



New Discoveries, Mechanisms and Technologies: Advancing the Frontiers of Enzymology

July 15 - 16, 2017

Chair

Crystal Smitherman Rosenberg

Waterville Valley

56 Packard's Road

Waterville Valley, NH, US

Conference Description

The Gordon Research Seminar on Enzymes, Coenzymes and Metabolic Pathways is a unique forum for graduate students, post-docs, and other scientists with comparable levels of experience and education to present and exchange new data and cutting edge ideas.

The 2017 GRS will highlight the latest advances, innovations and new discoveries in enzymology from the fundamentals of determining enzyme function to complex enzyme mechanisms and their roles in cancer and disease. This meeting will also emphasize career development by including a panel of senior and junior leaders from academia, industry, government and beyond, as well as providing multiple opportunities to network in a casual, stimulating environment.

Related Meeting



This GRS will be held in conjunction with the "Enzymes, Coenzymes and Metabolic Pathways" Gordon Research Conference (GRC). Those interested in attending both meetings must submit an application for the GRC in addition to an application for the GRS. Refer to the [associated GRC program page](#) for more information.

Conference Program

Saturday

2:00 pm - 5:00 pm	Arrival and Check-in
3:30 pm - 3:45 pm	Introductory Comments by GRC Site Staff / Welcome from the GRS Chair
3:45 pm - 4:30 pm	Keynote Session: Phosphonate Biosynthesis Discussion Leader: Crystal Smitherman Rosenberg (Aalto Scientific, Ltd., USA)
3:45 pm - 4:15 pm	Wilfred van der Donk (Howard Hughes Medical Institute / University of Illinois at Urbana-Champaign, USA) "Phosphonate Biosynthesis: A Treasure Trove for Novel Enzymology"
4:15 pm - 4:30 pm	Discussion
4:30 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Advances in Fundamentals of Enzymology Discussion Leader: Emilia Strandback (Graz University of Technology, Austria)
7:30 pm - 7:50 pm	Eric Koehn (University of California, Berkeley, USA) "Characterization of PqqB: A Protein of Unknown Function Within the Pyrroloquinoline Quinone (PQQ) Biosynthetic Pathway"
7:50 pm - 8:00 pm	Discussion
8:00 pm - 8:20 pm	Jacquelyn Blake-Hedges (University of California, Berkeley, USA) "Investigating the Regiospecificity of an Unusual Bacterial Acyl-CoA Dehydrogenase"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 8:50 pm	John Janetzko (Harvard Medical School, USA) "It's a Trap! Asp/Glu Carboxylate Glycosylation of O-GlcNAc Transferase Triggers Peptide Backbone Reactions"
8:50 pm - 9:00 pm	Discussion

9:00 pm - 9:20 pm	Erin McCarthy (Pennsylvania State University, USA) "Destruction and Reformation of an Iron-Sulfur Cluster During Catalysis by Lipoyl Synthase"
9:20 pm - 9:30 pm	Discussion
Sunday	
7:30 am - 8:30 am	Breakfast
9:00 am - 11:00 am	Innovations and Applications of Enzymology and Metabolic Pathways Discussion Leader: Matteo Planchestainer (University of Nottingham, United Kingdom)
9:00 am - 9:20 am	Maureen Hill (University of Massachusetts Amherst, USA) "Engineered Caspases with Altered Specificities Enable Identification of Exosites "
9:20 am - 9:30 am	Discussion
9:30 am - 9:50 am	Vanessa Chaplin (University of Massachusetts Amherst, USA) "Engineering Alternate Radical Rebound Chemistry in Factor Inhibiting HIF (FIH)"
9:50 am - 10:00 am	Discussion
10:00 am - 10:20 am	James Vranish (U.S. Naval Research Laboratory, USA) "Enhanced Catalysis of Glycolytic Pathways by Co-Localization of Enzymes on Nanoparticle Surfaces"
10:20 am - 10:30 am	Discussion
10:30 am - 10:50 am	Cathleen Zeymer (ETH Zurich, Switzerland) "The Enzyme Mechanism of a <i>De Novo</i> Designed and Evolved Aldolase"
10:50 am - 11:00 am	Discussion
11:00 am - 12:30 pm	Poster Session <i>Coffee will be served in the poster area from 11:00 am - 11:30 am</i>
12:30 pm - 1:30 pm	Lunch

1:30 pm - 2:30 pm

Mentorship Component: Broadening Horizons in the Scientific Career Landscape

This session serves as the career development discussion panel of the conference. The panelists include investigators in academia and industry, as well as experts in non-traditional careers. They will discuss different career paths, offer advice on career development, and answer questions from conference attendees.

Discussion Leader: **Tatiana Mishanina** (University of Wisconsin-Madison, USA)

1:30 pm - 2:30 pm

Panel Discussion

Broadening Horizons in the Scientific Career Landscape

- **Kay Ahn** (Janssen Research & Development, USA)
- **Holly Ellis** (Auburn University, USA)
- **Stefan Gross** (Agius Pharmaceuticals, USA)
- **Nicole Neuman** (Trends in Biochemical Sciences, Cell Press, USA)
- **Wilfred van der Donk** (Howard Hughes Medical Institute / University of Illinois at Urbana-Champaign, USA)

2:30 pm - 3:00 pm

Evaluation Period

Fill in GRS Evaluation Forms

3:00 pm

Seminar Concludes

Contributors

