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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) 68362-LS-CF.1		
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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 The 2016 Gordon Research Conference on Mitochondria & Chloroplasts assembled an international group of scientists investigating the evolution, biogenesis and quality control of these essential organelles. This GRC brought together investigators working on mitochondria, chloroplasts and non-photosynthetic plastids in animal, plant, algal and fungal systems with interest in: i) evolution and diversity of organelles of endosymbiotic origin (including cyanobacteria and other secondary or even tertiary plastids); ii) transcriptional and translational					
15. SUBJECT TERMS Final Report					
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF ABSTRACT UU	15. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Klaas Van Wijk	
a. REPORT UU	b. ABSTRACT UU			c. THIS PAGE UU	19b. TELEPHONE NUMBER 607-255-3664

Report Title

Final Report: 2016 Mitochondria & Chloroplasts Gordon Research Conference & Gordon Research Seminar

ABSTRACT

The 2016 Gordon Research Conference on Mitochondria & Chloroplasts assembled an international group of scientists investigating the evolution, biogenesis and quality control of these essential organelles.

This GRC brought together investigators working on mitochondria, chloroplasts and non-photosynthetic plastids in animal, plant, algal and fungal systems with interest in: i) evolution and diversity of organelles of endosymbiotic origin (including apicoplasts and other secondary or even tertiary plastids), ii) transcriptional and translational regulation of organelle biogenesis, protein sorting and assembly into holocomplexes, and iii) protein maturation and quality control, as well as removal of organelles during nutrient stress and aging through autophagy or unique vesicular mechanisms. Large scale techniques were discussed because they allow comprehensive analysis of transcriptional regulation of organelle biogenesis (e.g. recognition of 'regulons' and associated transcription factors), retrograde organellar signaling, and protein homeostasis (proteostasis) through analysis of protein degradation (e.g. by metabolic labeling and mass spectrometry). This GRC provided an excellent platform to accelerate discovery of common and unique organellar features and accelerate knowledge transfer between different research communities.

Speakers with international recognition in the field joined young investigators and scientists who have not previously attended this conference. Fifteen short talks were selected from abstracts to showcase emerging late breaking topics, especially from early career investigators. Expert Discussion Leaders guided discussions. Daily poster sessions enriched and stimulated interactions between participants and research communities. This GRC was preceded by a GRS.

The Gordon Research Seminar on Mitochondria and Chloroplasts included seminars on organelle biogenesis, homeostasis, dynamics and signaling. These discussions will help us understand how these organelles are integrated in the complex system of Eukaryotic cells.

Enter List of papers submitted or published that acknowledge ARO support from the start of the project to the date of this printing. List the papers, including journal references, in the following categories:

(a) Papers published in peer-reviewed journals (N/A for none)

<u>Received</u>	<u>Paper</u>
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TOTAL:

Number of Papers published in peer-reviewed journals:

(b) Papers published in non-peer-reviewed journals (N/A for none)

<u>Received</u>	<u>Paper</u>
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TOTAL:

Number of Papers published in non peer-reviewed journals:

(c) Presentations

Number of Presentations:

Non Peer-Reviewed Conference Proceeding publications (other than abstracts):

Received Paper

TOTAL:

Number of Non Peer-Reviewed Conference Proceeding publications (other than abstracts):

Peer-Reviewed Conference Proceeding publications (other than abstracts):

Received Paper

TOTAL:

Number of Peer-Reviewed Conference Proceeding publications (other than abstracts):

(d) Manuscripts

Received Paper

TOTAL:

Number of Manuscripts:

Books

Received Book

TOTAL:

Received Book Chapter

TOTAL:

Patents Submitted

Patents Awarded

Awards

Graduate Students

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
FTE Equivalent:	
Total Number:	

Names of Post Doctorates

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
FTE Equivalent:	
Total Number:	

Names of Faculty Supported

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
FTE Equivalent:	
Total Number:	

Names of Under Graduate students supported

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
FTE Equivalent:	
Total Number:	

Student Metrics

This section only applies to graduating undergraduates supported by this agreement in this reporting period

The number of undergraduates funded by this agreement who graduated during this period:

The number of undergraduates funded by this agreement who graduated during this period with a degree in science, mathematics, engineering, or technology fields:.....

The number of undergraduates funded by your agreement who graduated during this period and will continue to pursue a graduate or Ph.D. degree in science, mathematics, engineering, or technology fields:.....

Number of graduating undergraduates who achieved a 3.5 GPA to 4.0 (4.0 max scale):.....

Number of graduating undergraduates funded by a DoD funded Center of Excellence grant for Education, Research and Engineering:.....

