

**Scientific Program**  
**NMR Meets Biology: An Interaction Meeting**

**Saturday, February 22, 2014**

10:00–10:30	<b>Introductory Remarks and TEA</b>
10:30 – 11:15	P. K. Madhu Overview of Solid-State NMR Methods for Recoupling and Decoupling
11:15 – 12:00	Daniel Huster Dynamic Aspects of Membrane Proteins
12:00 – 12:30	Ratan Kumar Rai Mechanistic Insights into Water–Protein Interactions of Filamentous Bacteriophage
12:30 – 14:00	<b>Lunch</b>
14:00 – 14:45	N. D. Kurur Some Studies on Long Lived States and Coherences
14:45 – 15:30	Neel Sarover Bhavesh Atomic-Resolution Structural Characterization of Native, Unfolded and Intermediate States of a Protein
15:30 – 15:50	Andrej Meusel T1 Mapping Performed by Optimized Frequency Selective Pulses as a Tool for Fat Localization and Quantification in
15:50 – 16:15	Anja Penk Benefits of Fractional Calculus for Protein Diffusion in Gels Measured by PFG-NMR
16:15 – 16:45	<b>Tea</b>
16:45 – 17:30	Amitabha Chattopadhyay Membrane Proteins: Doorkeepers in Health and Disease
17:30 – 18:15	K. V. Ramanathan Solid State NMR Experiments for the Partially Ordered and the Fully Rigid Systems – Need for Improved and Sensitive Methods for the Study of Structure and Dynamics

## Sunday, February 23, 2014

09:15-10:00	Amitabha Chattopadhyay GPCR-Cholesterol Interaction: A Multidimensional Approach
10:00-10:30	Subhradip Paul Solid-State NMR Structural Studies of an Amphiphilic n-Type Nanotube
10:30-10:45	<b>Tea</b>
10:45 – 11:05	Bappaditya Chandra Structure of Transient Membrane-Active Amyloid- $\beta$ Oligomers Probed in Physiological Conditions by Sequential Fluorescence and Solid-State NMR Spectroscopy
11:05 – 11:25	Juliane Adler Local Interactions Influence the Fibrillation-Kinetics, Structure and Dynamics of Amyloid $\beta$ Peptides but Leave the General Fibril Structure Unchanged
11:25 – 11:45	Sheetal Jain Efficient Heteronuclear Cross Polarization Technique for Solid State NMR and its Applications
11:45 – 12:15	Peter Schmidt The Structure of Neuropeptide Y bound to its G protein-coupled Y2 receptor
12:15 – 13:00	Dulal Panda FtsZ Assembly Dynamics: An Attractive Antibacterial Drug Target
13:00 – 14:00	<b>Lunch</b>
14:00 – 14:45	Thomas Vosegaard Structure and Dynamics of Membranes and Membrane Proteins
14:45 – 15:05	Akshay Kumar Ganguly A Dynamic Protein Complex Helps in Cytoadherence During Malaria Infection
15:05 – 15:25	Soeren Stahlberg Investigations of the Structure and Dynamics of Different Ceramide Species in Models of the Stratum Corneum using Solid-State NMR and MD Simulations
15:25 – 15:45	Georg Kuenze Structural Investigation of Glycosaminoglycan Binding to the Immune-Regulatory Protein Interleukin-10
15 :45 – 16:15	Alexander Vogel The Orientaion and Dynamics of Estradiol and Estradil Oleate in Lipid Membranes and HDL Disc Models
16:15 – 16:30	<b>Tea</b>
16:30 – 17:15	Neeraj Sinha Predominant Role of Water in Native Collagen Structure, Stability and Functions Revealed by Solid – State NMR Spectroscopy
17:15-18:15	Shimon Vega Basic Concepts of DNP Spectroscopy of Solids-I

## Monday, February 24, 2014

09:15 – 10:00	Philip Kuchel New Aspects of Cellular Function Studied with NMR: Rapid Dissolution $^{13}\text{C}$ DNP, and Enantiomeric Discrimination with Stretched Hydrogels
10:00 – 10:30	Gerrit Vortmeier Structure and Dynamics of Ghrelin Bound to Membranes and its Receptor
10:30 – 19:00	<b>Tea and Tour to South Goa</b>
20:00-23:00	<b>Banquet Dinner</b>

## Tuesday, February 25, 2014

09:15 – 10:00	Gianluigi Veglia Optimization of NMR experiments for Oriented and Magic Angle Spinning Experiments on Membrane Proteins
10:00 – 10:30	Stephen Theisgen GCAP-2-New Insights into the Mechanism of Membrane Binding
10:30 – 10:45	<b>Tea</b>
10:45 – 11:05	Ulrike Krug Interaction of G $\alpha$ protein peptides with Y2 receptor studied with NMR spectroscopy
11:05 – 11:50	Ashutosh Kumar Understanding the Link Between Structure, Dynamics and Toxicity of $\alpha$ - Synuclein and its Mutants in PD
11:50 – 12:20	Holger Scheidt On the Way to Understanding Amyloid Plaques- Solid-State NMR Investigations of Different Structures of Amyloid $\beta$ Along the Fibrillation Process
12:20– 12:50	Duncan Crick Structure and Function of 7-Helical Membrane Proteins Investigated by NMR Spectroscopy
13:00 – 14:00	<b>Lunch</b>
14:00 – 14:45	Clemens Glaubitz Resolving the Functional Mechanism of Membrane Proteins by High-Field and DNP-Enhanced Solid-State NMR
14:45 – 15:30	B. Jagadeesh Real-time Homodecoupled Pure-shift NMR Methods for Medium-size Molecules and Small Secondary Structures
15:30 – 16:15	H. S. Atreya NMR Methods for Rapid Resonance Assignments of Challenging Proteins
16:15 – 16:30	<b>Tea</b>
16:30 – 17:15	Ashish Arora Characterization of Structure and Dynamics of Bacterial Peptidyl-tRNA hydrolases and Eukaryotic ADF/Cofilins
17:15– 18:15	Shimon Vega Basic Concepts of DNP Spectroscopy of Solids-II

## Wednesday, February 26, 2014

09:30 – 10:15	Jochen Balbach Exploring Protein Energy Landscapes by NMR
10:15 – 11:00	Sujoy Mukherjee Thermodynamic Characterization of Intermediates States of an Immunoglobulin Domain Prior to Fibril Formation
11:00 – 11:15	<b>Tea</b>
11:15 – 11:45	Pushpa Mishra Structural Characteristics of Conserved C-terminal Segment of Eukaryotic Acidic Ribosomal P2 proteins: Functional Implications
11:45 – 12:30	Gianluigi Veglia Allosteric Regulation of the Sarcoplasmic Reticulum Ca <sup>2+</sup> -ATPase by Phospholamban and Sarcolipin using Solid-State NMR Spectroscopy
12:45	<b>Lunch and Tour to North Goa</b>