SESSION LECTURE

No. 26

Structural Biology

Room: 302AB

Co-Chairs: Ming Lei

Wolfgang Baumeister

Day 2 October 28th (Sunday) 13:30 – 17:00		
Time	**Speaker**	**Title**
13:30-14:00	**Wolfgang Baumeister** *Max-Planck-Institute of Biochemistry, Germany*	Cryo-Electron Tomography -The Promise and Challenges of Doing Structural Biology in situ
14:00-14:30	**Sen-Fang Sui** *Tsinghua University, China*	Cryo-EM Structure of phycobilisome
14:30-15:00	**Z. Hong Zhou** *University of California, USA*	Imaging viral genome packaging, transcription and delivery by cryoEM
15:00-15:30	**Tea Break**	
15:30-16:00	**Ming Lei** *Shanghai Institute of Precision Medicine, Shanghai Jiao Tong University School of Medicine, China*	Structural insight into precursor tRNA processing by yeast Ribonuclease P
16:00-16:30	**Ning Gao** *Peking University, China*	
16:30-17:00	**Xinzheng Zhang** *National Laboratory of Biomacromolecules, Institute of Biophysics, Chinese Academy of Sciences, China*	Pushing the resolution limit by correcting the Ewald sphere effect in single-particle Cryo-EM reconstructions

Ming Lei

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Executive Director of Shanghai Institute of Precision Medicine, Shanghai Jiaotong University School of Medicine. The goal of Prof. Lei's laboratory is to understand the organization and dynamics of macromolecular assemblies important for genome regulation and stability. With combination of structural analyses, such as X-ray crystallography, nuclear magnetic resonance and electron microscopy, coupled with biophysical and biochemical experimentation, his laboratory has made important progress on telomeres and epigenetics.

Sen-Fang Sui

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Professor of School of Life Sciences, Tsinghua University. Member of Chinese Academy of Sciences since 2009. Using cryo-electron microscopy in combination with biochemical, biophysical and cellular methods, Dr. Sui's laboratory focuses on: (1) structures, functions and mechanisms of large protein complexes, macromolecular machines and membrane proteins, and (2) molecular mechanisms of membrane trafficking, lipid-protein interactions and membrane-related human diseases.

Ning Gao

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Professor and Deputy Dean of School of Life Sciences, Peking University. Gao lab is engaged in mechanistic study of proteinnucleic acid molecular machines using cryo- EM as a major tool. The lab is currently focusing on ribosome biogenesis and DNA replication machineries.

Wolfgang Baumeister

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Head of the Department of Structural Biology at the Max-Planck-Institute of Biochemistry in Martinsried, Germany and Professor of Physics and Chemistry at the Technical University, Munich. He is a member of several academies, including the US National Academy of Sciences and the American Academy of Arts and Sciences. Dr. Baumeister's lab has focussed on two directions: 1. The structure and function of the proteasome and 2. The development of cryo-electron tomography for structural studies of macromolecules in situ, i.e. in unperturbed cellular environments.

Z. Hong Zhou

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Professor in the Department of Microbiology, Immunology and Molecular Genetics and Director of the Electron Imaging Center for Nanamachines in California NanoSystems Institute, University of California, Los Angeles. Trained in physics, biochemistry and computational sciences, Dr. Zhou is best known for demonstrating atomic modeling using single particle cryo electron microscopy (cryoEM). Using cryoEM as his major tool of inquiry, he seeks to understand the mechanisms of viral assembly, genome packaging and transcription and molecular translocation by membrane proteins.

Xinzheng Zhang

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Principal Investigator at the National Laboratory of Biomacromolecules, Institute of Biophysics, Chinese Academy of Sciences (CAS). Dr. Xinzheng Zhang's laboratory focus on: 1. Cryo-EM technology development; 2. Cryo-EM studies of virus structure and the mechanisms of virus entry and virus neutralization.