

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Proteomics in Cell Biology and Disease (S2)

September 20-23, 2020 • Hilton Santa Fe Historic Plaza Hotel • Santa Fe, New Mexico, USA

Scientific Organizers: Jennie R. Lill, Forest M. White and Kathryn S. Lilley

Supported by the Directors' Fund

Discounted Abstract & Scholarship Deadline: / Abstract Deadline: / Discounted Registration Deadline: July 20, 2020

SUNDAY, SEPTEMBER 20

Arrival and Registration

MONDAY, SEPTEMBER 21

Welcome and Keynote Address

Alice Y. Ting, Stanford University, USA
Directed Evolution of TurboID for Efficient Proximity Labeling in Living Cells and Organisms

Studying the Cell Surfaceome

Bernd Wollscheid, ETH Zürich, Switzerland
Surfaceome Nanoscale Organization

Nadia Martinez-Martin, Genentech, Inc., USA
Multidimensional Mapping of the Human IgSF Interactome

Gavin J. Wright, Wellcome Trust Sanger Institute, UK
Large-Scale Systematic approaches to Identify Novel Receptor-Ligand Pairs that Initiate Intercellular Signaling

Short Talks Chosen from Abstracts

Workshop 1: Analysis of the Peptidome

Short Talks Chosen from Abstracts

Dissection of Complex Data Sets: Informatic and Statistical Tools of the Trade

Jyoti Choudhary, Institute of Cancer Research, UK
Integrative Proteogenomics - Investigating Mechanisms of Action of Pathogenic Species

Lennart Martens, Ghent University, Belgium
Machine Learning Powered Next-Generation Proteomics

Olga Vitek, Northeastern University, USA
Challenges in Large-Scale Computational Mass Spectrometry and Multiomics

Pär L. Nordlund[†], Karolinska Institute, Sweden
Informatics Tools for Deciphering the on and off Target Activity of Small Molecule Compounds

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, SEPTEMBER 22

Working towards Single Cell Proteomics

Matthew S. Bogyo, Stanford University School of Medicine, USA
Chemical Proteomic Tools for Identification and Imaging of Enzymes Involved in Cancer and Infectious Disease

Edward M. Marcotte[†], University of Texas at Austin, USA
Single Molecule Peptide Sequencing

Garry P. Nolan[†], Stanford University, USA
CyTOF Single Cell Analysis of Clinical Samples

Joseph Gogain[†], SomaLogic, Inc, USA
Discovery and Validation of a Blood-Based Protein Signature for Early Detection of Mesothelioma

Short Talks Chosen from Abstracts

Workshop 2: Biostatistics

Short Talks Chosen from Abstracts

Integrative Multidimensional Omics

Speaker to be Announced

Nathalie Agar, Brigham and Womens Hospital, USA
Mass Spectrometry Imaging Methodologies, to Study Neuro-Oncology in Brain Cancer

Jonathan S. Weissman, University of California, San Francisco, USA
Multidimensional Omics - Harnessing Ribosomal Profiling and Proteomics to Investigate Non Canonical Translation Events in Disease

Claudia Andrea Escher, Biognosys AG, Switzerland
Multiplexed Serum based Quantitative Proteomics

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, SEPTEMBER 23

Spatial Proteomics

Kathryn S. Lilley, University of Cambridge, UK
The Impact of the Location of Translation on Protein Function

Anne-Claude Gingras, Lunenfeld-Tanenbaum Research Institute, Canada
Tracking Spatiotemporal Proteomics in Complex Systems using Proximity Tagging

Matthias Trost, Newcastle University, UK
Proteome Analysis Identifies Novel Roles for Ubiquitylation in the Innate Immune Response from the Phagosome

Speaker to be Announced

Short Talks Chosen from Abstracts

Workshop 3: Cell Surface Receptor Interactomics

Short Talks Chosen from Abstracts

Elucidation of in vivo Signaling Networks

Forest M. White, Massachusetts Institute of Technology, USA
Phosphoproteomics for Characterization of Therapeutic Resistance Pathways

Jennie R. Lill, Genentech, Inc., USA
Kinase Signaling in Autoimmunity

David E. James, University of Sydney, Australia
Signaling Network Regulation of Exercise Physiology

Marcus Bantscheff, GlaxoSmithKline, Germany
Chemoproteomics for the Elucidation of Signaling Networks

Short Talks Chosen from Abstracts

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

THURSDAY, SEPTEMBER 24

Departure