The number of undergraduates funded by your agreement who graduated during this period and intend to work for the Department of Defense

The number of undergraduates funded by your agreement who graduated during this period and will receive scholarships or fellowships for further studies in science, mathematics, engineering or technology fields:.....

Names of Personnel receiving masters degrees

<u>NAME</u>
Total Number:

Names of personnel receiving PHDs

<u>NAME</u>
Total Number:

Names of other research staff

<u>NAME</u>	<u>PERCENT SUPPORTED</u>
FTE Equivalent:	
Total Number:	

Sub Contractors (DD882)

Inventions (DD882)

Scientific Progress

Technology Transfer



GORDON RESEARCH CONFERENCES

FINAL PROGRESS REPORT

Army Research Office

Grant Number W911NF-16-1-0020

Mitochondria & Chloroplasts GRC/GRS

June 18-24, 2016

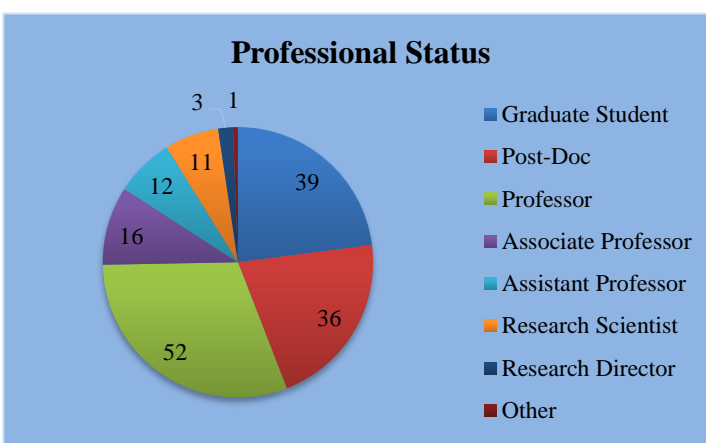
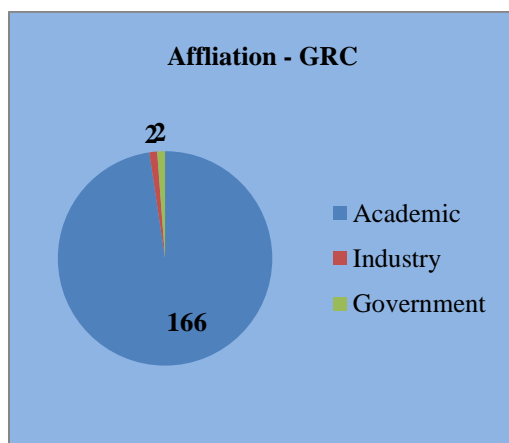
Operational Summary

The Gordon Research Conference (GRC) and Gordon Research Seminar (GRS) on Mitochondria & Chloroplasts were held at the Mount Snow Conference Center in West Dover, Vermont from June 18-24, 2016. The meeting covered a variety of scientific topics and the content presented was highly rated by participants.



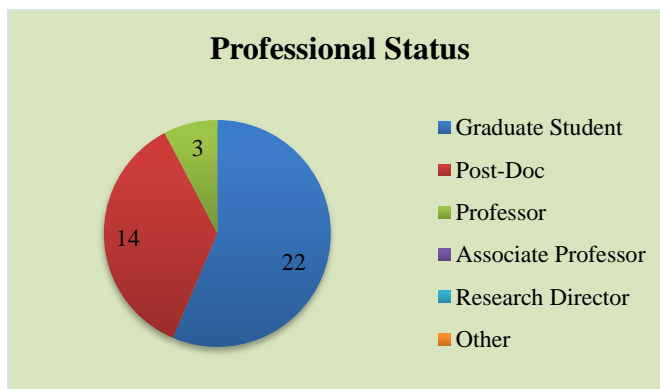
Conference Participants

The Conference was well-attended with 170 participants. Scientists from academia represented 98% of the participants while attendees from government accounted for 1% and those from industry totaled 1%. The meeting also attracted a strong mix of young investigators and senior scientists. Students and post-docs accounted for 44% of all attendees. Approximately 36% of the participants at the 2016 meeting were women.



Seminar Participants

The Seminar was well-attended with 39 participants. Scientists from academia represented 100% of the participants. Students and post docs combined accounted for 92% of all attendees. Approximately 51% of the participants at the 2016 seminar were women.



Conference Program

The 2016 Gordon Research Conference on Mitochondria & Chloroplasts assembled an international group of scientists investigating the evolution, biogenesis and quality control of these essential organelles.

