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Sunday, August 7, 2016

<i>Time</i>	Event
10:30 a.m. - 12:00 p.m.	Registration Hilton Downtown Knoxville, 2 nd Floor Lobby
12:00 - 12:30 p.m.	Opening Ceremony – Lunch provided Paul Langan, Oak Ridge National Laboratory
12:30 - 1:15 p.m.	Plenary Lecture Jack Johnson, Scripps Research Institute <i>“Structural Studies of Virus Particle Maturation: An Experimental Laboratory for Large-Scale Macromolecular Dynamics”</i>
1:15 - 1:45 p.m.	Break
Session 1: Sources and Facilities Chair: Volker Urban	
1:45 - 2:10 p.m.	Jean Jakoncic, National Synchrotron Light Source II <i>“NSLS-II Biomedical Beamlines for Micro-Crystallography, FMX, and for Highly Automated Crystallography, AMX: New Opportunities for Advanced Data Collections”</i>
2:10 - 2:35 p.m.	Nadia Zatsepin, Arizona State University <i>“Serial Femtosecond Crystallography at LCLS: The First 5 Years”</i>
2:35 - 3:00 p.m.	Atsushi Nakagawa, Osaka University, Japan <i>“SPring-8 BL44XU, A Beamline for Large Biological Macromolecular Assemblies”</i>
3:00 - 3:25 p.m.	Richard Gillilan, Cornell University <i>“CHESS, CHESS-U, and the Future: Modeling Signal AND Noise on BioSAXS Beamlines”</i>
3:25 - 3:50 p.m.	Paul Langan, Oak Ridge National Laboratory <i>“Opportunities for Biology at the New and Improved Oak Ridge Neutron Sources”</i>
3:50 p.m.	Adjourn

Monday, August 8, 2016

<i>Time</i>	Event
9:00 - 9:45 a.m.	Plenary Lecture Michael Crowley, National Renewable Energy Laboratory (NREL) <i>“Cellulose and Diffraction: Connecting Molecular Structure to Measurements”</i>
9:45 - 10:15 a.m.	Break
Session 2: Drug Design Chair: Jerry Parks	
10:15 - 10:45 a.m.	Jeremy Smith, University of Tennessee <i>“Proteins: Forever Aging?”</i>
10:45 - 11:10 a.m.	Irene Weber, Georgia State University <i>“Protein Crystallography for Tackling the Problem of HIV Drug Resistance”</i>
11:10 - 11:35 a.m.	Mayank Aggarwal, Oak Ridge National Laboratory <i>“Mapping the H-Bonding Patters in Human Carbonic Anhydrase II Complexed with Clinical Drugs”</i>
11:35 a.m. - 12:00 p.m.	Jerry Parks, Oak Ridge National Laboratory <i>“Discovery of Inhibitors of Multidrug Efflux Pumps in Gram-Negative Bacteria”</i>
12:00 - 1:30 p.m.	Conference Photos Lunch on own
Session 3: New Instruments and Methods Chair: Matt Cuneo	
1:30 - 1:55 p.m.	Paul Adams, Lawrence Berkeley National Laboratory <i>“Computational Methods for Neutron Crystallography in Phenix”</i>
1:55 - 2:20 p.m.	Wah Chiu, Baylor College of Medicine <i>“CryoEM of Molecular Machine with Variable Conformations of Its Components”</i>
2:20 - 2:40 p.m.	Suman Kumar Mandal, Shiv Nadar University, India <i>“Quantitative Analysis of Hydrogen Bonding in Proteins: A Charge Density Approach”</i>
2:40 - 3:00 p.m.	Ichiro Tanaka, Ibaraki University, Japan <i>“Cryoprotectant-Free High-Pressure Freezing and Dynamic Nuclear Polarization for More Sensitive Detection of Hydrogen in Neutron Protein Crystallography”</i>
3:00 - 3:30 p.m.	Break
Session 4: Bioenergy Chair: Hugh O’Neill	
3:30 - 4:00 p.m.	Jochen Zimmer, University of Virginia, School of Medicine <i>“Crystallographic Snapshots of a Polysaccharide Secretion Machinery”</i>
4:00 - 4:30 p.m.	Yoshiki Higuchi, University of Hyogo <i>“Structural Studies of [NiFe]-hydrogenases”</i>

