

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA, 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.  
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 30-11-2022	2. REPORT TYPE Final Report	3. DATES COVERED (From - To) 16-May-2022 - 15-Nov-2022
---	--------------------------------	---

4. TITLE AND SUBTITLE Final Report: 2022 Microbial Stress Response GRC/GRS	5a. CONTRACT NUMBER W911NF-22-1-0066
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER 611102

6. AUTHORS	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES AND ADDRESSES Gordon Research Conferences, Inc. 512 Liberty Lane  West Kingston, RI 02892 -1502	8. PERFORMING ORGANIZATION REPORT NUMBER
--	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS (ES) U.S. Army Research Office P.O. Box 12211 Research Triangle Park, NC 27709-2211	10. SPONSOR/MONITOR'S ACRONYM(S) ARO
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) 80232-BB-CF.1

12. DISTRIBUTION AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.
--

13. SUPPLEMENTARY NOTES The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other documentation.
---

14. ABSTRACT
--------------

15. SUBJECT TERMS
-------------------

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	15. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU	UU		Michael Laub
					19b. TELEPHONE NUMBER 617-324-0418

# RPPR Final Report

as of 08-Dec-2022

Agency Code: 21XD

Proposal Number: 80232BBCF

Agreement Number: W911NF-22-1-0066

## INVESTIGATOR(S):

**Name:** Michael Laub  
**Email:** laub@mit.edu  
**Phone Number:** 6173240418  
**Principal:** Y

Organization: **Gordon Research Conferences, Inc.**

Address: 512 Liberty Lane, West Kingston, RI 028921502

Country: USA

DUNS Number: 075712877

EIN: 050300482

**Report Date:** 15-Feb-2023

Date Received: 30-Nov-2022

**Final Report** for Period Beginning 16-May-2022 and Ending 15-Nov-2022

**Title:** 2022 Microbial Stress Response GRC/GRS

**Begin Performance Period:** 16-May-2022

**End Performance Period:** 15-Nov-2022

**Report Term:** 0-Other

Submitted By: Ph.D. Nancy Gray

Email: grants@grc.org

Phone: (401) 742-8826

**Distribution Statement:** 1-Approved for public release; distribution is unlimited.

**STEM Degrees:** 0

**STEM Participants:**

**Major Goals:** Bacteria and Archaea face a nearly constant onslaught of diverse stressors, including nutrient limitations, temperature changes, antibiotics, phage, host immune systems, and more. Whether they can properly detect and respond to such stressors largely determines their survival in a world of fierce competition. Microbes have evolved finely tuned and sophisticated regulatory mechanisms for responding to stress by controlling genome duplication and repair, gene expression, proteostasis, RNA processing, and both central and secondary metabolism - collectively, these responses enable survival in a range of harsh conditions. Thus, delineating how microbes respond to stress will elucidate the fundamental principles governing key cellular processes. Understanding microbial stress responses will also significantly impact biotechnology, environmental biology, and medicine. The latest advances in this field will be the subject of the 2022 Gordon Research Conference (GRC) on Microbial Stress Response to be held July 17-22 at Mount Holyoke College.

**Accomplishments:** Bacteria face a nearly constant onslaught of diverse stressors, including nutrient limitations, temperature changes, antibiotics, phage, host immune systems, and more. Whether they can properly detect and respond to such stressors largely determines their survival in a world of fierce competition. The 2022 Microbial Stress Response GRC featured the latest, cutting-edge research into all facets of how bacteria sense, respond, and adapt to stress. The talks and posters presented showcased the myriad approaches being taken to understand bacterial stress responses, including genetic, biochemical, structural, imaging, computational, and genome-scale assays. A range of organisms and scales of study, from the atomic to the population level, were included.

The program featured a diverse and distinguished set of invited speakers as well as many talks selected from submitted abstracts that highlight early-stage investigators, postdocs, and graduate students. As with prior versions of the Microbial Stress Response GRC, the daily poster sessions were a major element of the meeting, enabling the dynamic exchange of new results and ongoing work, while promoting interactions between conference participants at every level. Additionally, this GRC was preceded by a GRS that focused entirely on grad students and postdocs.

The Gordon Research Seminar on Microbial Stress Response 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 goal is to bring together early-career scientists in a highly stimulating environment to present their current research, learn about career options, and build informal networks with others interested in how bacteria adapt in response to stress.

This meeting, the fourth Microbial Stress Response GRS, was held in conjunction with the Microbial Stress Response Gordon Research Conference. The GRS program consisted of a keynote presentation and discussion, a

## **RPPR Final Report** as of 08-Dec-2022

mentorship panel showcasing the diversity of careers available to PhD microbiologists, two poster sessions, and eight speakers selected from the submitted abstracts. Attendees had the opportunity to interact with the keynote speaker and mentorship panel throughout the duration of the GRS during lunches, dinners, and poster sessions.

**Training Opportunities:** Speakers, discussion leaders, poster presenters and attendees simultaneously contributed to and benefited from the collective skills and experience shared throughout the conference.

**Results Dissemination:** The final program has been posted on the GRC website.

**Honors and Awards:** Nothing to Report

**Protocol Activity Status:**

**Technology Transfer:** Nothing to Report

### **Partners**

,

I certify that the information in the report is complete and accurate:

Signature: Darlene Armstrong

Signature Date: 11/30/22 3:34PM



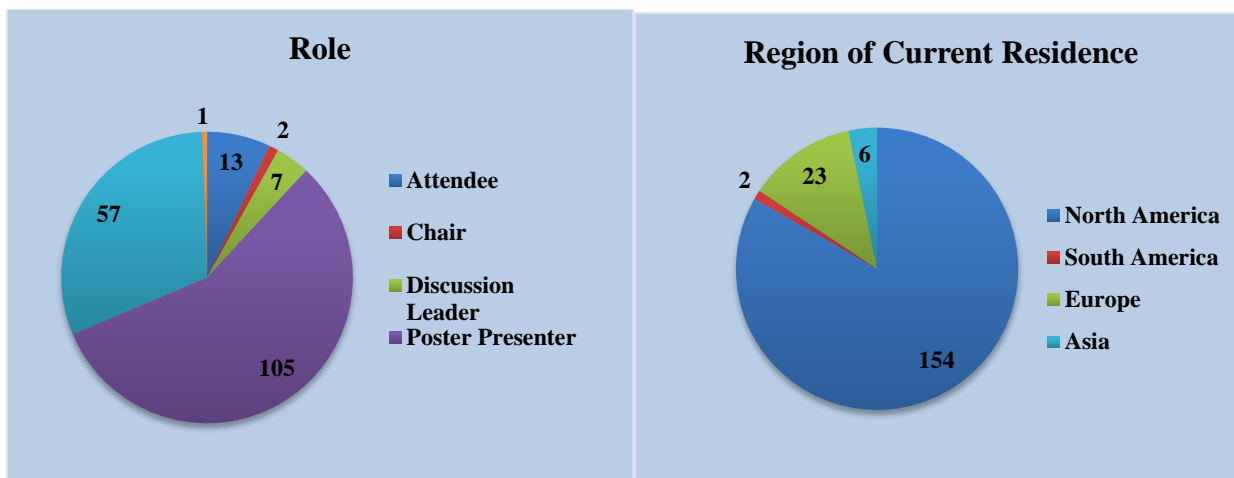
**GORDON RESEARCH CONFERENCES  
FINAL REPORT  
Army Research Office  
Microbial Stress Response GRC/GRS  
Grant Number W911NF2210066**

**Operational Summary**

The Gordon Research Conference (GRC) and Gordon Research Seminar (GRS) on Microbial Stress Response were held at Mount Holyoke College in South Hadley, Massachusetts July 16-22, 2022. The meeting covered a variety of scientific topics and the content presented was highly rated by participants.

