

# Conference program Molecular Biophysics

11-13 March 2026, Kloster Hünfeld, Germany

## Programme

### WEDNESDAY 11.03.

**14.00-14.30 – arrival and check-in**

**Session 1 14.30-16.20 – chair Christian Sieben (HZI)**

Opening remarks – CU & RB (10 min)

Invited 1: Uri Raviv (HUJI), Mechanism of virus capsid assembly and disassembly (15+5 min)

Invited 2: Jens Bosse (CSSB/MHH), From in silico to in cellulo: Illuminating viral morphogenesis (25+5 min)

Invited 3: Vahid Sandoghdar (MPI/FAU), Visualizing the virus life cycle: from initial entry to secondary infection (25+5 min)

Invited 4: Raz Jelinek (BGU), Amyloid catalysts: new biological functions and structures (15+5 min)

**16.20-16.45 coffee break**

**Session 2 16.45-17.55 – chair Henrike Heise (FZJ/HHU)**

Selected abstract 1: Jennifer Rothe (UzL), Modifying Norovirus capsid assembly through mutations (12+3 min)

Invited 5: Roy Beck-Barkai (TAU), Structural heterogeneity in health and mutated intrinsically disordered proteins (15+5 min)

Selected abstract 2: Axel Jeibmann (Uni BI), A Negative Charge Drives Structural Responses of the Blue-Light Receptor Plant Cryptochrome (12+3 min)

Invited 6: Rina Rosenzweig (WIS), Molecular Mechanisms of DNAJC12 Chaperone: From Structure to Disease (15+5 min)

**DINNER 18:00**

**Session 3 19:30-20:00 – chair Janine Kopicki, CSSB/UzL**

6 Flash talks (3+2 min): Henrike Heise, Thomas Kierspel, Lukas Pekarek, Enrico Caragliano, Simon Doll, Roman Renger

**POSTER SESSION 20:00 – open end**

## **THURSDAY 12.03.**

### **Breakfast**

#### **Session 4 9:00-10:25 – chair Gabriel Moya, Fluobrick**

Invited 7: Eitan Lerner (HUJI), Studying biomolecular condensates in cells using new & existing fluorescence microspectroscopy approaches (15+5 min)

Invited 8: Viktorija Glembockytė (MPI MR), Engineering Optical Nanoscale Tools with DNA (25+5 min)

Invited 9: Ariel Kaplan (Technion), Unzipping the Secrets of Gene Regulation: The Role of Intrinsically Disordered Regions in Transcription Factor Binding (15+5 min)

Selected abstract 3: Aviva Tovey (HUJ), Quantitative Quenchable FRET: unveiling quenching mechanisms arising from intermolecular dye interactions (12+3 min)

#### **Coffee break 10:25-11:00**

#### **Session 5 11:00-12:00 – chair Kirsten Bacia, Uni Halle**

Invited 10: Ingrid Tessmer (U Würzburg), Single molecule studies of DNA alkylation repair (25+5 min)

Selected abstract 4: Leonardo Levorin (FZJ), Investigating the Interaction of the AD Drug Candidate RD2 with A $\beta$  Amyloid Fibrils via Paramagnetic Relaxation Enhancement (12+3 min)

Selected abstract 5: Roman Renger (EI, UK), Adding dynamics to structural biology – Towards easy-to-use single-molecule fluorescence tools (12+3 min)

### **LUNCH 12:00**

#### **Session 6 14:00-15:40 – chair Johannes Hohlbein, Wageningen**

Invited 11: Jonas Ries (UW), MINFLUX for dynamic structural cell biology (25+5 min)

Selected abstract 6: Ekaterina Vorobevskaia (TU DD), Active destabilization of the integrin synaptic complex reduces bacterial adaptation to antibiotics (12+3 min)

Invited 12: Sharon Ruthstein (BIU), The use of EPR spectroscopy to study transcription mechanism in-vitro and in-cell (15+5 min)

