



# Programme



22<sup>ND</sup> HEART OF EUROPE BIO-CRYSTALLOGRAPHY MEETING (HEC22)  
12<sup>TH</sup>-14<sup>TH</sup> SEPTEMBER 2019, UNIVERSITY CENTER, OBERGURGL TYROL, AUSTRIA

# Programme

**Thursday, 12th September 2019**

12:00-15:00 Registration

14:45-15:05 Welcome & opening remarks

Klaus Scheffzek

15:05-15:15 Presentation of new HEC group (Ursula Neu, Berlin)

## **Session I: Signaling**

Chair: Katja Faelber

15:15-15:35 Structure and Assembly of the Mitochondrial Membrane Remodelling GTPase Mgm1

Katja Faelber (group Daumke)

15:40-16:00 Structural studies on Adhesion GPCR Ectodomains

Björn Kieslich (group Sträter)

16:05-16:25 Structural Characterisation of Iodothyronine Deiodinases

Holly Towell (group Steegborn)

16:30-16:50 Crystal Structures of the c-di-AMP Synthesizing Enzyme CdaA

Jana Laura Heidemann (group Ficner)

16:55-17:15 How the pArg Protein Mark Keeps the Stress Response Kinase McsB under Control

Bence Hajdusits (group Clausen)

17:20-17:30 XtalTool - The all-in-one sample holder for sensitive crystals

Christin Reuter (Jena Bioscience GmbH)

17:30 Refreshments

## Session II: DNA and chromatin modification

Chair: Wulf Blankenfeldt

- 18:00-18:10 How to Improve your Hit Rate when Screening  
Claire Naylor (Molecular Dimensions)
- 18:10-18:30 Structural Insights into p300 Mechanism of Action and Drug Targeting  
Zuzanna Kaczmarek (group Nowotny)
- 18:35-18:55 Sequence Specificity of TET Dioxygenases  
Dominik Rafalski (group Bochtler)
- 19:00-19:20 Zinc-Dependent Nucleases from S1-P1 Family: from High-Resolution Structures to Understanding of Substrate Binding  
Kristýna Adámková (group Dohnálek)
- 19:25-19:45 A molecular Embrace - Crystal Structure of a DNA Repair Factor Complex  
Junqiao Jia (group Wahl)
- 19:50-20:00 How Cryo-EM Is Revolutionizing Structural Biology Complexes after the "Resolution Revolution"  
Florence Husada (Thermo Fisher Scientific)
- 20:00 Dinner
- 21:15 Social program (live instrumental music), followed by networking get together and discussion in the bar area

## Friday, 13th September 2019

### Session III: Drug design and fragment screening

Chair: Mariusz Jaskólski

- 8:30-8:40 Latest Results from the Photon III Detector  
Vernon Smith (Bruker)
- 8:40-9:00 F2X Universal and F2X Entry: Novel Chemically Diverse Libraries for Crystallographic Fragment Screening  
Tatjana Barthel (group Weiss)
- 9:05-9:25 FragMAX WebApp - Fragment Screening Project Management Tool at BioMAX  
Gustavo Lima (group Mueller)

9:30-9:50 Structural Characterization of Antibody-Based Derivatives for Prostate Cancer Imaging and Therapy

Zora Nováková (group Bařinka)

9:55-10:15 A Systematic Method for the Selection of New Structurally Robust Protein Scaffolds for Directed Evolution

Pavel Mikulecky (group Schneider)

10:20-10:30 Latest News in Cryo-EM with JEOL

Emanuel Katzmann (JEOL Germany GmbH)

10:30 Coffee and tea

#### **HEC Lecture**

Chair: Klaus Scheffzek

11:00-12:00 Venkatraman Ramakrishnan

The Quest for the Structure of the Ribosome

12:30-18:00 HEC22 photo followed by guided networking tours (lunch box provided)

#### **Session IV: Technical Advances in Structural Biology**

Chair: Manfred Weiss

18:00-18:10 Rationalizing Biomolecular Crystallization Behavior Using Light Scattering Technologies

Christian Sieg (Wyatt Technology)

18:10-18:30 Towards Molecular Movies - Dynamic Structural Biology at XFEL Intermediate States of Photoreceptors

Luisa Sauthof (group Scheerer)

18:35-18:55 Structural Biology Core Facility at Malopolska Centre of Biotechnology

Przemysław Grudnik (group Glatt)

19:00-19:20 Modular Cloning to Simplify *E.coli* Protein Expression Screening

Martin Bommer (group Heinemann)

19:25-19:45 Synthetic Binders to Stabilize Complex Protein Structures

Clara Baldin (group Scheffzek)

19:50-20:00 Introduction to Oryx Robots from Douglas Instruments: An Overview of Experiments for Soluble and Membrane Proteins  
Stefan Kolek (Douglas Instruments Ltd, UK)

20:15 Dinner and Dance

### Saturday, 14th September 2019

#### Session V: Structural enzymology

Chair: Kristina Djinovic-Carugo

8:30-8:40 Nanotemper: Finding Best Buffer Conditions is a Crucial Step in the Protein Crystallization Process  
Marco Schwieder (Nanotemper)

8:40-9:00 Structural Basis of Substrate Recognition by Deoxyhypusine Synthase  
Elżbieta Wątor (group Glatt)

9:05-9:25 First Glimpse of a new Structural Class of L-Asparaginases  
Joanna Loch (group Jaskólski)

9:30-9:50 Towards the Elucidation of the Last Uncharacterized Step in Heme *d1* Biosynthesis  
Thomas Klünemann (group Blankenfeldt)

9:55-10:15 Specificity Redirection of Cullin4-Ring Ubiquitin Ligases by the Retroviral Protein Vpr  
Sofia Banchenko (group Schwefel)

10:20-10:30 Latest Developments from Rigaku  
Mark Benson (Rigaku)

10:30-11:00 Coffee and tea, checkout

11:00-11:10 Cutting through the Hype of Micro-Electron Diffraction  
Andreas Förster (Dectris)

- 11:10-11:30 Structural and Functional Characterization of Phosphoglucomutase 5  
Dominic Pühringer, (group Djinovic-Carugo)
- 11:35-11:55 Preliminary Crystal Structure Analysis of Serpin 4 from Tick  
Andrii Mazur (group Smatanova)
- 12:00-12:10 Announcement of HEC23 (Michael Weyand/Clemens Steegborn)
- 12:10-12:30 HEC prize and closing remarks
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- 12:30-13:30+ Lunch and departure