



# Innsbruck Symposium

Celebrating 100 years of X-ray crystallography

Focus on Structural Biology

September 8 / 9, 2014

CCB - Center for Chemistry & Biomedicine  
Lecture hall M.01.470 / 490



#### Organization Team

Klaus Scheffzek, Bernhard Rupp, Klaus Liedl, Theresia Dunzendorfer-Matt • Innsbruck | Ulrike Wagner • Graz |  
Hans Brandstetter • Salzburg | Kristina Djinovic-Carugo, Tim Clausen • Vienna | Manfred S. Weiss • Berlin



# PROGRAM

## MONDAY, SEPTEMBER 8, 2014

**09:00** Exhibition start (Foyer)

**10:30** Welcome to Industrial Presentations (Lecture Hall) Chair: Theresia Dunzendorfer-Matt

10:30 - 10:50 Thomas Jocks, *Wyatt Technology*  
**Using Dynamic Light Scattering to Optimize Purification, Crystallization and Formulation of Proteins**

10:50 - 11:10 Matthias Molnar, *Nanotemper*  
**Some Like it Hot: Biomolecule Analytics using MicroScale Thermophoresis**

11:10 - 11:30 Bettina Spitzenberger, *GE Healthcare*  
**Current Developments in Protein Purification**

**11:30 - 12:00** Lunch snack (Foyer)

## MAIN PROGRAM

**12:00 - 12:10** Opening & Welcome, Klaus Scheffzek

**Session 1** Chair: Bernhard Rupp (Vista/Innsbruck)

12:10 - 12:45 Christoph Hermes, *EMBL, Hamburg*  
**From X-ray Tubes to X-ray Lasers - History of X-ray Sources**

12:45 - 13:25 Alex McPherson, *UCI, Irvine*  
**Protein Crystallization: What We Have Learned**

13:25 - 14:05 Giovanna Scapin, *Merck & Co. Inc., New Jersey*  
**Structural Chemistry and Drug Discovery at Merck**

14:05 - 14:25 Hubert Mayerhofer, *IBS, Grenoble*  
**Ripening Green Bananas: Steps Towards a Structural Understanding of the Ethylene Signalling Pathway**

14:25 - 14:45 Clivia Hejny, *University of Innsbruck*  
**Witches Crystallography: The Magic of Aperiodic Crystal Structures and their Periodicity in Higher Dimensional Space**

**14:45 - 15:30** Coffee break & exhibition (Foyer)

**Session 2** Chair: Ilme Schlichting (Heidelberg)

15:30 - 16:10 The EMBO keynote Lecture:  
 Marat Yusupov, *IGBMC, Strasbourg*  
**High Resolution Crystal Structures of the Eukaryotic Ribosome with Bound Inhibitors**

16:10 - 16:50 Raimund Dutzler, *University of Zurich*  
**Structural Basis for Transmembrane Iron Transport**

16:50 - 17:10 Clarissa Eibl *FMP, Berlin*  
**Structural Characterization of Ionotropic Glutamate Receptors: The Intermediate State of Receptor Activation**

17:10 - 17:50 Ilme Schlichting *MPI, Heidelberg*  
**Pushing the Limits of Biomolecular Crystallography – The Future is Bright**

**18:00** Exhibition continued (Foyer)

**19:00** Conference dinner @aDLERS HOTEL (Brunecker Straße 1, Innsbruck)

**TUESDAY, SEPTEMBER 9, 2014**

**08:00 - 08:10** Wake up coffee and re-opening

**Session 3 Chair: Anastassis Perrakis (Amsterdam)**

08:10 - 08:30 Simone Weyand, *University of Cambridge*

**Membrane Proteins at Work - From Structure to Function and Back**

08:30 - 09:10 The Bruker Lecture:



Axel T. Brunger, *Stanford University*

**Computational and Experimental Advances for Challenging Low-Resolution Structures**

09:10 - 09:50 Anastassis Perrakis, *Netherlands Cancer Institute*

**From ARP/wARP to PDB\_REDO, and Back Again - A Crystallographer's Guide to Real Space: Building and Rebuilding Models**

09:50 - 10:30 Hubert Huppertz, *University of Innsbruck*

**Solid State Chemistry and Crystallography**

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

**Session 4 Chair: Klaus Scheffzek (Innsbruck)**

11:00 - 11:40 Ken Holmes, *MPI, Heidelberg*

**X-ray Diffraction and the Molecular Basis of Muscle Contraction**

11:40 - 12:20 Patrick Cramer, *MPI, Göttingen/LMU, Munich*

**Structural Biology of Genome Transcription**

12:20 - 12:40 Anton Meinhart, *MPI, Heidelberg*

**An Old Fellow Revisited: The Walker A Lysine Functions As a Molecular Doorstop**

12:40 - 13:20 Werner Kühlbrandt, *MPI, Frankfurt*

**What X-Rays Cannot Do: Single-Particle Imaging, Molecular Tomography and the Resolution Revolution in Cryo-EM**

**13:20** Closing remarks and lunch snack

**13:45 - 17:00** Exhibition continued (Foyer)