This GRC brought together investigators working on mitochondria, chloroplasts and non-photosynthetic plastids in animal, plant, algal and fungal systems with interest in: i) evolution and diversity of organelles of endosymbiotic origin (including apicoplasts and other secondary or even tertiary plastids), ii) transcriptional and translational regulation of organelle biogenesis, protein sorting and assembly into holocomplexes, and iii) protein maturation and quality control, as well as removal of organelles during nutrient stress and aging through autophagy or unique vesicular mechanisms. Large scale techniques were discussed because they allow comprehensive analysis of transcriptional regulation of organelle biogenesis (e.g. recognition of 'regulons' and associated transcription factors), retrograde organellar signaling, and protein homeostasis (proteostasis) through analysis of protein degradation (e.g. by metabolic labeling and mass spectrometry). This GRC provided an excellent platform to accelerate discovery of common and unique organellar features and accelerate knowledge transfer between different research communities.

Speakers with international recognition in the field joined young investigators and scientists who have not previously attended this conference. Fifteen short talks were selected from abstracts to showcase emerging late breaking topics, especially from early career investigators. Expert Discussion Leaders guided discussions. Daily poster sessions enriched and stimulated interactions between participants and research communities. This GRC was preceded by a GRS.

The Gordon Research Seminar on Mitochondria and Chloroplasts included seminars on organelle biogenesis, homeostasis, dynamics and signaling. These discussions will help us understand how these organelles are integrated in the complex system of Eukaryotic cells.

Conference Budget

Funding provided by the Army Research Office supported partial registration for 2 graduate students, 6 professors and 1 research scientist at the GRC and partial registration for 3 graduate students and 2 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 from the GRC included numerous positive remarks regarding the topic selection, quality of speakers, interactions among attendees, and the poster sessions. Evaluations from the attendees at the GRS included comments about the networking opportunities, quality of speakers and poster presentations.

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

Dr. Klaas Van Wijk, GRC Chair
Cornell University

Dr. Elden Rowland, GRS Chair
Cornell University

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

Mitochondria & Chloroplasts

Gordon Research Conference

Evolution, Biogenesis and Quality Control of Organelles of Endosymbiotic Origin

June 19-24, 2016

Mount Snow
West Dover, VT

Chair: [Klaas J. Van Wijk](#)

Vice Chair: [Johannes M. Herrmann](#)

Contributors



ELSEVIER



Meeting Program

Sunday

2:00 pm - 9:00 pm	Arrival and Check-in
6:00 pm	Dinner
7:30 pm - 7:40 pm	Welcome / Introductory Comments by GRC Site Staff
7:40 pm - 9:30 pm	Organelle Evolution and Diversification Discussion Leader: John Archibald (Dalhousie University, Canada)
7:40 pm - 8:00 pm	Introduction by Discussion Leader
8:00 pm - 8:20 pm	Sven Gould (Heinrich Heine University Düsseldorf, Germany) "The Mitochondrial and Plastid Contribution to Eukaryotic Membrane Complexity"

8:20 pm - 8:30 pm Discussion

8:30 pm - 8:50 pm **Ross Waller** (University of Cambridge, United Kingdom)
"Plastid Gain, Loss and Rebirth in Alveolate Protists"

8:50 pm - 9:00 pm Discussion

9:00 pm - 9:20 pm **Geoffrey McFadden** (University of Melbourne, Australia)
"Apicomplexa and Apicoplasts"

9:20 pm - 9:30 pm Discussion

Monday

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm **Organelle DNA and RNA**
Discussion Leader: **Maureen Hanson** (Cornell University, USA)

9:00 am - 9:10 am Introduction by Discussion Leader

9:10 am - 9:20 am Selected from Poster Abstracts: **Inge Kuehl** (Max Planck Institute for
Biology of Ageing, Germany)
"POLRMT Regulates the Switch Between Replication-Primer Formation
and Gene Expression of Mammalian mtDNA"

9:20 am - 9:25 am Discussion

9:25 am - 9:35 am Selected from Poster Abstracts: **Jose Gualberto** (Plant Molecular Biology
Institute (IBMP), CNRS, France)
"The RECG1 DNA Translocase Is a Key Factor in Recombination
Surveillance, Repair, and Segregation of the Mitochondrial DNA in
Arabidopsis"

9:35 am - 9:40 am Discussion

9:40 am - 10:00 am **Dmitry Terniakov** (Rowan University, USA)
"Mitochondrial Transcription: Around the 'Circle of Surprise'"

10:00 am - 10:10 am Discussion

10:10 am - 10:25 am Selected from Poster Abstracts: **Torsten Ochsenreiter** (University of Bern,
Switzerland)
"The Mitochondrial Genome Segregation Machinery in Trypanosomes"