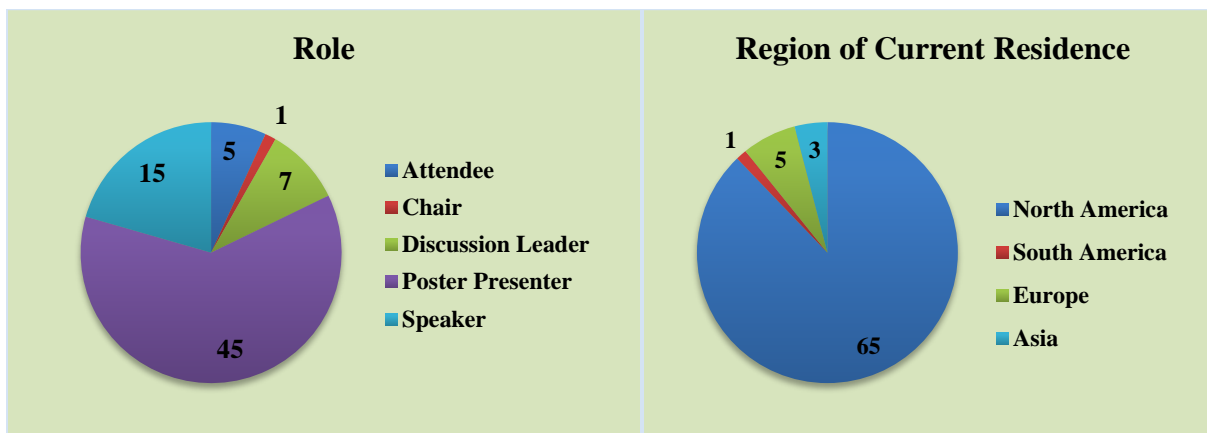
**Conference Participants**

The Conference was well-attended with 185 participants. Scientists from academia represented 98% of the participants while attendees from government accounted for 2%. The meeting also attracted a strong mix of young investigators and senior scientists. Students and post-docs accounted for 54% of all attendees. Approximately 49% of the participants at the 2022 meeting were women.



**Seminar Participants**

The Seminar was well-attended with 74 participants. Students and post docs combined accounted for 92% of all attendees. Approximately 54% of the participants at the 2022 seminar were women.



**Conference Program**

Bacteria face a nearly constant onslaught of diverse stressors, including nutrient limitations, temperature changes, antibiotics, phage, host immune systems, and more. Whether they can properly detect and respond to such stressors largely determines their survival in a world of fierce competition. The 2022 Microbial Stress Response GRC featured the latest, cutting-edge research into all facets of how bacteria sense, respond, and adapt to stress. The talks

and posters presented showcased the myriad approaches being taken to understand bacterial stress responses, including genetic, biochemical, structural, imaging, computational, and genome-scale assays. A range of organisms and scales of study, from the atomic to the population level, were included.

The program featured a diverse and distinguished set of invited speakers as well as many talks selected from submitted abstracts that highlight early-stage investigators, postdocs, and graduate students. As with prior versions of the Microbial Stress Response GRC, the daily poster sessions were a major element of the meeting, enabling the dynamic exchange of new results and ongoing work, while promoting interactions between conference participants at every level. Additionally, this GRC was preceded by a GRS that focused entirely on grad students and postdocs. The Gordon Research Seminar on Microbial Stress Response 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 goal is to bring together early-career scientists in a highly stimulating environment to present their current research, learn about career options, and build informal networks with others interested in how bacteria adapt in response to stress.

This meeting, the fourth Microbial Stress Response GRS, was held in conjunction with the Microbial Stress Response Gordon Research Conference. The GRS program consisted of a keynote presentation and discussion, a mentorship panel showcasing the diversity of careers available to PhD microbiologists, two poster sessions, and eight speakers selected from the submitted abstracts. Attendees had the opportunity to interact with the keynote speaker and mentorship panel throughout the duration of the GRS during lunches, dinners, and poster sessions.

#### **Conference Budget**

Funding provided by the Army Research Office supported partial registration for 1 graduate student, 1 associate professor and 3 assistant professors at the GRC and partial registration for 7 graduate students, 1 professor and 4 postdocs at the GRS.

#### **Conference Feedback**

Participants had an opportunity to provide feedback at the end of the Conference. The feedback collected from the meeting was extremely positive. Evaluations included numerous positive remarks including the diversity of topics, exceptional talks and the engaging poster sessions. Evaluations from the GRS included positive comments regarding the interesting and dynamic sessions, the ability to network and the diverse speaker pool.

GRC would like to thank the Army Research Office for its continued support of the meetings. The contributions received have been critical to the success of the conferences and are having a measurable impact in advancing the frontiers of science worldwide.

Dr. Michael Laub, GRC Chair  
Massachusetts Institute of Technology /  
Howard Hughes Medical Institute

Dr. Jade Wang, GRC Chair  
University of Wisconsin-Madison

Dr. Jan-Ulrik, GRS Chair  
Illinois State University

Dr. Nancy Ryan Gray  
President and Chief Executive Officer  
Gordon Research Conferences

## Microbial Stress Response

### Gordon Research Conference

#### Bacterial Mechanisms for Sensing, Responding and Adapting to Stress

July 17 - 22, 2022

Chairs Michael Laub and Jade Wang

Vice Chairs Amy K. Schmid and Peter Chien

Mount Holyoke College

50 College Street

South Hadley, MA, United States

#### Conference Program

##### Sunday

2:00 pm - 9:00 pm      Arrival and Check-in

6:00 pm - 7:00 pm      Dinner

7:30 pm - 7:40 pm      Introductory Comments by GRC Site Staff / Welcome from the GRC Chair

7:40 pm - 9:30 pm      Stress of Being in a Host  
Discussion Leader: Jan-Ulrik Dahl (Illinois State University, United States)

7:40 pm - 7:45 pm      Introduction by Discussion Leader

7:45 pm - 8:05 pm      Sophie Helaine (Harvard Medical School, United States)  
"Persisting in Macrophages"

8:05 pm - 8:10 pm      Discussion

8:10 pm - 8:30 pm      William Navarre (University of Toronto, Canada)  
"How H-NS and the Core Transcriptional Machinery Collaborate to Regulate Foreign Genes"

8:30 pm - 8:35 pm      Discussion

8:35 pm - 8:45 pm      Mariya Lobanovska (University of California Berkeley, United States)  
"Role of Stressosomes in the Regulation of *Listeria Monocytogenes* Virulence"

8:45 pm - 8:50 pm      Discussion

8:50 pm - 9:10 pm      Jan-Willem Veening (University of Lausanne, Switzerland)  
"The Transcriptional and Phenotypic Landscape of *Streptococcus Pneumoniae* During Infection"

