J. Sundermann

*AbbVie Deutschland GmbH & Co. KG*

14:00 **Nano meets fluidized bed: Improving the bioavailability of poorly soluble drugs**

A. Grave and S. Shi

*Glatt Pharmaceutical Services GmbH & Co. KG*

14:20 **A nanotechnological approach to the encapsulation of poorly soluble compounds using the solvent displacement method**

B. Benbakrim<sup>1,2</sup>, N. Taarji<sup>2</sup> and A. Hafidi<sup>1</sup>

<sup>1</sup>*Laboratory of Agri-Food, Biotechnology and Valorization of Plant Resources, Cadi Ayyad University, Morocco*

<sup>2</sup>*College of Agriculture & Environmental Sciences, Agrobiosciences Program Mohamed VI Polytechnic University Morocco*

14:40 **Parenteral delivery strategies for poorly soluble PROTACs: Comparative development of liposomal, albumin-based, and cyclodextrin formulations for ACBI2 and ACBI3**

M. Jaki<sup>1</sup>, L. Dari<sup>1</sup>, M. Wittmann<sup>2</sup> and R. Süss<sup>1</sup>

<sup>1</sup>*University of Freiburg, Institute of Pharmaceutical Sciences, Department of Pharmaceutics, Germany*

<sup>2</sup>*Boehringer Ingelheim Pharma GmbH & Co. KG, Germany*

15:00 **Coffee Break**

## Conference Day 1 - 09 February 2026

### Scientific Session 1 – Nanoparticulate formulations

- 15:30      **Perfluorocarbon-nanoemulsions as artificial oxygen carriers for medical applications**  
K.B. Siebecke<sup>1</sup>, M.A.Schroer<sup>2</sup>, F. Nocke<sup>3</sup> and J.-E. Sydow<sup>3</sup>  
*<sup>1</sup>Institute of Physiology, University Hospital Essen, University of Duisburg-Essen, Germany*  
*<sup>2</sup>Nanoparticle Process Technology (NPPT), Faculty of Engineering, University of Duisburg-Essen, Germany*  
*<sup>3</sup>Institute of Physiological Chemistry, University of Duisburg-Essen, University Hospital Essen, Germany*
- 15:50      **Developing super stable perfluorocarbon-based artificial oxygen carriers by high pressure homogenization**  
F. Nocke<sup>1</sup>, M. Penzel<sup>1</sup> and K.B. Siebecke<sup>2</sup>  
*<sup>1</sup>Institute of Physiological Chemistry, University Hospital Essen, University of Duisburg-Essen, Germany*  
*<sup>2</sup>Institute of Physiology, University Hospital Essen, University of Duisburg-Essen, Germany*
- 16:10      **Bond lifetime in dynamic covalently crosslinked hydrogels determines the release of nanoparticulate vaccines**  
F. Hauswirth and M. Breunig  
*Department of Pharmaceutical Technology, University of Regensburg, Germany*
- 16:30      **Panel Discussion: Options after the PhD – PostDocs present their career paths**  
L.M. Spindler (*Boehringer Ingelheim Pharma GmbH & Co. KG*)  
E. Preis (*Friedrich Schiller University Jena*)  
B. Winkeljann (*Ludwig-Maximilians-Universität München and RNhale*)
- 18:00      **Come together at the PharmaCampus**