10:25 am - 10:30 am Discussion

10:30 am - 11:00 am	Coffee Break
11:00 am - 11:20 am	Toshiharu Shikanai (Kyoto University, Japan) "Evolution of PPR Proteins"
11:20 am - 11:30 am	Discussion
11:30 am - 11:40 am	Selected from Poster Abstracts: Stephane Bentolila (Cornell University, USA) "More than PPR Proteins: The Complexity of Plant RNA Editosomes"
11:40 am - 11:45 am	Discussion
11:45 am - 11:55 am	Selected from Poster Abstracts: Pal Maliga (Rutgers University, USA) "Plastid Transformation in <i>Arabidopsis</i> "
11:55 am - 12:00 pm	Discussion
12:00 pm - 12:20 pm	Aleksandra Trifunovic (University of Cologne, Germany) "The Role of ClpP in the Regulation of Mitochondrial Protein Synthesis"
12:20 pm - 12:30 pm	Discussion
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	<u>Poster Session</u>
6:00 pm	Dinner
7:30 pm - 9:30 pm	Protein Synthesis in Organelles Discussion Leader: Francis-Andre Wollman (Institut de Biologie Physico-Chimique (IBPC), CNRS, France)
7:30 pm - 7:40 pm	Introduction by Discussion Leader
7:40 pm - 8:00 pm	Alexey Amunts (Science for Life Laboratory, Sweden) "The Mitochondrial Ribosome at High Resolution"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	Alice Barkan (University of Oregon, USA) "Genome-Wide Analyses of Translational Dynamics in Chloroplasts"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:00 pm	Zofia Chrzanowska-Lightowlers (University of Newcastle, United Kingdom)

"Protein Synthesis in Human Mitochondria"

9:00 pm - 9:05 pm Discussion

9:05 pm - 9:25 pm **David Meinke** (Oklahoma State University, USA)

"Using Genetics to Explore the Importance of Chloroplast Translation in *Arabidopsis*"

9:25 pm - 9:30 pm Discussion

Tuesday

7:30 am - 8:30 am Breakfast

8:30 am Group Photo

9:00 am - 12:30 pm **Sorting of Organellar Proteins**

Session in honor of Dr. Gottfried Schatz.

Discussion Leader: **Doron Rapaport** (University of Tuebingen, Germany)

9:00 am - 9:10 am Introduction by Discussion Leader

9:10 am - 9:30 am **Carla Koehler** (University of California, Los Angeles, USA)

"Protein Import into Mitochondria"

9:30 am - 9:40 am Discussion

9:40 am - 10:00 am **Masato Nakai** (Osaka University, Japan)

"The Chloroplast Protein Import System: Evolution and Mechanisms"

10:00 am - 10:10 am Discussion

10:10 am - 10:25 am Selected from Poster Abstracts: **Danny Schnell** (Michigan State University, USA)

"Mapping the Molecular Interactions During Protein Import into Chloroplasts"

10:25 am - 10:30 am Discussion

10:30 am - 11:00 am Coffee Break

11:00 am - 11:10 am Selected from Poster Abstracts: **Jan Riemer** (University of Cologne, Germany)

"The Interactome of the Mitochondrial Oxidoreductase Mia40/CHCHD4 Reveals a Link to Mitochondrial Calcium Uptake"

11:10 am - 11:15 am Discussion

11:15 am - 11:25 am	Selected from Poster Abstracts: Dong Wook Lee (Pohang University of Science and Technology, South Korea) "Proline Residues in Transit Peptides Play Crucial Roles During Preprotein Import into Chloroplasts"
11:25 am - 11:30 am	Discussion
11:30 am - 11:50 am	Toshiya Endo (Kyoto Sangyo University, Japan) "Transport of Proteins and Lipids to Mitochondria"
11:50 am - 12:00 pm	Discussion
12:00 pm - 12:20 pm	Danja Schuenemann (Ruhr-University Bochum, Germany) "Transport and Insertion Mechanisms of Thylakoid Membrane Proteins"
12:20 pm - 12:30 pm	Discussion
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	<u>Poster Session</u>
6:00 pm	Dinner
7:30 pm - 9:30 pm	Assembly of Organellar Protein Complexes and Their Cofactors Discussion Leader: Dennis Winge (University of Utah, USA)
7:30 pm - 7:40 pm	Introduction by Discussion Leader
7:40 pm - 8:00 pm	Peter Rehling (University of Gottingen, Germany) "Assembly of Mitochondrial Protein Complexes"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	Sabeeha Merchant (University of California, Los Angeles, USA) "Iron Storage Within and Outside the Plastid"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:00 pm	Eva-Mari Aro (University of Turku, Finland) "Thylakoid Complex Assembly"
9:00 pm - 9:05 pm	Discussion
9:05 pm - 9:25 pm	Ulrich Brandt (Radboud University Nijmegen, The Netherlands) "Complex I - Structure and Assembly"
9:25 pm - 9:30 pm	Discussion