9:10 pm - 9:15 pm      Discussion

9:15 pm - 9:30 pm      General Discussion

##### Monday

7:30 am - 8:30 am      Breakfast

8:30 am - 9:00 am      Group Photo

9:00 am - 12:30 pm	Replication and Nutrient Stress Discussion Leader: Amy Schmid (Duke University, United States)
9:00 am - 9:20 am	Peter Freddolino (University of Michigan, United States) "The <i>E. coli</i> "Leucine-responsive Regulatory Protein" Integrates Host and Microbial Stress Signals to Reshape DNA and Gene Expression"
9:20 am - 9:25 am	Discussion
9:25 am - 9:35 am	Thalia Sass (Brandeis University, United States) "Replication Stalling and Transcription Termination Conflicts Induce the RpoS General Stress Response through the Regulation of <i>iraD</i> by DnaA and SspA"
9:35 am - 9:40 am	Discussion
9:40 am - 9:50 am	Ryan Otto (The University of Texas Southwestern Medical Center, United States) "Predicting the Effect of Gene Expression and Environmental Variation on <i>E. coli</i> Growth Rate"
9:50 am - 9:55 am	Discussion
9:55 am - 10:15 am	Carol Gross (University of California, San Francisco, United States) "Expression-Fitness Relationships in Essential Genes"
10:15 am - 10:20 am	Discussion
10:20 am - 10:50 am	Coffee Break
10:50 am - 11:10 am	Lyle Simmons (University of Michigan, United States) "Regulation of the DNA Damage Checkpoint"
11:10 am - 11:15 am	Discussion
11:15 am - 11:25 am	Erika Smith (Johns Hopkins University School of Medicine, United States) "Sound the Alarmone: The role of CdnL in the <i>Caulobacter</i> Stringent Response"
11:25 am - 11:30 am	Discussion
11:30 am - 11:50 am	Anjana Badrinarayanan (National Centre for Biological Sciences (TIFR), India) "Searching for Homology"
11:50 am - 11:55 am	Discussion
11:55 am - 12:05 pm	Irina Artsimovitch (Ohio State University, United States) "Restraining Rho Termination During Stress"
12:05 pm - 12:10 pm	Discussion
12:10 pm - 12:30 pm	General Discussion
12:30 pm - 1:30 pm	Lunch

1:30 pm - 4:00 pm	Free Time
3:00 pm - 4:00 pm	<p>The GRC Power Hour™</p> <p><i>The GRC Power Hour™ is designed to address diversity and inclusion in the scientific workplace by providing a safe environment for informal and meaningful conversations amongst colleagues of all career stages. The program supports the professional growth of all members of our communities, including ethnicity, race and/or gender identity by providing an open forum for discussion and mentoring.</i></p> <p>Organizers: Petra Levin (Washington University in St. Louis, United States) and Allison Williams (University of California San Francisco , United States)</p>
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	<p>Stress of Other Cells</p> <p>Discussion Leader: Petra Levin (Washington University in St. Louis, United States)</p>
7:30 pm - 7:50 pm	<p>Marie Elliot (McMaster University, Canada)</p> <p>"Exploring Uncharted Territory in Streptomyces Growth and Development"</p>
7:50 pm - 7:55 pm	Discussion
7:55 pm - 8:05 pm	<p>Anthony Martini (National Cancer Institute, United States)</p> <p>"Development and Mechanisms of Pyocyanin Resistance in Staphylococcus aureus"</p>
8:05 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	<p>Daniel Wall (University of Wyoming, United States)</p> <p>"Adapting to Cell Envelope Stress as a Cooperative Microbial Community"</p>
8:30 pm - 8:35 pm	Discussion
8:35 pm - 8:45 pm	<p>Maria Hadjifrangiskou (Vanderbilt University Medical Center, United States)</p> <p>"Subversion of Mitochondrial Metabolism Supports Intracellular Bacterial Expansion Inside the Host Cell"</p>
8:45 pm - 8:50 pm	Discussion
8:50 pm - 9:10 pm	<p>Chris Waters (Michigan State University, United States)</p> <p>"Cyclic Di-Nucleotide Signaling and Adaptation in Microorganisms"</p>
9:10 pm - 9:15 pm	Discussion
9:15 pm - 9:25 pm	<p>Jiqiang Ling (University of Maryland, College Park, United States)</p> <p>"Role of Translational Fidelity in Bacteria-Host Interactions"</p>
9:25 pm - 9:30 pm	Discussion

Tuesday

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Oxidative, Metal and Antibiotic Stress Discussion Leader: Joan Slonczewski (Kenyon College, United States)
9:00 am - 9:20 am	Christina Stallings (Washington University School of Medicine, United States) "Metabolic Remodeling in Response to Antibiotic Stress in Mycobacteria"
9:20 am - 9:25 am	Discussion
9:25 am - 9:35 am	Amir Mitchell (University of Massachusetts Medical School, United States) "Bacterial Response and Adaptation to Host-Targeting Chemotherapies Alters Drug Metabolism"
9:35 am - 9:40 am	Discussion
9:40 am - 9:50 am	Jason Peters (University of Wisconsin-Madison, United States) "The Genetics of Antibiotic Function in <i>Acinetobacter baumannii</i> "
9:50 am - 9:55 am	Discussion
9:55 am - 10:15 am	Frederic Barras (Institut Pasteur, France) "Fe-S Cluster-Based Biology and Redox Adaptation"
10:15 am - 10:20 am	Discussion
10:20 am - 10:50 am	Coffee Break
10:50 am - 11:05 am	John Helmann (Cornell University, United States) "Bacillus Subtilis Stress Responses"
11:05 am - 11:10 am	Discussion
11:10 am - 11:20 am	Susan Rosenberg (Baylor College of Medicine, United States) "How Drugs and Gambling Promote Antibiotic Resistance Evolution and Drugs to Stop Them"
11:20 am - 11:25 am	Discussion
11:25 am - 11:35 am	Carissa Chan (Yale School of Medicine, United States) "Universal Protein Chaperone Hsp70 Advances Bacterial Survival During Magnesium Starvation by Inhibiting Protein Synthesis"
11:35 am - 11:40 am	Discussion
11:40 am - 11:50 am	Hualiang Pi (Vanderbilt University Medical Center, United States) " <i>Clostridioides difficile</i> Adapts to Iron Stress Through Intracellular Iron Biomineralization"
11:50 am - 11:55 am	Discussion
11:55 am - 12:05 pm	William Beavers (Louisiana State University School of Veterinary Medicine, United States)

"Polyunsaturated Fatty Acids Potentiate Aminoglycoside Killing of *S. Aureus* Small Colony Variants"

12:05 pm - 12:10 pm Discussion

12:10 pm - 12:30 pm General Discussion

12:30 pm - 1:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm Poster Session

6:00 pm - 7:00 pm Dinner

7:30 pm - 9:30 pm Energy and Metabolic Stress  
Discussion Leader: Daniel Stoebel (Harvey Mudd College, United States)

7:30 pm - 7:50 pm Lars Dietrich (Columbia University, United States)  
"The Effect of Light on Biofilm Metabolism in *Pseudomonas Aeruginosa*"

7:50 pm - 7:55 pm Discussion

7:55 pm - 8:15 pm N. Cecilia Martinez-Gomez (University of California, Berkeley, United States)  
"Unraveling Lanthanide Transport, Storage, and Usage in *Methylobacterium Extorquens*"

8:15 pm - 8:20 pm Discussion

8:20 pm - 8:30 pm Rylee Hackley (Duke University, United States)  
"TrmB Targets Anaplerotic Enzymes from Diverse Evolutionary Lineages to Regulate Gluconeogenesis in Halophilic Archaea"

8:30 pm - 8:35 pm Discussion

8:35 pm - 8:55 pm Caroline Harwood (University of Washington, United States)  
"Bacterial Longevity"

8:55 pm - 9:00 pm Discussion

9:00 pm - 9:10 pm Thomas Kehl-Fie (University of Illinois at Urbana-Champaign, United States)  
"Alternative Glycolytic Isozymes Facilitate Glucose Consumption by Pathogens When Metal-starved by the Host"