## Conference Day 2 - 10 February 2026

### Scientific Session 2 – Amorphous solid dosage forms

- 9:00      **Invited Lecture: The many faces of disorder: Revealing hidden diversity in amorphous forms of drugs**  
I.C.B. Martins  
*Department of Pharmacy, University of Copenhagen, Denmark*
- 9:30      **Particle-based silica aerogels as carrier systems for poorly water-soluble drugs**  
J. Pierick<sup>1,2</sup>, J.H. Finke<sup>1,2</sup> and G. Garnweitner<sup>1</sup>  
<sup>1</sup>*Institute for Particle Technology (iPAT), Technische Universität Braunschweig, Germany*  
<sup>2</sup>*Center of Pharmaceutical Engineering (PVZ), Technische Universität Braunschweig, Germany*
- 9:50      **Hot-melt extrusion of a ternary mixture with cannabidiol: A study on drug recrystallization stability and content**  
E. Breitbach<sup>1,2</sup> and H. Bunjes<sup>1,2</sup>  
<sup>1</sup>*Technische Universität Braunschweig, Institut für Pharmazeutische Technologie und Biopharmazie, Germany*  
<sup>2</sup>*Technische Universität Braunschweig, Zentrum für Pharmaverfahrenstechnik - PVZ, Germany*
- 10:10     **Lossless shear mixing of milligrams for the development of amorphous solid dispersions**  
G. Winkler, J. Nikolaus, A. Bramboeck and D. Treffer  
*MeltPrep GmbH, Austria*
- 10:30     **Predictive temperature modeling for extrusion of amorphous solid dispersions**  
S. Meyer, J. Winck and M. Thommes  
*TU Dortmund University, Germany*
- 10:50     ***In-situ* amorphization of poorly soluble naproxen using laser powder bed fusion 3D printing**  
F. Engelsing<sup>1,2</sup>, A. Grave<sup>2</sup>, R.J. Kok<sup>1</sup> and J. Quodbach<sup>1</sup>  
<sup>1</sup>*Division of Pharmaceutics, Utrecht Institute of Pharmaceutical Sciences (UIPS), Utrecht University, the Netherlands*  
<sup>2</sup>*Glatt Pharmaceutical Services GmbH & Co. KG, Germany*

## Conference Day 2 - 10 February 2026

11:10      **Coffee break**

### **Scientific Session 3 – Cell-based systems for *in vitro* evaluation**

11:40      Invited Lecture: **FlowCube as a novel *in-vitro* tool for cell interaction studies under flow conditions**

M. Anzengruber

*University of Vienna, Division of Pharmaceutical Technology and Biopharmaceutics, Austria*

12:10      **Development and characterization of polymeric nanomicelles of fluticazone furoate and in vitro evaluation on BEAS2B cell line**

M. Çelik Tekeli<sup>1</sup>, E. Uzunhisarcikli<sup>2</sup> and A.N. Oktay<sup>3</sup>

<sup>1</sup>*Department of Pharmaceutical Technology, Erciyes University Faculty of Pharmacy, Turkey*

<sup>2</sup>*Department of Pharmacology, Erciyes University Faculty of Pharmacy, Turkey*

<sup>3</sup>*Department of Pharmaceutical Technology, Gulhane Faculty of Pharmacy, University of Health Sciences, Turkey*

12:30      **In vitro/ in vivo correlation of drug absorption studies using the Ocular DynaMiTES**

M. Düttmann<sup>1</sup> and S. Reichl<sup>2</sup>

<sup>1</sup>*TU Braunschweig, Institut für Pharmazeutische Technologie und Biopharmazie, Germany*

<sup>2</sup>*TU Braunschweig, Zentrum für Pharmaverfahrenstechnik - PVZ, Germany*

12:50      **Lunch break**

## Conference Day 2 - 10 February 2026

### Poster Session

13:30 **Poster Short Talks**

14:30 **Poster Session and Coffee Break**

15:30 Keynote Lecture: **Contemporary models and pharmaceutical production – From a virtual intestine to 3D printed medicines**  
C. Bergström  
*Department of Pharmacy, Uppsala University, Sweden*

16:15 Optional: Tour of the Institute of Pharmaceutical Technology and Biopharmaceutics, University of Münster

19:00 **Conference Dinner**

Location: 1648 Café / Lounge / Gastronomie (Heinrich-Brüning-Str. 5, Münster)