Wednesday

- 7:30 am - 8:30 am Breakfast
- 9:00 am - 12:30 pm **Organelle Signaling**
Discussion Leader: **Eric Shoubridge** (McGill University, Canada)
- 9:00 am - 9:10 am Introduction by Discussion Leader
- 9:10 am - 9:30 am **Cole Haynes** (Memorial Sloan Kettering Cancer Center, USA)
"Retrograde Signaling: Adapting to Mitochondrial Dysfunction via a Mitochondrial UPR"
- 9:30 am - 9:40 am Discussion
- 9:40 am - 9:50 am Selected from Poster Abstracts: **Robert Larkin** (Huazhong Agricultural University, China)
"Reduced Chloroplast Coverage (REC) Genes from *Arabidopsis thaliana* Help to Establish the Size of the Chloroplast Compartment"
- 9:50 am - 9:55 am Discussion
- 9:55 am - 10:15 am **Barry Pogson** (Australian National University, Australia)
"Plastid Retrograde Signalling"
- 10:15 am - 10:25 am Discussion
- 10:25 am - 10:55 am Coffee Break
- 10:55 am - 11:15 am **James Whelan** (La Trobe University, Australia)
"Plant Mitochondrial Signalling and Regulation of Gene Expression"
- 11:15 am - 11:25 am Discussion
- 11:25 am - 11:35 am Selected from Poster Abstracts: **Brendan Battersby** (University of Helsinki, Finland)
"Quality Control of Mitochondrial MT-ATP6 Protein Synthesis Is Required for Membrane Integrity and Organelle Fitness"
- 11:35 am - 11:40 am Discussion
- 11:40 am - 12:00 pm **Agnieszka Chacinska** (International Institute of Molecular and Cell Biology in Warsaw, Poland)
"Retrograde Signaling via Cytosolic Preproteins"
- 12:00 pm - 12:10 pm Discussion

12:10 pm - 12:25 pm	Selected from Poster Abstracts: Guo-Zhang Wu (Max-Planck Institute of Molecular Plant Physiology, Germany) "GUN1, the Central Hub of Retrograde Signaling, Enables Protein Import Under Stress"
12:25 pm - 12:30 pm	Discussion
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	<u>Poster Session</u>
6:00 pm	Dinner
7:00 pm - 7:30 pm	<u>Business Meeting</u> <i>Nominations for the Next Vice Chair; Fill in Conference Evaluation Forms; Discuss Future Site and Scheduling Preferences; Election of the Next Vice Chair</i>
7:30 pm - 9:30 pm	Large Scale Organelle Biology Discussion Leader: Paul Jarvis (University of Oxford, United Kingdom)
7:30 pm - 7:40 pm	Introduction by Discussion Leader
7:40 pm - 8:00 pm	Vamsi Mootha (Harvard University, USA) "Integration of Proteomics and Phylogenetic Profiling to Identify Novel Mitochondrial Factors"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	Sacha Baginsky (University of Halle, Germany) "New Insights into Plastid Protein Import and Its Regulation Through Quantitative Proteomics"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:00 pm	Mike Ryan (Monash University, Australia) "Systems Approaches to Understand Mitochondrial Complex I Assembly"
9:00 pm - 9:05 pm	Discussion
9:05 pm - 9:25 pm	A. Harvey Millar (The University of Western Australia, Australia) "Protein Turnover by Metabolic Labeling and Mass Spectrometry"
9:25 pm - 9:30 pm	Discussion

Thursday

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Organelle Proteostasis Discussion Leader: Andreas Reichert (Heinrich-Heine-Universität Düsseldorf, Germany)
9:00 am - 9:10 am	Introduction by Discussion Leader
9:10 am - 9:30 am	Chris Meisinger (University of Freiburg, Germany) "Proteomic Profiling in Mitochondria"
9:30 am - 9:40 am	Discussion
9:40 am - 9:50 am	Selected from Poster Abstracts: Pedro Teixeira (Stockholm University, Sweden) "Shredding Targeting Peptides in Mitochondria and Chloroplasts"
9:50 am - 9:55 am	Discussion
9:55 am - 10:15 am	Antoni Barrientos (University of Miami Miller School of Medicine, USA) "Insights into the Mitoribosome Assembly Pathway"
10:15 am - 10:25 am	Discussion
10:25 am - 10:55 am	Coffee Break
10:55 am - 11:15 am	Bertrand Friguet (Institut de Biologie Paris-Seine (IBPS), Université Pierre et Marie Curie, France) "Mitochondrial Protein Oxidative Modifications and Maintenance During Aging and upon Oxidative and Metabolic Stress"
11:15 am - 11:25 am	Discussion
11:25 am - 11:35 am	Selected from Poster Abstracts: Steven Glynn (Stony Brook University, USA) "The i-AAA Protease Recognizes Specific Degradation Signals to Control Proteostasis Within the Mitochondrial Intermembrane Space"
11:35 am - 11:40 am	Discussion
11:40 am - 12:00 pm	Kentaro Inoue (University of California, Davis, USA) "Not Just Old Scissors - Function and Regulation of Thylakoidal Processing Peptidase"

