GORDON RESEARCH CONFERENCES
FINAL PROGRESS REPORT
SFRR-E
Project title: Support for the 2023 Nitric Oxide Gordon Research Seminar

To whom it may concern,

The Gordon Research Seminar (GRS) on Nitric Oxide were held at the Ventura Beach Marriott in Ventura, California from February 11-12, 2023. The meeting covered a variety of scientific topics and the content presented was highly rated by participants. The Seminar was well-attended with 42 participants. Students and post docs combined accounted for 74% of all attendees. Additional registrants served as mentors at the seminar. Participants ranged from academics, government and academic/industrial. A detailed program has been copied below and can also be found on the meetings website here: 2023 Nitric Oxide (GRS) Seminar GRC.

The Nitric Oxide GRS provided a unique forum for young doctoral and post-doctoral researchers to present their work, discuss new methods, cutting edge ideas, and pre-published data, as well as to build collaborative relationships with their peers. Experienced mentors and trainee moderators facilitated active participation in scientific discussion to allow all attendees to be engaged participants rather than spectators. The 2023 NO GRS focused on interdisciplinary studies and applications of NO. It featured oral and poster presentations on outstanding and unpublished work in broad topic areas including generation, detection and regulation of NO and related reactive species in biological systems. We encouraged trainees in the areas of NO biosynthesis, physiology and signaling to apply as the NO GRS provided a unique opportunity for early career researchers. In addition to scientific discussions and keynote lecture by a distinguished speaker, the NO GRS provided a mentorship panel with representation from academia and industry to explore potential career paths. Participants of the NO GRS were strongly encouraged to attend the parent Nitric Oxide Gordon Research Conference to learn about the latest findings in the field and interface with both rising scholars and pioneering investigators.

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 regarding the interactive and engaging poster sessions, the variety of topics and the diversity of speakers.

Thank you for your generous support of this meeting. 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.

Sincerely,

Erika M. Palmieri -S
Digitally signed by Erika M. Palmieri -S
Date: 2023.12.14 13:59:40 -05'00'

Dr. Erika Palmieri, GRS Chair
National Cancer Institute at Frederick, NIH, United States

Dr. Emily Stevenson, GRS Chair
Rutgers, The State University of New Jersey, United States

Nitric Oxide (GRS)
Gordon Research Seminar

Biology and Chemistry of NO and Reactive Species in Physiology and Pathology

February 11 - 12, 2023

Chairs Erika M. Palmieri and Emily R. Stevenson

Ventura Beach Marriott

2055 Harbor Boulevard

Ventura, CA, United States

Conference Description

The Nitric Oxide GRS provides a unique forum for young doctoral and post-doctoral researchers to present their work, discuss new methods, cutting edge ideas, and pre-published data, as well as to build collaborative relationships with their peers. Experienced mentors and trainee moderators will facilitate active participation in scientific discussion to allow all attendees to be engaged participants rather than spectators.

The 2023 NO GRS will focus on interdisciplinary studies and applications of NO. It will feature oral and poster presentations on outstanding and unpublished work in broad topic areas including generation, detection and regulation of NO and related reactive species in biological systems. We encourage trainees in the areas of NO biosynthesis, physiology and signaling to apply as the NO GRS will provide a unique opportunity for early career researchers. In addition to scientific discussions and keynote lecture by a distinguished speaker, the NO GRS will provide a mentorship panel with representation from academia and industry to explore potential career paths.

Participants of the NO GRS are strongly encouraged to attend the parent Nitric Oxide Gordon Research Conference to learn about the latest findings in the field and interface with both rising scholars and pioneering investigators.

