

## Scientific Program | Monday, 23 March 2026

10:00–12:00	Registration and Poster Setup
12:00–13:00	<b>LUNCH</b>
13:00–13:10	Introduction / Opening

### Section 1: Protein-Lipid Interaction

Chair: Melanie König

13:10–13:50	<b>Matti Javanainen</b> , <i>University of Tampere, Finland</i> Lipid scrambling by the Sec61 translocon
13:50–14:10	<b>Manpreet Kaur</b> , <i>Heidelberg University Biochemistry Center, Germany</i> Plasma membrane transbilayer asymmetry of PI(4,5)P <sub>2</sub> drives unconventional secretion of Fibroblast Growth Factor 2
14:10–14:30	<b>Aleksander Czogalla</b> , <i>University of Wroclaw, Poland</i> One legion in purpose, many warriors in spirit: on the behavior of signaling lipids in biological membranes
14:30–15:10	<b>Radek Sachl</b> , <i>J. Heyrovsky Institute of Physical Chemistry, Prague</i> Shaping ganglioside nanodomains by approaching protein ligands

15:10 **COFFEE BREAK / POSTERS**

### Section 2: Methodological Progress

Chair: Daniel Huster

15:40–16:20	<b>Luca Monticelli</b> , <i>University Lyon, France</i> Molecular simulations of lipid droplet biogenesis
16:20–16:40	<b>Christian Eggeling</b> , <i>Leibniz Institute of Photonic Technologies (IPHT), Jena, Germany</i> Resolving dynamics in three-dimensional lipid membrane structures with super-resolution MINFLUX microscopy
16:40–17:00	<b>Janina Nandy</b> , <i>Research Center Borstel, Germany</i> Liposome-based microfluidic platform for standardised analysis of antimicrobial peptides
17:00–17:20	<b>Aldo Pasos Trejo</b> , <i>Freie Universitaet Berlin, Germany</i> Towards machine-learned coarse-grained models of lipid bilayers and membranes
17:20–17:40	<b>Matthias Schneider</b> , <i>TU – Dortmund University, Germany</i> From thermodynamic state to biological function: The physics of the interface vs the structure of the molecule
17:40	Sponsor presentations

18:00 **DINNER**

### Evening lecture

Chair: Claudia Steinem

19:00	<b>Hans-Joachim Galla</b> , <i>University of Münster, Germany</i> Membrane Biophysics over the years: from Gomadingen to Drübeck
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19:40 Posters and networking

## Scientific Program | Tuesday, 24 March 2026

08:00 **BREAKFAST**

### Session 3: Membrane Remodeling

Chair: Michael Meinecke

- 09:00–09:25 **Michael Meinecke**, *Heidelberg University Biochemistry Center, Germany*  
Mitochondrial Membrane Biogenesis
- 09:25–10:05 **Erdinc Sezgin**, *Karolinska Institutet, Sweden*  
Biophysical properties of cells and nanoscale bioparticles as new bi-omarkers in health and disease
- 10:05–10:25 **Rainer Böckmann**, *Friedrich-Alexander-Universität, Germany*  
Immune receptor clustering in a plasma membrane model

10:25 **COFFEE BREAK**

- 10:40–11:20 **Anna Duncan**, *Aarhus University, Denmark*  
Molecular simulations of complex and crowded bilayers
- 11:20–11:40 **Sinja Götz**, *University of Freiburg, Germany*  
Asymmetry Stress from Leaflet Expansion Triggers Membrane Remodeling
- 11:40–12:00 **Tsu-Wang Sun**, *Max Planck Institute of Colloids and Interfaces, Germany*  
Photoswitchable lipids as regulators of membrane mechanics, phase behavior, and mechanosensitive channel gating

12:00 **LUNCH**

13:00 **Excursion / Free time**

15:30 **COFFEE BREAK**

### Session 4: Biological Barriers

Chair: Ksenia Korshunova

- 16:20–17:00 **Jesús Perez-Gil**, *Complutense University, Spain*  
The Pulmonary Surfactant Membrane Hub, Barrier or Gate to Airborne Materials?
- 17:00–17:20 **Ainhoa Collada**, *Complutense University, Spain*  
Elucidating the Role of Pulmonary Surfactant Proteins SP-B and SP-C in the Nucleation of Three-dimensional Interface-associated Membrane Structures
- 17:20–17:40 **Oskar Engberg**, *University of Leipzig, Germany*  
Chain-Dependent Lipid Dynamics Explain Structural Organization and Function of the Skin Barrier
- 17:40–18:00 **Julius Kiuru**, *University of Helsinki, Finland*  
Computational study of tight junction strand architecture and branching