12:00 pm - 12:10 pm	Discussion
12:10 pm - 12:25 pm	Selected from Poster Abstracts: Masanori Izumi (Tohoku University, Japan) "Autophagy for the Elimination of Photodamaged Chloroplasts"
12:25 pm - 12:30 pm	Discussion
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	<u>Poster Session</u>
6:00 pm	Dinner
7:30 pm - 9:30 pm	Organelle Autophagy, Aging and Senescence Discussion Leader: Roberta Gottlieb (Cedars-Sinai Medical Center, USA)
7:30 pm - 7:40 pm	Introduction by Discussion Leader
7:40 pm - 8:00 pm	Luca Scorrano (Venetian Institute of Molecular Medicine, University of Padua, Italy) "Mitochondrial Morphology and Apoptosis"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:30 pm	Marisa Otegui (University of Wisconsin-Madison, USA) "Chloroplast Autophagy and the ESCRT Complex"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:00 pm	Richard Youle (National Institute of Neurological Disorders and Stroke, NIH, USA) "Pink1/Parkin-Controlled Mitophagy"
9:00 pm - 9:10 pm	Discussion
9:10 pm - 9:25 pm	Selected from Poster Abstracts: Hagai Abeliovich (Hebrew University of Jerusalem, Israel) "Mechanisms of Selectivity During Stationary Phase Mitophagy"
9:25 pm - 9:30 pm	Discussion

Friday

7:30 am - 8:30 am	Breakfast
9:00 am	Departure

Mitochondria & Chloroplasts (GRS)

Gordon Research Seminar

Endosymbiotic Organelles: Biogenesis, Homeostasis and Integration

June 18-19, 2016

Mount Snow
West Dover, VT

Chairs: [Elden E. Rowland](#) & [Katja Hansen](#)

Contributors



Final Meeting 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 by the GRS Conference Chair |
| 3:45 pm - 4:30 pm | Organelle Biogenesis and Homeostasis
Discussion Leader: Lidia Wrobel (International Institute of Molecular and Cell Biology in Warsaw, Poland) |
| 3:45 pm - 4:00 pm | Piotr Chroscicki (International Institute of Molecular and Cell Biology in Warsaw, Poland)
"Localized Synthesis of Proteins at the Surface of Mitochondria" |
| 4:00 pm - 4:05 pm | Discussion |
| 4:05 pm - 4:20 pm | Anthony Rampello (Stony Brook University, USA)
"Degradation of a Mitochondrial Small Tim Translocase by the i-AAA Protease Is Mediated Through an N-Terminal Recognition Signal" |
| 4:20 pm - 4:25 pm | Discussion |
| 4:25 pm - 4:30 pm | General Discussion |

4:30 pm - 6:00 pm Poster Session

6:00 pm Dinner

7:30 pm - 9:30 pm **Organelle Biogenesis and Homeostasis (*continued*) / Signaling to and from Organelles**

Discussion Leaders: **Moritz Niemann** (University of Bern, Switzerland) and **Juan Camilo Moreno Beltran** (Max Planck Institute of Molecular Plant Physiology, Germany)

7:30 pm - 7:45 pm **Lauri Nikkanen** (University of Turku, Finland)
"Regulation of Chloroplast Biogenesis, Photosynthesis and Metabolism by the Plastidial Thioredoxin Network"

7:45 pm - 7:50 pm Discussion

7:50 pm - 8:05 pm **Sriram Garg** (Heinrich-Heine-Universität Düsseldorf, Germany)
"Role of Charge in Organelle Protein Targeting Evolution"

8:05 pm - 8:10 pm Discussion

8:10 pm - 8:25 pm **Michal Eisenberg-Bord** (Weizmann Institute of Science, Israel)
"Lam6 Regulates the Extent of Contacts Between Organelles"

8:25 pm - 8:30 pm Discussion

8:30 pm - 8:45 pm **Guo-Zhang Wu** (Max-Planck Institute of Molecular Plant Physiology, Germany)
"GUN1, the Central Hub of Retrograde Signaling, Enables Protein Import to Maintain Protein Homeostasis of Chloroplast Under Stress"

8:45 pm - 8:50 pm Discussion

8:50 pm - 9:05 pm **Lidia Wrobel** (International Institute of Molecular and Cell Biology in Warsaw, Poland)
"Traffic Jam at the Mitochondrial Gate"