Conference Program

Saturday

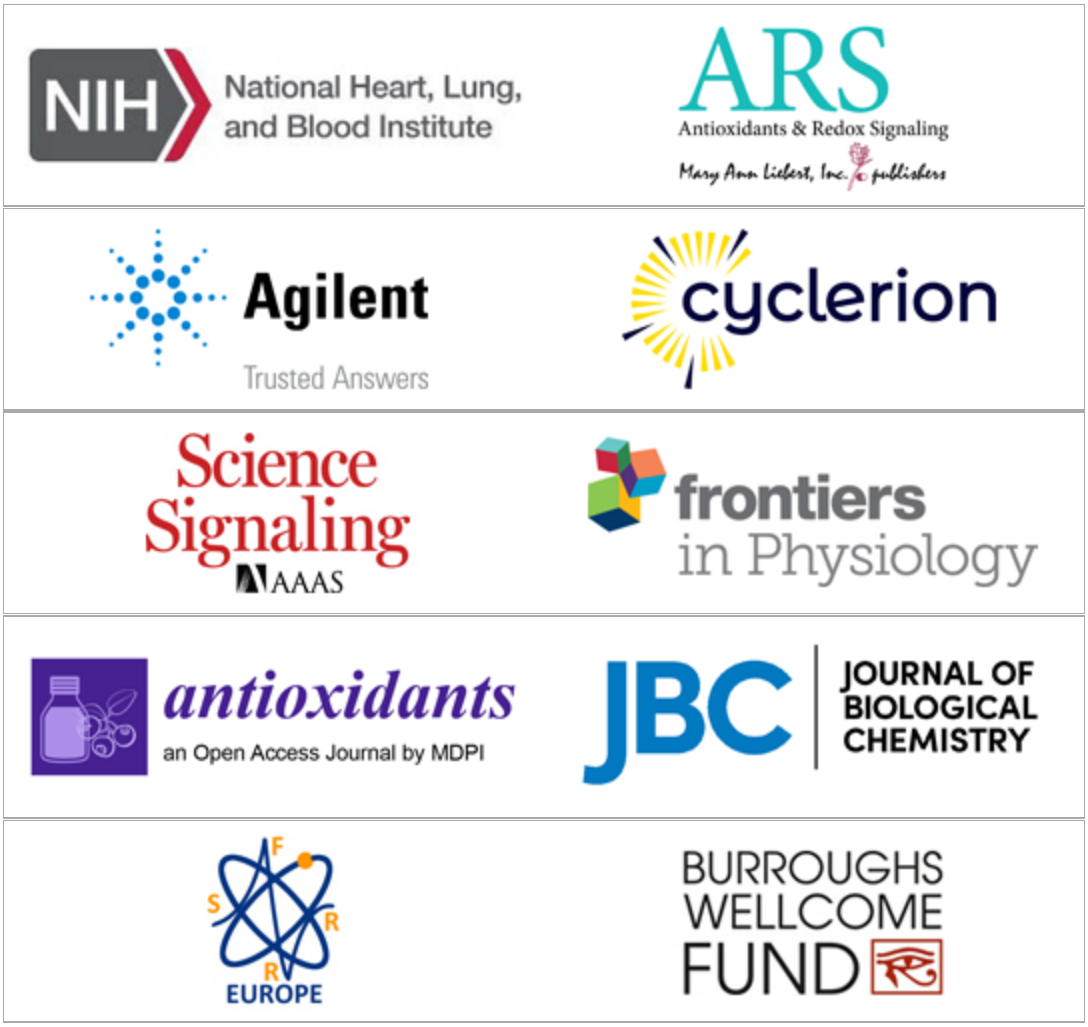
1:00 pm - 5:00 pm	Arrival and Check-in
3:30 pm - 3:45 pm	Introductory Comments by GRC Staff / Welcome and Introduction from the Chairs

3:45 pm - 4:30 pm	**Keynote Session: Cracking the Code of Clinical Translation of Nitric Oxide Science** Discussion Leader: **Ben Gaston** (Indiana University School of Medicine, United States)
3:45 pm - 4:20 pm	**Nathan Bryan** (Nitric Oxide Innovations, LLC, United States) "Cracking the Code of Clinical Translation of Nitric Oxide Science"
4:20 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	**Chemical biology of Nitric Oxide and Reactive Species** Discussion Leaders: **Zohreh Safari** (University of Maryland School of Medicine, United States) and **Ramesh Chennupati** (Universitätsklinikum Düsseldorf, Germany)
7:30 pm - 7:40 pm	**Lauryn Ridley** (NIAID, United States) "Using Molecular Modeling and Biochemical Analysis to Examine The Effect of The Sickle Cell Mutation on The Interactions Between Hemoglobin and eNOS"
7:40 pm - 7:45 pm	Discussion
7:45 pm - 7:55 pm	**Gurneet Sangha** (University of Maryland, United States) "Mechanosensitive Piezo1 Stimulation Increases Red Blood Cell and Endothelial Cell Nitric Oxide Through Different Pathways"
7:55 pm - 8:00 pm	Discussion
8:00 pm - 8:10 pm	**Nicki Dyson** (Queen Mary University of London , United Kingdom) "Nitrite Reductase Activity of Liver-derived Xanthine Oxidoreductase Maintains Cardiovascular Homeostasis"
8:10 pm - 8:15 pm	Discussion
8:15 pm - 8:25 pm	**Titus Gehling** (University of Cologne, Germany) "Nitrite-dependent NO Synthesis in Mitochondria by Sulfite Oxidase"
8:25 pm - 8:30 pm	Discussion
8:30 pm - 8:40 pm	**Matthew Dent** (University of Pittsburgh, United States) "Characterization of a Novel CO Binding Transcription Factor as a CO Poisoning Antidote that Elicits Limited Hypertension in Vivo"
8:40 pm - 8:45 pm	Discussion
8:45 pm - 8:55 pm	**Nicole Colussi** (University of Pittsburgh, United States)