9:10 pm - 9:15 pm Discussion

9:15 pm - 9:30 pm General Discussion

Wednesday

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm Regulatory Systems for Stress

Discussion Leader: Amy Gehring (Williams College, United States)

9:00 am - 9:20 am Mark Buttner (John Innes Centre, United Kingdom)  
"How C-Di-GMP Controls Progression Through the Streptomyces Life Cycle"

9:20 am - 9:25 am Discussion

9:25 am - 9:35 am Christina Savage (NIH, United States)  
"Morphological Coupling Between Coat Assembly and Transcription During Sporulation"

9:35 am - 9:40 am Discussion

9:40 am - 9:50 am Wade Winkler (University of Maryland, United States)  
"Microcompartment-Related Structures Exhibit Dynamic Behavior"

9:50 am - 9:55 am Discussion

9:55 am - 10:15 am Sean Crosson (Michigan State University, United States)  
"Coordinate Regulation of Stress Response and Surface Adhesion"

10:15 am - 10:20 am Discussion

10:20 am - 10:50 am Coffee Break

10:50 am - 11:10 am Susan Gottesman (National Cancer Institute, NIH, United States)  
"Novel Regulatory Loops for Turning On and Off the RpoS Response"

11:10 am - 11:15 am Discussion

11:15 am - 11:25 am Philip Adams (National Institutes of Health, United States)  
"Characterization of *B. burgdorferi* Regulatory RNAs Detected by Transcriptome Mapping"

11:25 am - 11:30 am Discussion

11:30 am - 11:40 am Danny Fung (University of Wisconsin-Madison, United States)  
"Spontaneous and Triggered Antibiotic Persistence by (p)ppGpp-GTP Antagonism in *Bacillus Subtilis*"

11:40 am - 11:45 am Discussion

11:45 am - 12:05 pm Gisela Storz (National Institute of Child Health and Human Development, NIH, United States)  
"Regulating Stress Responses From Inside Genes"

12:05 pm - 12:10 pm Discussion

12:10 pm - 12:30 pm General Discussion

12:30 pm - 1:30 pm Lunch

1:30 pm - 4:00 pm Free Time

4:00 pm - 6:00 pm Poster Session

6:00 pm - 7:00 pm Dinner

7:00 pm - 7:30 pm Business Meeting

*Nominations for the Next Vice Chair(s); Complete the GRC Evaluation Forms; Discuss Future Dates and Venue; Election of the Next Vice Chair(s)*

7:30 pm - 9:30 pm Stress of Phage and Mobile Genetic Elements

Discussion Leader: Mona Orr (Amherst College (Mona Wu Orr), United States)

7:30 pm - 7:40 pm Introduction by Discussion Leader

7:40 pm - 8:00 pm Alan Grossman (Massachusetts Institute of Technology, United States)

"Bacterial Sex is Stressful"

8:00 pm - 8:05 pm Discussion

8:05 pm - 8:15 pm Charlie Mo (Rockefeller University, United States)

"Exploring the Impact of Type III CRISPR-Cas Immunity on Bacterial Variation"

8:15 pm - 8:20 pm Discussion

8:20 pm - 8:30 pm Tong Zhang (Massachusetts Institute of Technology, Department of Biology, United States)

"Direct Activation of a Fused Toxin-Antitoxin System by the Major Capsid Protein of Bacteriophages"

8:30 pm - 8:35 pm Discussion

8:35 pm - 8:45 pm Amar Deep (University of California, San Diego, United States)

"The Condensin-like Wadjet Defense System Impairs Bacterial Plasmid Transformation by Recognition and Cleavage of Closed-Circular DNA"

8:45 pm - 8:50 pm Discussion

8:50 pm - 9:00 pm Amelia McKitterick (Harvard Medical School, United States)

"Bursting at the Seams: Characterization of a Novel Phage Lysis Gene in Actinophages"

9:00 pm - 9:05 pm Discussion

9:05 pm - 9:15 pm Late-Breaking Topic

9:15 pm - 9:20 pm Discussion

9:20 pm - 9:30 pm General Discussion

Thursday

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm Proteotoxic and Translational Stress

Discussion Leader: Eduardo Groisman (Yale School of Medicine, United States)

9:00 am - 9:20 am	Jean-Francois Collet (UCLouvain, Belgium) "Protecting Nascent Polypeptides from Premature Aging"
9:20 am - 9:25 am	Discussion
9:25 am - 9:35 am	Andrew Savinov (Massachusetts Institute of Technology, United States) "Mapping Functional Regions of Essential Bacterial Proteins with Dominant-negative Protein Fragments"
9:35 am - 9:40 am	Discussion
9:40 am - 9:50 am	Jonathan Dworkin (Columbia University, United States) "Making and Breaking Ribosome Dimers"
9:50 am - 9:55 am	Discussion
9:55 am - 10:15 am	Stefan Katharios-Lanwer Meyer (National Institutes of Health (NIH), United States) "Pseudomonas aeruginosa Induces Aggregation in the Co-Infecting Pathogen Stenotrophomonas maltophilia"
10:15 am - 10:20 am	Discussion
10:20 am - 10:50 am	Coffee Break
10:50 am - 11:00 am	Short Talk Selected from Poster Abstracts
11:00 am - 11:05 am	Discussion
11:05 am - 11:25 am	Gert Bange (Philipps University Marburg, Germany) "Are You Stressed? Functional Roles of Di-Adenosine Nucleotides"
11:25 am - 11:30 am	Discussion
11:30 am - 11:40 am	David Ranava (Northwestern University, United States) "Extraribosomal Role of Hibernation Promoting Factor in Staphylococcus Aureus"
11:40 am - 11:45 am	Discussion
11:45 am - 11:55 am	Srujana Samhita Yadavalli (Rutgers University, United States) "Dual Functions of a Biosynthetic Enzyme (QueE) in tRNA Modification and Bacterial Stress Response"
11:55 am - 12:00 pm	Discussion
12:00 pm - 12:20 pm	Daniel Kearns (Indiana University Bloomington, United States) "Adaptor-Mediated Lon Proteolysis in Bacillus Subtilis"
12:20 pm - 12:25 pm	Discussion
12:25 pm - 12:30 pm	General Discussion

12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Cell Envelope Stress Discussion Leader: William Navarre (University of Toronto, Canada)
7:30 pm - 7:50 pm	Allison Williams (University of California San Francisco , United States) "Visualizing the Bacterial Stress Sensing Machinery in Action"
7:50 pm - 7:55 pm	Discussion
7:55 pm - 8:05 pm	Rachna Chaba (Indian Institute of Science Education and Research (IISER) Mohali, India) "Long-Chain Fatty Acid Metabolism is Intricately Interconnected to the Cpx Envelope Stress Response"
8:05 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	Natividad Ruiz (Ohio State University, United States) "Building an Outer Membrane – How Stressful!"
8:30 pm - 8:35 pm	Discussion
8:35 pm - 8:45 pm	Angela Mitchell (Texas A&M University, United States) "Cold Stress as an Instrument to Elucidate the Unique Role of YhdP in E. coli Cell Envelope Biogenesis"
8:45 pm - 8:50 pm	Discussion
8:50 pm - 9:10 pm	Petra Levin (Washington University in St. Louis, United States) "How the Environment Shapes E. coli"
9:10 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
<b>Friday</b>	
7:30 am - 8:30 am	Breakfast
9:00 am	Departure

#### Contributors



**Gordon Research  
Conferences**  
*Frontiers of Science*





National Institute of  
Allergy and  
Infectious Diseases

ScienceAdvances  
AAAS

Microbiology  
An Evolving Science  
Slonczewski · Foster · Zinser  
WWNorton.com