9:05 pm - 9:10 pm Discussion

9:10 pm - 9:25 pm **Mary Couvillion** (Harvard Medical School, USA)
"Synchronized Translation Across Cellular Compartments During Yeast Mitochondrial Biogenesis"

9:25 pm - 9:30 pm Discussion

Sunday

7:30 am - 8:30 am Breakfast

9:00 am - 11:00 am **Organelle Damage, Repair and Degradation / Organellar Transcription, Translation and Evolution**

Discussion Leaders: **Elden Rowland** (Cornell University, USA) and **Inge Kuehl** (Max Planck Institute for Biology of Ageing, Germany)

9:00 am - 9:15 am **Jun Liu** (Michigan State University, USA)
"A Chloroplast Thylakoid Lumen Protein Maintains Photosystem II Function Under Changing Light Conditions"

9:15 am - 9:20 am Discussion

9:20 am - 9:35 am **Nazmul Bhuiyan** (Cornell University, USA)
"Plastoglobule Localized Metalloprotease PGM48 Is a Positive Regulator of Senescence in *Arabidopsis* Leaves"

9:35 am - 9:40 am Discussion

9:40 am - 9:55 am **Bernard Gutmann** (ARC Centre of Excellence in Plant Energy Biology, University of Western Australia, Australia)
"A Fresh Eye on the Evolution of PPR Proteins in Plants"

9:55 am - 10:00 am Discussion

10:00 am - 10:15 am **Maria Miranda** (Max Planck Institute for Biology of Ageing, Germany)
"Impact on Mitochondrial Function by Increased Levels of Mitochondrial RNA Polymerase"

10:15 am - 10:20 am Discussion

10:20 am - 10:35 am **Xiaowen Shi** (Cornell University, USA)
"Members of the ORRM Family Affect Organellar RNA Editing and Impact Plant Development"

10:35 am - 10:40 am Discussion

10:40 am - 10:55 am **Moritz Niemann** (University of Bern, Switzerland)
"tRNA Import Across the Mitochondrial Outer Membrane of African Trypanosomes Requires the ATOM Complex"

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 Lunch

1:30 pm - 2:30 pm **Mentorship Component: Career Discussion**

Discussion Leader: **Katja Hansen** (Technische Universität Kaiserslautern, Germany)

1:30 pm - 2:30 pm Panel Discussion

"Career Planning in Academics and Work Life Balance"

- **Agnieszka Chacinska** (International Institute of Molecular and Cell Biology in Warsaw, Poland)
- **Johannes Herrmann** (Technische Universität Kaiserslautern, Germany)

2:30 pm - 3:00 pm Evaluation Period

Fill in GRS Evaluation Forms

3:00 pm Seminar Concludes

Mitochondria & Chloroplast GRC – Registration List

Abeliovich, Hagai	Hebrew University of Jerusalem	Speaker	Registered
Ahola, Sofia	CECAD Research Center, University of Cologne	Poster Presenter	Registered
Alexeyev, Mikhail F	University of South Alabama	Poster Presenter	Registered
Amunts, Alexey	Science for Life Laboratory	Speaker	Registered
Archibald, John	Dalhousie University	Discussion Leader	Registered
Aro, Eva-Mari	University of Turku	Speaker	Registered
Baggio, Francesca	Max Planck Institute for Biology of Ageing	Poster Presenter	Registered
Baginsky, Sacha	University of Halle	Speaker	Registered
Bai, Yidong	University of Texas Health Science Center	Poster Presenter	Registered
Banerjee, Rupa	LMU Munich	Poster Presenter	Registered
Barkan, Alice	University of Oregon	Speaker	Registered
Barrientos, Antoni	University of Miami Miller School of Medicine	Speaker	Registered
Bentolila, Stephane P	Cornell University	Speaker	Registered
Bhuiyan, Nazmul H	Cornell University	Poster Presenter	Registered
Blumberg, Amit	Ben Gurion University of the Negev	Poster Presenter	Registered
Bonnefoy, Nathalie	CNRS	Poster Presenter	Registered
Brandt, Ulrich	Radboud University Nijmegen	Speaker	Registered
Braymer, Joseph J	Philipps-University Marburg	Poster Presenter	Registered
Cao, Xupeng	Dalian Institute of Chemical Physics	Poster Presenter	Registered
Castandet, Benoit	Boyce Thompson Institute	Poster Presenter	Registered
Chacinska, Agnieszka	International Institute of Mol Cell Biology, Warsaw	Speaker	Registered
Chroscicki, Piotr	International Institute of Mol Cell Biology, Warsaw	Poster Presenter	Registered
Chrzanowska-Lightowlers	University of Newcastle	Speaker	Registered
Couvillion, Mary T	Harvard Medical School	Poster Presenter	Registered
Dabney-Smith, Carole	Miami University (Ohio)	Poster Presenter	Registered
Danon, Avihai	Weizmann Institute of Science	Poster Presenter	Registered
Day Dowson, A	University of Warwick	Poster Presenter	Registered
Eisenberg-Bord, M	Weizmann Institute of Science	Poster Presenter	Registered
Endo, Toshiya	Kyoto Sangyo University	Speaker	Registered
Englmeier, Robert	Max-Planck-Institute of Biochemistry	Poster Presenter	Registered
Esparza-Perusquia, M	Universidad nacional Autonoma de Mexico	Poster Presenter	Registered
Esson, Heather J	Institute of Parasitology, Biology Centre, ASCR	Poster Presenter	Registered
Feiz, Leila	Boyce Thompson Institute for Plant Research	Poster Presenter	Registered
Fiumera, Heather L	Binghamton University	Poster Presenter	Registered
Flores-Herrera, Oscar	Universidad nacional Autonoma de Mexico	Poster Presenter	Registered
Fontanesi, Flavia	University of Miami	Poster Presenter	Registered