	"Defining the Mechanism of Action for NO_2-CLA: Integration of Phospholipid Substrates and Protein Targets for Signaling in the Context of Inflammation and Ischemia-reperfusion Injury"
8:55 pm - 9:00 pm	Discussion
9:00 pm - 9:10 pm	**Joaquin Ortiz de Zevallos** (University of Virginia, United States) "Sexual Dimorphism in Exercise Economy, Exercise Capacity and Skeletal Muscle Contractile Function: Effects of Dietary Nitrate Supplementation"
9:10 pm - 9:15 pm	Discussion
9:15 pm - 9:25 pm	**Ciara O'Neill** (University of Galway, Ireland) "Comparison Of Nitric Oxide Delivery Via No Donors Versus iNOS Overexpression in HER2-Amplified Breast Cancer"
9:25 pm - 9:30 pm	Discussion
Sunday	
7:30 am - 8:30 am	Breakfast
9:00 am - 11:00 am	**Endogenous Nitric Oxide and Signaling Pathways** Discussion Leaders: **Anthea Lo Bue** (Heinrich-Heine University, Germany) and **Ronghua Wang** (University of Pittsburgh School of Medicine, United States)
9:00 am - 9:10 am	**ELISA ZUCCARELLO** (COLUMBIA UNIVERSITY, United States) "Drug Development of Novel Phosphodiesterase 5 Inhibitors for the Therapy of Alzheimer’s Disease"
9:10 am - 9:15 am	Discussion
9:15 am - 9:25 am	**Jeeyoung Lee** (NIH, United States) "Erythropoietin Modulates Heart Function in Obese Mice Requiring Neuronal Nitric Oxide Synthase and Independent of Erythropoiesis"
9:25 am - 9:30 am	Discussion
9:30 am - 9:40 am	**Kai Sun** (Houston Methodist Cancer Center, United States) "Pan-NOS Inhibitor L-NMMA Enhances Antitumor Effect of Docetaxel in Obesity-associated Triple Negative Breast Cancer"
9:40 am - 9:45 am	Discussion
9:45 am - 9:55 am	**Lucas Carvalho** (Karolinska Institutet, Sweden) "Therapeutic Effects of Dietary Amino Acids and Beetroot Extract Supplementation in a Novel Model of Diabetic Nephropathy"
9:55 am - 10:00 am	Discussion
10:00 am - 10:10 am	**Junjie Li** (Heinrich-Heine-University Düsseldorf, Germany)

	"Generation and Phenotyping of RBC Arg1 KO Mice"
10:10 am - 10:15 am	Discussion
10:15 am - 10:25 am	**Haruna Takeda** (Tohoku University, Japan) "Single Cell Multiomics Reveals Polysulfide-Dependent Regulation of Hematopoietic Stem Cell Differentiation"
10:25 am - 10:30 am	Discussion
10:30 am - 10:40 am	**Pia Burboa** (Rutgers Biomedical and Health Sciences, United States) "Inactivation of Inflammation-induced Hyperpermeability is Mediated by eNOS Trafficking"
10:40 am - 10:45 am	Discussion
10:45 am - 10:55 am	**Elise Femino** (National Cancer Institute, United States) "NOS2 and COX2 Expression Correlates with Prognosis of Estrogen Receptor Negative and Triple Negative Breast Cancer"
10:55 am - 11:00 am	Discussion
11:00 am - 12:30 pm	**Poster Session** *Coffee will be served in the poster area from 11:00 am - 11:30 am*
12:30 pm - 1:30 pm	Lunch
1:30 pm - 2:30 pm	**Mentorship Component: Navigating Career Options: Flexibilities, Adaptation and Communication** Discussion Leader: **Matthew Dent** (University of Pittsburgh, United States)
1:30 pm - 2:30 pm	**Panel Discussion** *Intentionally Inclusive Environments for Better Communication* • **Debashree Basudhar** (Bristol Myers Squibb, United States) • **Brant Isakson** (University of Virginia School of Medicine, United States) • **Amrita Ahluwalia** (Queen Mary University of London, United Kingdom) • **Edward Moreira Bahnson** (University of North Carolina at Chapel Hill, United States)
2:30 pm - 3:00 pm	**Evaluation Period** *Complete the GRS Evaluation Forms; Election of Future Chair(s)*
3:00 pm	Seminar Concludes

Contributors



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