Funding for this conference was made possible [in part] by 1R13AI172273-01 from the National Institute of Allergy and Infectious Diseases. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Funding for this conference was made possible [in part] by 1R13AI172273-01 from the National Institute of Allergy and Infectious Diseases. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

## Microbial Stress Response (GRS)

### Gordon Research Seminar

#### Microbial Sensing, Signaling and Survival in Stress

July 16 - 17, 2022

Chair Jan-Ulrik Dahl

Mount Holyoke College

50 College Street

South Hadley, MA, United States

#### Conference Program

##### Saturday

1:00 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: Benefits and Costs of Living an Aerobic Lifestyle Discussion Leader: Verena Fritsch (Freie Universität Berlin, Institute for Microbiology, Germany)
3:45 pm - 4:15 pm	James Imlay (University of Illinois at Urbana-Champaign, United States) "Molecular Explanations for the Toxicity of Oxygen"
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	Stress Signaling Discussion Leaders: Reid Oshiro (University of California - Berkeley, United States) and Divya Choudhary (University of Oxford, United Kingdom)
7:30 pm - 7:45 pm	Sophie Bouillet (NIH, United States) "Modulating the Sigma Factor RpoS Response and Recovery from Stress in <i>Escherichia coli</i> "
7:45 pm - 7:50 pm	Discussion
7:50 pm - 8:05 pm	Vincent de Bakker (University of Lausanne, Switzerland) "Multiomics Profiling of Pneumococcal Stress Responses"
8:05 pm - 8:10 pm	Discussion
8:10 pm - 8:25 pm	Maia Baskerville (Yale University, United States) "Understanding the Mechanism of Host Glutathione Depletion by <i>Helicobacter pylori</i> "
8:25 pm - 8:30 pm	Discussion
8:30 pm - 8:45 pm	Anthony Martini (National Cancer Institute, United States) "Development and Mechanisms of Pyocyanin Resistance in <i>Staphylococcus aureus</i> "

8:45 pm - 8:50 pm Discussion

8:50 pm - 9:05 pm Sadia Sultana (Illinois State University, United States)  
"Characterization of the Uropathogenic *Escherichia coli*'s Increased Resistance to the Neutrophilic Oxidant Hypochlorous Acid"

9:05 pm - 9:10 pm Discussion

9:10 pm - 9:25 pm Pengbo Cao (Georgia Institute of Technology, United States)  
"A Novel Small RNA Governs Chronic or Acute Infection in *Pseudomonas aeruginosa*"

9:25 pm - 9:30 pm Discussion

## Sunday

7:30 am - 8:30 am Breakfast

9:00 am - 11:00 am Stress Resistance Mechanisms  
Discussion Leaders: Matthew Flores (Virginia Polytechnic Institute and State University, United States) and Hualiang Pi (Vanderbilt University Medical Center, United States)

9:00 am - 9:15 am Tomas Bermudez (Vanderbilt University Medical Center, United States)  
"Discovering New Pathways Towards Fosfomycin Resistance in Uropathogenic *E. coli* and How They Affect Pathogen Fitness"

9:15 am - 9:20 am Discussion

9:20 am - 9:35 am Razan Alnahhas (Boston University, United States)  
"Relating Single Cell Heterogeneity in Expression of Stress-Response Genes to Antibiotic Tolerance in *Escherichia coli*"

9:35 am - 9:40 am Discussion

9:40 am - 9:55 am Sarah Beagle (Washington University in St. Louis, United States)  
"*Klebsiella pneumoniae* Exhibits a Spontaneous Resistance to the Beta-Lactam Mecillinam"

9:55 am - 10:00 am Discussion

10:00 am - 10:15 am Ravi Chawla (The Scripps Research Institute/Postdoc, United States)  
"The Histone H1-Like Protein AlgP Facilitates Even Spacing of Polyphosphate Granules in *Pseudomonas aeruginosa*"

10:15 am - 10:20 am Discussion

10:20 am - 10:35 am Stefan Katharios-Lanwermyer (National Institutes of Health (NIH), United States)  
"*Pseudomonas aeruginosa* Induces Aggregation in the Co-Infecting Pathogen *Stenotrophomonas maltophilia*"

10:35 am - 10:40 am Discussion

10:40 am - 10:55 am Falk Ponath (Helmholtz Institute for RNA-based Infection Research (HIRI), Germany)

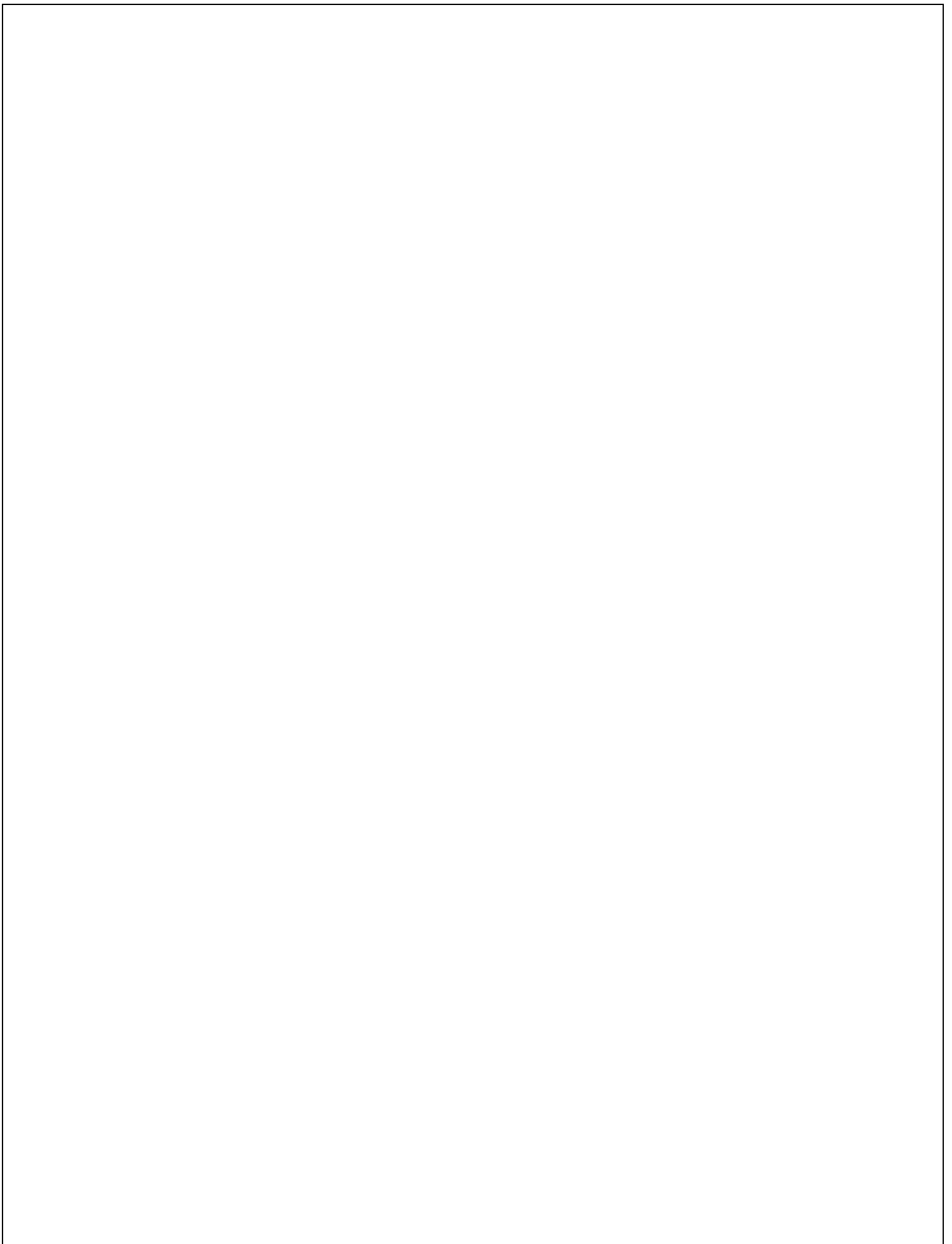
"Uncovering a Global Stress Response in the Early-Branching Species *Fusobacterium nucleatum*"

