

Program

Sunday, 3 September 2017

Session I: Achievements and Challenges (Chair. P. K. Madhu)

16:30 Welcome (D. Huster and P. K. Madhu)

16:45 **NMR Atomic-Resolution Structures of Amyloid Fibrils**
Beat Meier, ETH Zürich

18:30 Dinner & Get Together

Monday, 4 September 2017

Session II: Membranes and Membrane Proteins I (Chair: D. Huster)

- 9:00 **Membrane Dipole Potential: Applications in Membrane and Cell Biology**
Amitabha Chattopadhyay, CCMB Hyderabad
- 9:50 **Interaction of Methylimidazolium Based Ampiphilic Ionic-Liquids with
Phospholipid Membranes: Physical Parameters and Structural Details**
Venus Singh Mithu, Guru Nanak Dev University, Amritsar
- 10:30 Coffee Break
- 10:50 **Structural Dynamics of the G Protein-Coupled Neuropeptide Y2 Receptor
in Lipid Membranes Revealed by Solid-State NMR Spectroscopy**
Peter Schmidt, Institute for Medical Physics and Biophysics, Leipzig University
- 12:30 Lunch

Session III: Amyloids I (Chair: S. Maiti)

- 13:30 **Glutaminyl Cyclase-Catalyzed pGlu-A β Modification Contributes to
Pathogenic Protein Aggregation and Neuroinflammation in Alzheimer's
Disease**
Steffen Roßner, Paul Flechsig Institute for Brain Research, Leipzig University
- 14:10 **Solid-State NMR Measurements on the Structure and Dynamics of N-
Terminally Truncated Pyroglutamyl-Modified A β Fibrils**
Holger A. Scheidt, Institute for Medical Physics and Biophysics, Leipzig
University
- 14:50 **NMR Methods to Understand Functional and Structural Details of Protein
Machinery at Atomic Level**
Chandrakala Gowda, TIFR Centre for Interdisciplinary Sciences, Hyderabad
- 15:30 Coffee Break

Session IV: Membranes and Membrane Proteins II (Chair: A. Chattopadhyay)

16:00 **Membrane Protein Structure Prediction Integrating Limited Experimental Data**

Jens Meiler, Institute for Medical Physics and Biophysics, Leipzig University

16:50 **Solid-state NMR Studies for Investigation of Ligand Binding and Dynamics of the GHS Receptor**

Ulrike Krug, Institute for Medical Physics and Biophysics, Leipzig University

17:30 **Drug Delivery Systems: Development, Design, and Application**

Uta Reibetanz, Institute for Medical Physics and Biophysics, Leipzig University

18:30 Dinner and Scientific Discussions

Tuesday, 5 September 2017

Session V: Protein Dynamics and Interactions I (Chair: B. Meier)

- 9:00 **Quantitative FRET Studies and Integrative Modeling Unravel the Structure and Dynamics of Biomolecular Systems in vitro and in live Cells**
Claus A. M. Seidel, Heinrich Heine University, Düsseldorf
- 9:50 **Post-Transcriptional Gene Silencing Mediated by RNA-Binding Proteins**
Mandar V. Deshmukh, Centre for Cellular and Molecular Biology, Hyderabad
- 10:30 Coffee Break
- 10:50 **Conformational Plasticity of the GPCR Activating Parathyroid Hormone**
Jochen Balbach, Institute of Physics, Biophysics, Martin Luther University
Halle
- 11:30 **Bacterial Cytoskeleton: Novel Functions and Interacting Partner**
Gayathri Pananghat, Indian Institute of Science Education and Research,
Pune
- 12:30 Lunch
- 13:30 Visit of Wilhelm Ostwald Gedenkstätte and Wilhelm Ostwald Park
- 15:30 Coffee Break

Session VI: Amyloids II (Chair: S. Roßner)

- 16:00 **NMR Studies of Antibody Light Chain Aggregates Using Solution and MAS Solid-State NMR**
Bernd Reif, TU München
- 16:40 **Structural Reorganisation Accompanying A β Aggregation**
Perunthiruthy K. Madhu, TIFR Centre for Interdisciplinary Sciences,
Hyderabad
- 17:20 **Structural Insights into Plasticity of DNA-Protein Interactions in Tetracycline Receptors**
Ruchi Anand, IIT Bombay, Mumbai, India
- 18:30 Dinner and Scientific Discussions

Wednesday, 6 September 2017

Session VII: Protein Dynamics and Interactions II (Chair: C. Glaubitz)

- 9:00 **Protein Dynamics with Applications in Immunity, Neurodegeneration and Cancer**
Christian Griesinger, Max Planck Institute for Biophysical Chemistry, Göttingen
- 9:50 **MDSrv: Viewing Molecular Dynamics Simulations on the Web**
Peter Hildebrand, Institute for Medical Physics and Biophysics, Leipzig University
- 10:30 Coffee Break
- 10:50 **Understanding the Function of Ubiquitin Family Proteins using Dynamics as a Molecular Descriptor**
Ravi Venkatramani, Department of Chemical Sciences, Tata Institute of Fundamental Research
- 11:30 **How to Find Ligands for a Structure-Less Protein**
Sudipta Maiti, Department of Chemical Sciences, Tata Institute of Fundamental Research
- 12:30 Lunch

Session VIII: Structural Biology with Polarization Enhancement (Chair: C. Seidel)

- 13:30 **Structural Investigations by MAS NMR and Dynamic Nuclear Polarisation (DNP)**
Hartmut Oschkinat, FMP Berlin
- 14:20 **NMR Meets ABC Transporters**
Clemens Glaubitz, Goethe University, Frankfurt
- 15:00 **Guest Lecture: Polarization Enhancement with Light**
Jörg Matysik, Institute for Analytical Chemistry, Leipzig University
- 15:40 Coffee Break

Session IX: NMR Techniques (Chair: Ch. Griesinger)

- 16:00 **Multiple Sequential Acquisition and Multiple Receivers to Speed Data Acquisition in Solid-State NMR**
Kaustubh Mote, TIFR Centre for Interdisciplinary Sciences, Hyderabad
- 16:40 **Characterization of Protein Structures and Transient Species of α -Synuclein with MAS Solid-State NMR Techniques**
Vipin Agarwal, TIFR Centre for Interdisciplinary Sciences, Hyderabad
- 17:20 **Improving NMR Experiments by Improved Theoretical Understanding of Pulse Sequences**
Matthias Ernst, ETH Zürich
- 18:30 Dinner and Scientific Discussions

Thursday, 7 September 2017

Session X: Protein Dynamics and Interactions III (Chair: M. Ernst)

- 9:00 **Chemokine Biology - Basic Research and Biomedical Applications**
Lars Baumann Institute for Medical Physics and Biophysics, Leipzig University
- 9:50 **Elucidating the Molecular Interactions of GRO Chemokines**
Krishna Krishna Mohan Poluri, Department of Biotechnology and Center for
Nanotechnology, IIT Roorkee
- 10:30 Coffee Break
- 10:50 **Regulation of CENP-A^{Cse4} Dynamics by Histone 4 Determines
Centromere Targeting**
Ashutosh Kumar, Department of Biosciences and Bioengineering, IIT Bombay
- 11:30 **The Structure and Dynamics of Mutated Amyloid β Fibrils**
Daniel Huster, Institute for Medical Physics and Biophysics, Leipzig University
- 12:30 Lunch
- 13:30 Excursion to Leipzig
- Dinner in Leipzig
- End of Meeting