## Conference Day 3 - 11 February 2026

### Scientific Session 4 – Lipid/polymer-based systems

- 9:00      **Invited Lecture: From insoluble to effective: A liquid-lipid nanocapsule toolbox for poorly water-soluble compounds**  
S. Hester  
*Institute of Pharmaceutical Technology and Biopharmaceutics, University of Münster, Germany*
- 9:30      **Fab' enabled active targeting to steer delivery of poorly water-soluble drugs with HSA nanocapsules**  
T. Kurze and S. Hester  
*Institute of Pharmaceutical Technology and Biopharmaceutics, University of Münster, Germany*
- 9:50      **Stability of lipid nanoparticles embedded in hydrogel-based pellets: Effects of preparation and drying**  
N. Hendricks<sup>1,2</sup> and H. Bunjes<sup>1,2</sup>  
<sup>1</sup>*Technische Universität Braunschweig, Institut für Pharmazeutische Technologie und Biopharmazie, Germany*  
<sup>2</sup>*Technische Universität Braunschweig, Zentrum für Pharmaverfahrenstechnik - PVZ, Germany*
- 10:10     **Development of stimuli-responsive polymer-based drug delivery systems (crosLNPs) by thermodynamic profiling of lipid-polymer interactions**  
J. Lembeck<sup>1</sup> and H. Heerklotz<sup>1,2,3</sup>  
<sup>1</sup>*University of Freiburg, Institute of Pharmaceutical Sciences, Department of Pharmaceutics, Germany*  
<sup>2</sup>*University of Freiburg, Centre of Biological Signaling Studies (BIOSS), Germany*  
<sup>3</sup>*University of Toronto, Leslie Dan Faculty of Pharmacy, Canada*
- 10:30     **Coffee Break**



## Conference Day 3 - 11 February 2026

### Scientific Session 5 – Innovative technologies

11:00 Invited Lecture: **Stimuli-responsive systems: What can we achieve?**

E. Preis<sup>1,2</sup>

<sup>1</sup>*Friedrich Schiller University Jena, Institute of Pharmacy, Department of Pharmaceutical Technology and Biopharmaceutics, Germany*

<sup>2</sup>*Philipps-Universität Marburg, Department of Pharmacy, Institute of Pharmaceutics and Biopharmaceutics, Germany*

11:30 **Vacuum-foamed porous solid dispersions as a method for small-scale development for foam extrusion release**

J. Zeppenfeld<sup>1</sup>, A. Bramboeck<sup>2</sup>, D. Treffer<sup>2</sup> and J. Winck<sup>1</sup>

<sup>1</sup>*TU Dortmund University, Germany*

<sup>2</sup>*MeltPrep GmbH, Austria*

11:50 **Dual-nozzle 3D printed mucoadhesive films for localized esophageal drug delivery**

F. Brokmann, S. Grzam, J. F. Kandzi and J. Krause

*University of Greifswald, Department of Biopharmaceutics and Pharmaceutical Technology, Germany*

12:10 **Dissecting the interplay of drug substances with bile and mucus**

L. Scheller<sup>1</sup>, J. Kehrein<sup>1</sup>, R. Bertermann<sup>2</sup>, T. Zorn<sup>3</sup>, B. Engel<sup>1</sup>, S. Hanio<sup>1</sup>, M. Finze<sup>2</sup>, T. Lühmann<sup>1</sup> and L. Meinel<sup>1,4</sup>

<sup>1</sup>*University of Würzburg, Institute of Pharmacy and Food Chemistry, Germany*

<sup>2</sup>*University of Würzburg, Institute for Inorganic Chemistry, Germany*

<sup>3</sup>*University of Würzburg, Institute of Organic Chemistry, Germany*

<sup>4</sup>*Helmholtz Institute for RNA-Based Infection Research (HIRI), Helmholtz Center for Infection Research (HZI), Germany*

12:30 **Closing Session**



## Optional – Workshop: Dual Centrifugation 11 February 2026

- 13:30      **Dual asymmetric centrifuge: Basic principle and applications**  
            C. Karst  
            *FlackTek Europe GmbH*
- 14:00      **Dual (symmetric) centrifuge: Basic principle and preparation of nanosized pharmaceutical formulations**  
            U. Massing  
            *University of Freiburg, Institute of Pharmaceutical Sciences, Department of Pharmaceutics, Germany*
- 14:45      **Coffee break and presentation of both types of dual centrifuges including equipment**
- 15:15      **Comparison of the performance of both types of dual centrifuges using the example of a lipid nanoemulsion**  
            N. Hellmund  
            *Institute of Pharmaceutical Technology and Biopharmaceutics, University of Münster, Germany*
- 15:35      **Formulation screening, parameter optimization and scale-up of grinding processes with dual centrifuge and agitator bead mills**  
            S. Mende  
            *NETZSCH Feinmahltechnik GmbH, Selb, Germany*
- 16:20      **Closing Session Workshop**