18:00 **DINNER**

## Evening Session

Chair: Andra Schromm

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| 19:00 | <b>Alf Honigmann</b> , <i>Technische Universität Dresden, Germany</i><br>Size dependent segregation of adhesion receptors in the tight junction |
| 19:40 | General discussion  |
| 20:00 | Posters and networking  |
| 22:00 | Jam Session   |

## Scientific Program | Wednesday, 25 March 2026

08:00                    **BREAKFAST**

### Session 5: Membrane Structure and Protein Function

Chair: Annette Meister

- 09:00–09:40            **Katia Cosentino**, *University of Modena and Reggio Emilia, Italy*  
Gasdermin Pores and Their Regulation by the Membrane Environment
- 09:40–10:00            **András Major**, *University of Göttingen, Göttingen, Germany*  
From condensate dynamics to monolayer structure: synaptic protein–membrane interactions studied on multiple scales
- 10:00–10:20            **Giorgia Roticiani**, *Universität Wien, Austria*  
Transport of FA anions by UCP1 is driven by specific amino acid residues revealed through electrophysiological experiments

10:20    **COFFEE BREAK**

- 10:40–11:20            **Frauke Gräter**, *Max Planck Institute for Polymer Research, Germany*  
Protein dynamics in and at membranes from physical simulations and generative models
- 11:20–11:40            **Katharina Beck**, *Lipospec GmbH, Germany*  
Expanding membrane-order probing beyond Laurdan using a water-soluble conjugated oligoelectrolyte (COE)
- 11:40–12:00            **Fabian Grünewald**, *Heidelberg Institute for Theoretical Studies (HITS), Germany*  
Nanoscale heterogeneity in hybrid polymer-lipid membranes creates native-like environments for integral membrane proteins

12:00    **GROUP PHOTO**

12:10    **LUNCH**

13:30    **Guided monastery tours / Free time**

15:30    **COFFEE BREAK / POSTERS**

### Session 6: Synthetic Biology

Chair: Christoph Westerhausen

- 16:20–17:00            **James Saenz**, *Technische Universität Dresden, Germany*  
Decoding and engineering membrane functions
- 17:00–17:20            **Aileen Cooney**, *Complutense University, Spain*  
Leveraging Hydrogels to Programme Membrane Transport in Liposome-Based Synthetic Cells
- 17:20–17:40            **Michelle Emmert**, *Center for Molecular Biology of Heidelberg University, Germany*  
Enzyme-driven motion and tubulation of lipid vesicles
- 17:40–18:00            **Kevin Jahnke**, *Harvard University, Cambridge, USA*  
Engineering asymmetric lipid vesicles for drug delivery

18:00    **DINNER**

## Evening Session

Chair: Christian Schwieger

- 19:00                    **Gerard Wong**, *California NanoSystems Institute (CNSI) & University of California, Los Angeles, USA.*  
The role of Gaussian curvature in selective immune cell suppression and cardiovascular disorders in COVID-19
- 19:40                    DGfB Membrane Section Meeting
- 20:00                    Posters and networking
- 22:00                    Board Games

## Scientific Program | Thursday, 26 March 2026

08:00                    **BREAKFAST / CHECK OUT**

### Session 7: Barriers in Health and Disease

Chair: Heiko Heerklotz

- 09:00–09:40            **Elina Ikonen**, *University of Helsinki, Finland*  
Control of desmosomal cell adhesions by caveolar membrane domains
- 09:40–10:00           **Maria Hoernke**, *Martin-Luther-Universität Halle (S.), Germany*  
Strong Membrane Permeabilization Activity Can Reduce Selectivity of Cyclic Antimicrobial Peptides
- 10:00–10:20           **Jacek Kozuch**, *Technische Universität Braunschweig, Germany*  
Tracking Molecular Events During Viral Infection at Model Membranes Using Surface-Enhanced Infrared Spectroscopy
- 10:20–10:40           **Daria Tamasova**, *Georg-August-Universität Göttingen, Germany*  
On-chip-based electrochemical biosensor development for evaluating antibiotic's mode of action

10:40    **COFFEE BREAK**

- 11:00–11:40           **Anna Taubenberger**, *Center for Molecular and Cellular Bioengineering (CMCB), BIOTEC*,  
Adaptations of cell biophysical properties during tumour growth and progression
- 11:40–12:00           **Sarah Crocoll**, *University of Freiburg, Germany*  
Cyclic Lipopeptides Targeting Membranes: Insights into Binding and Permeabilization

12:00    **CONCLUSION + AWARDS**

12:10    **LUNCH**