4:30 - 4:45 p.m.	William Brad O'Dell, University of North Carolina <i>"Oxygen Species at the Active Site of a Fungal Polysaccharide Monooxygenase"</i>
4:45 - 5:00 p.m.	Naomi Plaza, University of Wisconsin <i>"Understanding Moisture-Induced Swelling of Wood Nanostructure Using SANS"</i>
5:00 - 6:00 p.m.	Adjourn Dinner on your own
6:00 - 8:00 p.m.	Poster Session Refreshments will be provided

Tuesday, August 9, 2016

Time	Event
9:00 - 9:45 a.m.	Plenary Lecture Peter Moody, Leicester University <i>"Combining Cryo-Neutron & X-ray Crystallography with Single Crystal Spectroscopy to Catch Peroxidase Intermediates"</i>
9:45-10:15	Break
Session 5: Macromolecular Complexes Chair: Loukas Petridis	
10:15 - 10:45 a.m.	Frank Gabel, Institut de Biologie Structurale, Grenoble, France <i>"SANS, NMR and Crystallography: A Powerful Combination to Study Challenging Protein-RNA Complexes"</i>
10:45 - 11:10 a.m.	Bret Freudenthal, University of Kansas Medical Center <i>"Molecular Snapshots of DNA Damage Processing"</i>
11:10 - 11:35 a.m.	Matthew Cuneo, Oak Ridge National Laboratory <i>"An Additional Allosteric Switch in ABC Transport"</i>
11:35 a.m. - 12:00 p.m.	Venu Vandavasi, Oak Ridge National Laboratory <i>"How Many Cellulose Synthases in the Cellulose Synthesis Complex?"</i>
12:00 - 1:30 p.m.	Lunch on your own
1:30 - 5:30 p.m.	ORNL Tours <ul style="list-style-type: none"> • TITAN • SNS • HFIR
7:00 - 9:00 p.m.	Banquet and Awards Ceremony – By ticket only Ken Herwig, Oak Ridge National Laboratory <i>"Prospects at the Oak Ridge National Laboratory Spallation Neutron Source Second Target Station"</i>

Wednesday, August 10

<i>Time</i>	Event
9:00 - 9:45 a.m.	Plenary Lecture Greg Hura, Lawrence Berkeley National Laboratory <i>“Combining SAXS and Crystallography to Build Intuition in Functional Macromolecular Networks and Engineering”</i>
9:45 - 10:15 a.m.	Break
Session 6: Enzyme Mechanism and Allostery Chair: Andrey Kovalevsky	
10:15 - 10:45 a.m.	Walter Chazin, Vanderbilt University <i>“How Does Human DNA Primase Count?”</i>
10:45 - 11:10 a.m.	Donald Ronning, University of Toledo <i>“Redefining Our Understanding of Nucleosidase Mechanisms One Proton at a Time”</i>
11:10 - 11:35 a.m.	Robert Phillips, University of Georgia <i>“Structure of the Tryptophan Indole-lyase-Oxindolylalanine Complex”</i>
11:35 a.m. - 12:00 p.m.	Yota Fukuda, Osaka University, Japan <i>“New Hot Topics on Copper Nitrite Reductases”</i>
12:00 - 1:30 p.m.	Lunch on your own
Session 7: Membrane Proteins Chair: Flora Meilleur	
1:30 - 2:00 p.m.	Chuck Sanders, Vanderbilt University <i>“The Amyloid Precursor Protein C99 Domain Binds Cholesterol and Undergoes a Structural Change When Reconstituted into Raft-Like Model Membranes”</i>
2:00 - 2:30 p.m.	Geoffrey Chang, University of California, San Diego <i>“Transporter: Structure, Function, and Application”</i>
2:30 - 3:00 p.m.	Ella Mihailescu, University of Maryland <i>“Neutron Diffraction Reveals Conformation and Interactions of a Voltage-Sensor Toxin with Lipid Membranes”</i>
3:00 - 3:30 p.m.	Break
Session 8: Membranes Chair: Shuo Qian	
3:30 - 4:00 p.m.	John Katsaras, Oak Ridge National Laboratory <i>“Lateral Membrane Organization in Model Systems and Live Bacteria”</i>
4:00 - 4:30 p.m.	Michael Wiener, University of Virginia, School of Medicine <i>“Functional Recognition of Membrane-Bound Substrates by the Integral Membrane Protein Protease Ste24p”</i>

4:30 - 5:00 p.m.	Fred Heberle, University of Tennessee <i>“Toward a Better Plasma Membrane Model: Probing Lipid Bilayer Asymmetry with SANS”</i>
5:00 p.m.	Closing Paul Langan, Oak Ridge National Laboratory