10:55 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	Stress Responses Discussion Leaders: Dalton Banh (The Rockefeller University, United States) and Aoshu Zhong (National Institute of Child Health and Human Development, NIH, USA, United States)
1:30 pm - 1:45 pm	Barry Li (Rutgers-New Jersey Medical School, United States) "Target-Independent "Fight-or-Flight" Mechanisms of Antimicrobial Resistance"
1:45 pm - 1:50 pm	Discussion
1:50 pm - 2:05 pm	Patricia Hare (UCONN Health, United States) "Leveraging Probiotic <i>Escherichia coli</i> Nissle 1917 to Hinder Levofloxacin Persister Resuscitation"
2:05 pm - 2:10 pm	Discussion
2:10 pm - 2:25 pm	Dan Pollack (New York University, United States) "Phenotypic Memory is Selected for in Fluctuating Stress"
2:25 pm - 2:30 pm	Discussion
2:30 pm - 3:00 pm	Evaluation Period <i>Complete the GRS Evaluation Forms; Election of Future Chair(s)</i>
3:00 pm	Seminar Concludes

Contributors



Funding for this conference was made possible [in part] by 1R13AI172273-01 from the National Institute of Allergy and Infectious Diseases. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.



## GRC Attendee List

The list of attendees appears below, sorted by the role recorded in their registration record.

Name	Affiliation	Participation	Gender
Laub, Michael	Massachusetts Institute of Technology / Howard Hughes Medical Institute	Chair	Male
Wang, Jade	University of Wisconsin-Madison	Chair	Female
Chien, Peter	University of Massachusetts Amherst	Vice Chair	Male
Schmid, Amy K	Duke University	Vice Chair	Female
Adams, Philip P	National Institutes of Health	Speaker	Male
Artsimovitch, Irina	Ohio State University	Speaker	Female
Badrinarayanan, Anjana	National Centre for Biological Sciences (TIFR)	Speaker	Female
Bange, Gert	Philipps University Marburg	Speaker	Male
Barras, Frederic	Institut Pasteur	Speaker	Male
Beavers, William N	Louisiana State University School of Veterinary Medicine	Speaker	Male
Buttner, Mark J	John Innes Centre	Speaker	Male
Chaba, Rachna	Indian Institute of Science Education and Research (IISER) Mohali	Speaker	Female
Chan, Carissa	Yale School of Medicine	Speaker	Female
Collet, Jean-Francois	UCLouvain	Speaker	Male
Crosson, Sean	Michigan State University	Speaker	Male
Deep, Amar	University of California, San Diego	Speaker	Male
Dietrich, Lars E	Columbia University	Speaker	Male
Dworkin, Jonathan	Columbia University	Speaker	Male
Elliot, Marie	McMaster University	Speaker	Female
Freddolino, Peter	University of Michigan	Speaker	Male
Fung, Danny K	University of Wisconsin-Madison	Speaker	Male
Gottesman, Susan	National Cancer Institute, NIH	Speaker	Female
Gross, Carol A	University of California, San Francisco	Speaker	Female
Grossman, Alan D.	Massachusetts Institute of Technology	Speaker	Male
Hackley, Rylee K	Duke University	Speaker	Female
Hadjifrangiskou, Maria	Vanderbilt University Medical Center	Speaker	Female
Harwood, Caroline S	University of Washington	Speaker	Female
Helaine, Sophie	Harvard Medical School	Speaker	Female
Helmann, John D	Cornell University	Speaker	Male
Katharios-Lanwermyer, Stefan	National Institutes of Health (NIH)	Speaker	Male
Kearns, Daniel B	Indiana University Bloomington	Speaker	Male
Kehl-Fie, Thomas E	University of Illinois at Urbana-Champaign	Speaker	Male
Levin, Petra	Washington University in St. Louis	Speaker	Female
Ling, Jiqiang	University of Maryland, College Park	Speaker	Male

Name	Affiliation	Participation	Gender
Lobanovska, Mariya	University of California Berkeley	Speaker	Female
Martinez-Gomez, N. Cecilia C	University of California, Berkeley	Speaker	Female
Martini, Anthony	National Cancer Institute	Speaker	Male
McKitterick, Amelia	Harvard Medical School	Speaker	Female
Mitchell, Amir	University of Massachusetts Medical School	Speaker	Male
Mitchell, Angela M	Texas A&M University	Speaker	Female
Mo, Charlie Y.	Rockefeller University	Speaker	Male
Navarre, William W	University of Toronto	Speaker	Male
Otto, Ryan	The University of Texas Southwestern Medical Center	Speaker	Male
Peters, Jason M	University of Wisconsin-Madison	Speaker	Male
Pi, Hualiang	Vanderbilt University Medical Center	Speaker	Female
Ranava, David	Northwestern University	Speaker	Male
Rosenberg, Susan	Baylor College of Medicine	Speaker	Female
Ruiz, Natividad	Ohio State University	Speaker	Female
Sass, Thalia H	Brandeis University	Speaker	Female
Savage, Christina R	NIH	Speaker	Female
Savinov, Andrew	Massachusetts Institute of Technology	Speaker	Male
Simmons, Lyle A	University of Michigan	Speaker	Male
Smith, Erika	Johns Hopkins University School of Medicine	Speaker	Female
Stallings, Christina L	Washington University School of Medicine	Speaker	Female
Storz, Gisela	National Institute of Child Health and Human Development, NIH	Speaker	Female
Veening, Jan-Willem	University of Lausanne	Speaker	Male
Wall, Daniel M	University of Wyoming	Speaker	Male
Waters, Chris	Michigan State University	Speaker	Male
Williams, Allison H	University of California San Francisco	Speaker	Female
Winkler, Wade C	University of Maryland	Speaker	Male
Yadavalli, Srujana Samhita	Rutgers University	Speaker	Female
Zhang, Tong	Massachusetts Institute of Technology	Speaker	Female
Dahl, Jan-Ulrik	Illinois State University	Discussion Leader	Male
Gehring, Amy M	Williams College	Discussion Leader	Female
Groisman, Eduardo A	Yale School of Medicine	Discussion Leader	Male
Orr, Mona W	Amherst College (Mona Wu Orr)	Discussion Leader	Female
Slonczewski, Joan L	Kenyon College	Discussion Leader	Female
Stoebel, Daniel M	Harvey Mudd College	Discussion Leader	Male
Alberge, François	University of Wisconsin-Madison	Poster Presenter	Male
Alnahhas, Razan	Boston University	Poster Presenter	Female
Anderson, Sarah	Washington University in St. Louis	Poster Presenter	Female
Arias Cartin, Rodrigo	Pasteur Institute	Poster Presenter	Male
Balasubramanian, Deepak	University of Central Florida	Poster Presenter	Male

