

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Targeted Protein Degradation: From Small Molecules to Complex Organelles (EK40)

June 7-8, 2021 • Virtual at your computer

Scientific Organizers: Sascha Martens, Tim Clausen and Judith Frydman

Sponsored by Merck & Co., Inc.

MONDAY, JUNE 7

Protease Machines (8:00am Denver/Mountain Time Start)

- ***Eilika Weber-Ban**, ETH Zürich, Switzerland
Substrate Recruitment to Proteasomal Degradation in Mycobacteria
- ***Tim Clausen**, Research Institute of Molecular Pathology, IMP, Austria
Regulation, Substrate Targeting and Reprogramming of the Bacterial ClpC:ClpP Protease
- Kylie J. Walters**, NCI, National Institutes of Health, USA
Structural and Mechanistic Insights into Proteasome Function
- Michal Sharon**, Weizmann Institute of Science, Israel
Specific Regulation of the 20S Proteasome Complex
- Daniel J. Finley**, Harvard University, USA
Proteome Remodeling by the Ubiquitin-Proteasome System
- Yangnan Gu**, University of California Berkeley, USA
Short Talk: Proximity Labeling Proteomics Reveals Critical Regulators for Inner Nuclear Membrane Protein Degradation in Plants
- John Hanna**, Harvard Medical School, USA
Short Talk: Structures of Chaperone-Associated Assembly Intermediates Reveal Coordinated Mechanisms of Proteasome Biogenesis
- Yue Feng**, University of Toronto, Canada
Short Talk: Serine and Threonine Phosphorylation Marks Proteins for Degradation by Mitochondrial ClpXP

Poster Session (11:30am Denver/Mountain Time Start)

Meet the Editors (12:30pm Denver/Mountain Time Start)

- Shawna Buttery**, STAR Protocols - Cell Press, USA
- Angela R. Parrish**, Nature Communications, USA
- Martina Rembold**, EMBO Reports, Germany
- Nonia Pariente**, PLOS Biology, UK
- Petra Gross**, Journal of Cell Science, The Company of Biologists, UK

Networking Lounge (2pm Denver/Mountain Time Start)

Autophagy and Lysosomal Degradation Pathways (3:00pm Denver/Mountain Time Start)

- ***Sascha Martens**, University of Vienna, Austria
Protein Degradation by Selective Autophagy
- Anne Simonsen**, University of Oslo, Norway
Selective Autophagy Pathways
- ***Malene Hansen**, Buck Institute for Research on Aging, USA
Role of Autophagy in Aging and Disease
- Hong Zhang**, Chinese Academy of Sciences, China
Phase Separation and Autophagy
- Jonathan Goodwin**, Casma Therapeutics, USA
Control of TFEB/TFE3 Family Transcription Factors through FLCN Sequestration

Alessio Reggio, Telethon Institute of Genetics and Medicine - TIGEM, Italy

Short Talk: Role of FAM134 Family Members in Endoplasmic Reticulum Remodeling, ER-Phagy and Collagen Quality Control

Chunmei Chang, University of California, Berkeley, USA

Short Talk: Reconstitution of Cargo-Induced LC3 Lipidation in Mammalian Selective Autophagy

Liang Ge, Tsinghua University, China

Short Talk: Multiple Chaperones Function as Autophagic Receptors for Aggreghagy

TUESDAY, JUNE 8

Signaling Degradation (8am Denver/Mountain Time Start)

- ***Brenda A. Schulman**, Max Planck Institute of Biochemistry, Germany
Cullin-RING E3 Ligase Specificity
- ***Raymond J. Deshaies**, Amgen, Inc., USA
Reprogramming E3-Ligases using Small Molecules
- Ivan Dikic**, Goethe University Medical School, Germany
Targeting Ubiquitin Signaling in Infectious Diseases
- J. Wade Harper**, Harvard Medical School, USA
Proteomics of Ubiquitin Signaling
- Ingrid E. Wertz**, Lyterian Therapeutics, USA
Co-opting the Ubiquitin System for Therapeutic Benefit
- Nicolas H. Thomä**, Friedrich Miescher Institute for Biomedical Research, Switzerland
Diversion of E3 Ligase Function by Small Molecules
- Mikolaj Slabicki**, Dana-Farber Cancer Institute, USA
Short Talk: Functional Genomic Dissection of the Mechanisms of Molecular Glue Degradors
- Career Roundtable (12pm Denver/Mountain Time Start)**
- Kylie J. Walters**, NCI, National Institutes of Health, USA
- Ingrid E. Wertz**, Lyterian Therapeutics, USA
- Judith Frydman**, Stanford University, USA

Proteostasis and Proteome Remodeling (3pm Denver/Mountain Time Start)

- ***Judith Frydman**, Stanford University, USA
Interplay between Chaperones and Degradation Machineries
- Ursula Jakob**, University of Michigan, USA
Protein Degradation in Response to Reactive Oxygens
- ***Della David**, Eberhard Karls Universität Tübingen, Germany
Mechanisms to Prevent Age-Dependent Protein Aggregation
- Eric J. Bennett**, University of California, San Diego, USA
Tuning Translation with Ubiquitin
- Carolyn R. Bertozzi**, Stanford University, USA
Targeted Protein Degradation through the Endosome/Lysosome Pathway
- Richa Sardana**, Cornell University, USA
Short Talk: Quality Control of Mistargeted Membrane Proteins: Ubiquitin-Mediated Sorting to the Lysosome for Degradation

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Vinay Verghese Eapen, Harvard Medical School, USA

Short Talk: Quantitative Proteomics Reveals the Selectivity of Ubiquitin-Binding Autophagy Receptors in the Turnover of Damaged Lysosomes by Lysophagy

Serena Carra, University of Modena and Reggio Emilia, Italy

Short Talk: Hsp90-Mediated Regulation of DYRK3 Couples Stress Granule Disassembly to Stress Adaptation and Cell Growth: Implications for Amyotrophic Lateral Sclerosis

Closing Remarks (5:50pm Denver/Mountain Time Start)