Selected abstract 7: Felix Erichson, (HS Mittweida), FRET-assisted modeling pipeline (FAMP) – a Python-based toolset for FRET guided integrative modeling (12+3 min)

Invited 13: Michal Sharon (WIS), Uncovering the unique properties of circulating proteasomes: A mass spectrometry perspective (15+5 min)

**Coffee break 15:40-16:10**

**Session 7 16:10-18:00 – chair Pedram Mehrabi, UHH**

Invited 14: Andrea Sinz (MLU), Structural Characterization of “Difficult” Proteins by Cross-Linking Mass Spectrometry Using MS-Cleavable Cross-Linkers (25+5 min)

Selected abstract 8: Puja Shreshta (RUB), Folding stability of YB1- cold shock domain inside cells and its modulation by ligand binding and post translation modification (12+3 min)

Invited 15: Dana Reichmann (HUJI), The Cys sense: regulation of cellular proliferation and protein homeostasis through redox-switch proteins (15+5 min)

Selected abstract 9: Margherita Tavasso (1NA), High-Throughput Single-Molecule Analysis of DNA-Protein Interactions Using DNA Curtains (12+3 min)

Selected abstract 10: Pritam Roy (Sorbonne), Deciphering the Calcium-Dependent Allosteric Switch of the T3SS Export Gate using Hydrogen-Deuterium Exchange Mass Spectrometry (HDX-MS) (12+3 min)

Selected abstract 11: Joanna Macnar (LMU), Non-trivial topological architectures as a new paradigm in protein nanocage engineering (12+3 min)

**DINNER 18:00**

**Session 8 19.30-20.00 chair Thomas Kierspel, CSSB/DESY**

6 poster flashes (3+2 min): Janine-Denise Kopicki, Matheus Issa, Jocky Kung, Lothar Gremer, Andreas Hartmann, Richard Börner

**POSTER SESSION 20:00 – open end**

**FRIDAY 13.03.**

**Breakfast**

**Session 8 9:00-10:30 – chair Michael Schlierf, TU Dresden**

Invited 17: Simon Ebbinghaus (Ruhr Uni), Client Folding in Biomolecular Condensates (25+5 min)

Selected abstract 12: Christian Sieben (HZI), Speak friend and enter – deconstructing the virus-cell infection synapse (12+3 min)

Invited 18: Dominik Oberthür (DESY), A snapshot love story: What serial crystallography has done and will do for us (25+5 min)

Selected abstract 13: Kirsten Bacia (Uni Halle), Structural basis of Arf1-driven membrane tubulation (12+3 min)

**Coffee break 10:30-11:00**

**Session 9 11:00-11:50 – chair Joanna Macnar, LMU**

Invited 19: Raya Sorkin (TAU), Regulation of Membrane Organization and Remodeling by Membrane Tension (15+5 min)

Selected abstract 14: Carolina Guamán (Buenos Aires), Searching for potential selective inhibitors of Plasma Membrane Ca<sup>2+</sup> - ATPase: The natural flavonoid gossypin as a possible candidate (12+3 min)

Selected abstract 15: Johannes Hohlbein (Wageningen), The Escherichia coli replication initiator DnaA is titrated on the chromosome (12+3 min)

**LUNCH 12:00**

**Session 10 13:00-14:10 – chair Richard Börner, HS Mittweida**

Invited 20: Yusuf Qutbuddin (MPI BC), Lights. Camera. Action. Light controlled manipulation of Synthetic Cells (25+5 min)

Selected abstract 16: Santiago di Lella (Buenos Aires), Oxygen release by oxymyoglobin is promoted by association to a mitochondrial membrane model (12+3 min)

Selected abstract 17: Thomas-Otavio Peulen (TU DO), Bound or unbound: Mapping and monitoring receptor oligomerization using time-resolved fluorescence (12+3 min)

Concluding words and poster prizes