Name	Affiliation	Participation	Gender
Banh, Dalton V.	The Rockefeller University	Poster Presenter	Male
Banta, Amy B	University of Wisconsin-Madison	Poster Presenter	Female
Baussier, Corentin	CNRS	Poster Presenter	Male
Beagle, Sarah D	Washington University in St. Louis	Poster Presenter	Female
Bermudez, Tomas	Vanderbilt University Medical Center	Poster Presenter	Male
Berry, Katherine E	Mount Holyoke College	Poster Presenter	Female
Bhatt, Shantanu	Saint Joseph's University	Poster Presenter	Male
Bouillet, Sophie	NIH	Poster Presenter	Female
Brown, Philip	UT Southwestern	Poster Presenter	Male
Camp, Amy	Mount Holyoke College	Poster Presenter	Female
Cao, Pengbo	Georgia Institute of Technology	Poster Presenter	Male
Cesinger, Monica R	University of Washington	Poster Presenter	Non-Binary
Chawla, Ravi	The Scripps Research Institute/Postdoc	Poster Presenter	Male
Chittrakanwong, Jurairat	Chulabhorn Graduate Institute	Poster Presenter	Female
Choby, Jacob	Emory University School of Medicine	Poster Presenter	Male
Choudhary, Divya	University of Oxford	Poster Presenter	Female
Cierniecki, John A	Caltech	Poster Presenter	Male
Ciolfi Mattioli, Camilla	weizmann Institute of science	Poster Presenter	Female
de Bakker, Vincent	University of Lausanne	Poster Presenter	Male
Di Venanzio, Gisela A	Washington University St Louis, School of Medicine	Poster Presenter	Female
Dumitrescu, Daniel G	Yale University	Poster Presenter	Male
Dupuy, Emile	De Duvé Institute - UCLouvain	Poster Presenter	Male
Dwane, Rachel	Uppsala University	Poster Presenter	Female
Earls, Christopher J	Cornell University	Poster Presenter	Male
Eaton, Daniel	Harvard Medical School	Poster Presenter	Male
Eriksson, Hanna E	Uppsala University	Poster Presenter	Female
Eskandarian, Haig Alexander	University of California, San Francisco	Poster Presenter	Male
Esteban Cuesta, Irene	LMU Munich	Poster Presenter	Female
Flores, Matthew J	Virginia Polytechnic Institute and State University	Poster Presenter	Male
Fones, Elizabeth	University of Washington	Poster Presenter	Female
Fozo, Elizabeth M	University of Tennessee	Poster Presenter	Female
Fritsch, Verena N.	Freie Universität Berlin, Institute for Microbiology	Poster Presenter	Female
Giammarinaro, Pietro Ivan	Marburg University	Poster Presenter	Male
Glasgo, Liz	University of Tennessee, Knoxville	Poster Presenter	Female
Gordon, Elizabeth	Yale University	Poster Presenter	Female
Gray, Michael J	University of Alabama at Birmingham	Poster Presenter	Male
Green, Erin R	Vanderbilt University Medical Center	Poster Presenter	Female
Guan, Jian	University of Michigan	Poster Presenter	Male

Name	Affiliation	Participation	Gender
Guillier, Maude	CNRS UMR8261- IBPC	Poster Presenter	Female
Hall, Ashley	University of Wisconsin and Great Lakes Bioenergy Research Center	Poster Presenter	Female
Hare, Patricia J	UCONN Health	Poster Presenter	Female
Harrison, Gregory A	Washington University School of Medicine	Poster Presenter	Male
Hooppaw, Anna J	Washington University in St. Louis	Poster Presenter	Female
Kamat, Aditya	National Centre for Biological Sciences	Poster Presenter	Male
Khan, Sebastian J	University of South Florida	Poster Presenter	Male
Kim, Soo-Kyoung	University of Maryland	Poster Presenter	Female
Kim, Lili M	University of California - San Francisco	Poster Presenter	Female
Koskiniemi, Sanna	Uppsala University	Poster Presenter	Female
Lagator, Mato	University of Manchester	Poster Presenter	Male
Lee, Eunjin	Korea University	Poster Presenter	Female
Leiva Araya, Lorenzo E	Chapman University	Poster Presenter	Male
Li, Barry	Rutgers-New Jersey Medical School	Poster Presenter	Male
Lin, Jordan D	University of Toronto	Poster Presenter	Male
Liu, Jane M	Pomona College	Poster Presenter	Female
LYU, ZHIHUI	University of Maryland, College Park	Poster Presenter	Female
Marotta, Julianna	Emory University	Poster Presenter	Female
McKeithen-Mead, Saria	MIT	Poster Presenter	Female
Mettert, Erin L	University of Wisconsin-Madison	Poster Presenter	Female
MICALETTO, Maureen	Institut Cochin- INSERM DRPA05	Poster Presenter	Female
Mishra, Ayushi	Indiana University	Poster Presenter	Female
Morehouse, Benjamin	Harvard Medical School & Dana-Farber Cancer Institute	Poster Presenter	Male
Ng, Wei L	Yale University	Poster Presenter	Female
Noel, Hannah	University of Illinois at Chicago	Poster Presenter	Female
Noort, Marco van den	University of Groningen	Poster Presenter	Male
Oshiro, Reid T	University of California - Berkeley	Poster Presenter	Male
Panda, Sasmita	University of Nebraska Medical Center	Poster Presenter	Female
Parks, Anastacia	Harvard Medical School	Poster Presenter	Female
Pollack, Dan	New York University	Poster Presenter	Male
Ponath, Falk	Helmholtz Institute for RNA-based Infection Research (HIRI)	Poster Presenter	Male
Pountain, Andrew	NYU School of Medicine	Poster Presenter	Male
Preska Steinberg, Asher	New York University	Poster Presenter	Male
Price, Paul A.	Eastern Michigan University	Poster Presenter	Male
Purdy, Alexandra E	Amherst College	Poster Presenter	Female
Reasoner, Seth A	Vanderbilt University Medical Center	Poster Presenter	Male
Rychel, Kevin W	University of California San Diego	Poster Presenter	Male
Salemi, Rachel I	University of Wisconsin -- Madison	Poster Presenter	Non-Binary

