**SUNDAY, FEBRUARY 4**
Arrival and Registration

**MONDAY, FEBRUARY 5**
Welcome and Keynote Address
Patrick Cramer, Max Planck Institute for Biophysical Chemistry, Germany
Insights into Gene Transcription: An Integrated Structural Biology Approach

Visualizing Cells
Elizabeth Villa, University of California, San Diego, USA
Opening Windows into the Cell: Bringing Structure to Cell Biology using Cryo-Electron Tomography

Grant J. Jensen, California Institute of Technology, USA
Structural Biology in vivo: Correlating Cryo-ET to Fluorescence Microscopy

Mark H. Ellisman, University of California San Diego, USA
The Big Picture of Small Things

Short Talk(s) Chosen from Abstracts

Visualizing Subcellular Compartments
Daniela Nicastro, University of Texas Southwestern Medical Center, USA
Cryo-Electron Tomography Sheds Light into Ciliary Structure and Function

Jun Liu, University of Texas Medical School at Houston, USA
High-Throughput Cryo-Electron Tomography: Visualizing Molecular Machines in Cells

Kay Grünewald, University of Oxford, UK
 Trafficking Vesicles and Enveloped Viruses

Short Talk(s) Chosen from Abstracts

**TUESDAY, FEBRUARY 6**
Translational Cryo-EM
Andrew B. Ward, The Scripps Research Institute, USA
Structure-Based Vaccine Design

Claudio Ciferri†, Genentech, USA
Building cryo-EM at Genentech to Enable Research and Pipeline Projects

Seungil Han, Pfizer Inc., USA
Applications of Cryo-EM in Small Molecule and Biologics Drug Design

Short Talk(s) Chosen from Abstracts

Workshop 1: Specimen Preparation and Troubleshooting for Single-Particle Work

Short Talks Chosen from Abstracts

**WEDNESDAY, FEBRUARY 7**
Cryo-EM of Small Single Particles
Dmitry Lyumkin, The Salk Institute for Biological Studies, USA
High-Resolution Cryo-EM Studies of Retroviral Intasomes

Maofu Liao, Harvard Medical School, USA
Single Particle Cryo-EM Studies of Lipid-Protein Interactions

Gabriel Lander†, The Scripps Research Institute, USA
How Low can you Go? Size and Resolution Limits Using Conventional cryo-EM

Short Talk Chosen from Abstracts

Workshop 2: Modeling and Refining Structures of Macromolecules in Cryo-EM Maps

Short Talks Chosen from Abstracts

Cryo-EM of Large Macromolecular Assemblies
Kiyoshi Nagai, Medical Research Council, UK
Structure of the Spliceosome: Towards Understanding Catalytic Mechanism

Gira Bhabha, Skirball Institute, NYU School of Medicine, USA
Architectures of Lipid Transport Systems in Bacteria

Adam Frost, University of California, San Francisco, USA
Function Follows Form: Cryo-EM Insights into Cell Biology

Eva Nogales, University of California, Berkeley, USA
Understanding Macromolecular Complex Assembly, Interactions and Dynamics through Cryo-EM

Short Talk(s) Chosen from Abstracts

**THURSDAY, FEBRUARY 8**
Cryo-EM of Membrane Proteins
Georgios Skiniotis, Stanford University, USA
Cryo-EM Visualization of G Protein-Coupled Receptors

Judy Hirst, MRC Mitochondrial Biology Unit, UK
CryoEM Structures of Mitochondrial Complex I

Doreen Matthes, National Institutes of Health, USA
Single-Particle Cryo-EM Studies of a Magnesium Ion Channel

Eric Gouaux, Oregon Health & Science University, USA
Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Recent Technological Advances in Cryo EM

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* Session Chair † Invited but not yet accepted  Program current as of September 27, 2017. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/18F1.
Cryo-EM from Cells to Molecules: Multi-Scale Visualization of Biological Systems (F1)
February 4-8, 2018 • Granlibakken Tahoe • Tahoe City, California, USA
Scientific Organizers: Georgios Skiniotis, Elizabeth Villa and Andrew B. Ward
Sponsored by Pfizer Inc.

Radostin Danev, Max Planck Institute of Biochemistry, Germany
Single Particle Imaging with the Volta Phase Plate

Bridget Carragher, New York Structural Biology Center, USA
New Approaches to Cryo-EM Specimen Preparation

Closing Keynote Address
Joachim Frank, Columbia University, USA
Story in a Sample: Multiple Ribosome Structures in a Single Cryo-EM Experiment

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, FEBRUARY 9
Departure