Name	Affiliation	Participation	Gender
Schmidt, Janka J.	Ruhr-University Bochum	Poster Presenter	Female
Schmitz, Karl R	University of Delaware	Poster Presenter	Male
Shore, Selene	University of Tennessee, Knoxville	Poster Presenter	Female
Shull, Lauren	University of Washington	Poster Presenter	Female
Silberstein, Meredith	Cornell University	Poster Presenter	Female
Sultana, Sadia	Illinois State University	Poster Presenter	Female
Thongdee, Narumon	National Institute of Child Health and Human Development, NIH	Poster Presenter	Female
Thouvenel, Laurie	de Duve Institute, UCLouvain	Poster Presenter	Female
Todor, Horia	University of California, San Francisco	Poster Presenter	Male
Trinquier, Aude E	UW Madison	Poster Presenter	Female
Tu, Nicholas H	The Scripps Research Institute	Poster Presenter	Male
VanDrisse, Chelsey M.	California Institute of Technology	Poster Presenter	Female
Vassallo, Christopher	Massachusetts Institute of Technology	Poster Presenter	Male
Waters, Lauren S	University of Wisconsin-Oshkosh	Poster Presenter	Female
Wen, Alice	BCM	Poster Presenter	Female
White, Maria L	University of South Florida	Poster Presenter	Female
Wiggins, Paul A	University of Washington	Poster Presenter	Male
Wood, Whitney N	Chapman University	Poster Presenter	Female
Yang, Jason H	Rutgers New Jersey Medical School	Poster Presenter	Male
Yeom, Jinki	Seoul National University	Poster Presenter	Male
Yu, Victor	University of Connecticut Health	Poster Presenter	Male
Zamarreño Beas, Jordi	Universidade Nova de Lisboa	Poster Presenter	Male
Zeinert, Rilee	National Institutes of Health	Poster Presenter	Male
Zhong, Aoshu	National Institute of Child Health and Human Development, NIH, USA	Poster Presenter	Male
Donohue, Timothy J	University of Wisconsin-Madison	Attendee	Male
Feaga, Heather	Cornell University	Attendee	Female
Gueiros Filho, Frederico J	Universidade de Sao Paulo	Attendee	Male
Guldimann, Claudia	LMU Munich	Attendee	Female
Ibba, Michael	Chapman University	Attendee	Male
Imlay, James A	University of Illinois at Urbana-Champaign	Attendee	Male
Kiley, Patricia J	University of Wisconsin-Madison	Attendee	Female
Kokoska, Robert J	DEVCOM Army Research Laboratory - Army Research Office	Attendee	Male
Nguyen, Dao	McGill University	Attendee	Female
Typas, Athanasios	European Molecular Biology Laboratory	Attendee	Male
Wan, Fengyi	Johns Hopkins University	Attendee	Male
Young, Megan K M	University of Wisconsin-Madison	Attendee	Female

## GRS Attendee List

The list of attendees appears below, sorted by the role recorded in their registration record.

Note: Only one primary role is recorded for each registration record, even if the attendee served in multiple roles at the meeting. The recorded role is based on the order of precedence listed below.

Name	Affiliation	Participation	Gender
Dahl, Jan-Ulrik	Illinois State University	Chair	Male
Alnahhas, Razan	Boston University	Speaker	Female
Baskerville, Maia J	Yale University	Speaker	Female
Beagle, Sarah D	Washington University in St. Louis	Speaker	Female
Bermudez, Tomas	Vanderbilt University Medical Center	Speaker	Male
Bouillet, Sophie	NIH	Speaker	Female
Cao, Pengbo	Georgia Institute of Technology	Speaker	Male
Chawla, Ravi	The Scripps Research Institute/Postdoc	Speaker	Male
de Bakker, Vincent	University of Lausanne	Speaker	Male
Hare, Patricia J	UCONN Health	Speaker	Female
Imlay, James A	University of Illinois at Urbana-Champaign	Speaker	Male
Katharios-Lanwermeier, Stefan	National Institutes of Health (NIH)	Speaker	Male
Li, Barry	Rutgers-New Jersey Medical School	Speaker	Male
Martini, Anthony	National Cancer Institute	Speaker	Male
Pollack, Dan	New York University	Speaker	Male
Ponath, Falk	Helmholtz Institute for RNA-based Infection Research (HIRI)	Speaker	Male
Sultana, Sadia	Illinois State University	Speaker	Female
Banh, Dalton V.	The Rockefeller University	Discussion Leader	Male
Choudhary, Divya	University of Oxford	Discussion Leader	Female
Flores, Matthew J	Virginia Polytechnic Institute and State University	Discussion Leader	Male
Fritsch, Verena N.	Freie Universität Berlin, Institute for Microbiology	Discussion Leader	Female
Oshiro, Reid T	University of California - Berkeley	Discussion Leader	Male
Pi, Hualiang	Vanderbilt University Medical Center	Discussion Leader	Female
Zhong, Aoshu	National Institute of Child Health and Human Development, NIH, USA	Discussion Leader	Male
Anderson, Sarah	Washington University in St. Louis	Poster Presenter	Female
Bhatt, Shantanu	Saint Joseph's University	Poster Presenter	Male
Blake, David J	Fort Lewis College	Poster Presenter	Male
Chan, Carissa	Yale School of Medicine	Poster Presenter	Female
Chittrakanwong, Jurairat	Chulabhorn Graduate Institute	Poster Presenter	Female
Ciemiński, John A	Caltech	Poster Presenter	Male
Dumitrescu, Daniel G	Yale University	Poster Presenter	Male
Dupuy, Emile	De Duve Institute - UCLouvain	Poster Presenter	Male
Eaton, Daniel	Harvard Medical School	Poster Presenter	Male

Name	Affiliation	Participation	Gender
Fones, Elizabeth	University of Washington	Poster Presenter	Female
Fung, Danny K	University of Wisconsin-Madison	Poster Presenter	Male
Glasgo, Liz	University of Tennessee, Knoxville	Poster Presenter	Female
Gordon, Elizabeth	Yale University	Poster Presenter	Female
Green, Erin R	Vanderbilt University Medical Center	Poster Presenter	Female
Hackley, Rylee K	Duke University	Poster Presenter	Female
Harrison, Gregory A	Washington University School of Medicine	Poster Presenter	Male
Hooppaw, Anna J	Washington University in St. Louis	Poster Presenter	Female
Khan, Sebastian J	University of South Florida	Poster Presenter	Male
Kim, Lili M	University of California - San Francisco	Poster Presenter	Female
Kim, Soo-Kyoung	University of Maryland	Poster Presenter	Female
Lin, Jordan D	University of Toronto	Poster Presenter	Male
Luttrell, Kerri	University of California, Santa Barbara	Poster Presenter	Female
Marotta, Julianna	Emory University	Poster Presenter	Female
McKeithen-Mead, Saria	MIT	Poster Presenter	Female
McKitterick, Amelia	Harvard Medical School	Poster Presenter	Female
Mishra, Ayushi	Indiana University	Poster Presenter	Female
Mo, Charlie Y.	Rockefeller University	Poster Presenter	Male
Ng, Wei L	Yale University	Poster Presenter	Female
Noel, Hannah	University of Illinois at Chicago	Poster Presenter	Female
Otto, Ryan	The University of Texas Southwestern Medical Center	Poster Presenter	Male
Parks, Anastacia	Harvard Medical School	Poster Presenter	Female
Reasoner, Seth A	Vanderbilt University Medical Center	Poster Presenter	Male
Rychel, Kevin W	University of California San Diego	Poster Presenter	Male
Salemi, Rachel I	University of Wisconsin -- Madison	Poster Presenter	Non-Binary
Sass, Thalia H	Brandeis University	Poster Presenter	Female
Savage, Christina R	NIH	Poster Presenter	Female
Savinov, Andrew	Massachusetts Institute of Technology	Poster Presenter	Male
Shore, Selene	University of Tennessee, Knoxville	Poster Presenter	Female
Shull, Lauren	University of Washington	Poster Presenter	Female
Smith, Erika	Johns Hopkins University School of Medicine	Poster Presenter	Female
Thongdee, Narumon	National Institute of Child Health and Human Development, NIH	Poster Presenter	Female
Thouvenel, Laurie	de Duve Institute, UCLouvain	Poster Presenter	Female
Trinquier, Aude E	UW Madison	Poster Presenter	Female
Tu, Nicholas H	The Scripps Research Institute	Poster Presenter	Male
VanDrisse, Chelsey M.	California Institute of Technology	Poster Presenter	Female
White, Maria L	University of South Florida	Poster Presenter	Female

Name	Affiliation	Participation	Gender
Wood, Whitney N	Chapman University	Poster Presenter	Female
Zeinert, Rilee	National Institutes of Health	Poster Presenter	Male
Orr, Mona W	Amherst College (Mona Wu Orr)	Attendee	Female
Sarsani, Vishal	University of Massachusetts Amherst	Attendee	Male