Formosa, Luke	Monash University	Poster Presenter	Registered
Fox, Thomas D	Cornell University	Discussion Leader	Registered
Friguet, Bertrand	Institut de Biologie Paris-Seine (IBPS), Université Pierre et Marie Curie	Speaker	Registered
Funes, Soledad	Universidad Nacional Autonoma de Mexico	Poster Presenter	Registered
Garg, Sriram G	Heinrich-Heine-Universität Düsseldorf	Poster Presenter	Registered
Gimm, J Aura	US Army Research Office	Attendee	Registered
Glerum, Moira	University of Waterloo	Attendee	Registered
Glynn, Steven E	Stony Brook University	Speaker	Registered
Gottlieb, Roberta	Cedars-Sinai Medical Center	Discussion Leader	Registered
Gould, Sven	Heinrich Heine University Düsseldorf	Speaker	Registered
Gruttner, Stefanie	Botanical Institute of the Christian-Albrechts-University Kiel	Poster Presenter	Registered
Gualberto, Jose M	Plant Molecular Biology Institute (IBMP), CNRS	Speaker	Registered
Gutmann, Bernard	ARC Centre of Excellence in Plant Energy Biology, University of Western Australia	Poster Presenter	Registered
Habich, Markus	University of Cologne	Poster Presenter	Registered
Haeussler, Simon	Ludwig-Maximilians-Universität München	Attendee	Registered
Hamon, Marie-Paule	Université Pierre et Marie Curie-Paris VI	Poster Presenter	Registered
Hampton, Marshall	University of Minnesota	Poster Presenter	Registered
Hansen, Katja	Technische Universität Kaiserslautern	Poster Presenter	Registered
Hanson, Maureen R	Cornell University	Discussion Leader	Registered
Harsman, Anke A	University of Bern	Poster Presenter	Registered
Haynes, Cole M	Memorial Sloan Kettering Cancer Center	Speaker	Registered
Herrmann, Johannes M	Kaiserslautern	Vice Chair	Technische Universität Registered
Holland, Robin L	University of Illinois, Urbana-Champaign	Poster Presenter	Registered
Inoue, Kentaro	University of California, Davis	Speaker	Registered
Ishida, Hiroyuki	Tohoku University	Poster Presenter	Registered
Izumi, Masanori	Tohoku University	Speaker	Registered
Jaiswal, Manish	Baylor College of Medicine	Poster Presenter	Registered
Jajoo, Rishi	UC Irvine	Poster Presenter	Registered
Jarvis, Paul	University of Oxford	Discussion Leader	Registered
Jeoun, Un-woo	Ajou University School of Medicine	Poster Presenter	Registered
Jo, Hakryul	Agios Pharmaceuticals, Inc.	Attendee	Registered
Käser, Sandro	University of Bern	Poster Presenter	Registered
Kaufman, Brett A	University of Pittsburgh	Poster Presenter	Registered

Kauppila, Johanna	Max Planck Institute for Biology of Ageing	Poster Presenter	Registered
Kauppila, Timo	Max Planck Institute for Biology of Ageing	Poster Presenter	Registered
Khalimonchuk, Oleh	University of Nebraska-Lincoln	Poster Presenter	Registered
Kim, Hyun-Jung	University of Miami	Poster Presenter	Registered
Kim, Minsoo	University of Massachusetts Amherst	Poster Presenter	Registered
Kmiec, Beata	Stockholm University	Poster Presenter	Registered
Kobayashi, Takehito	Kyushu University	Poster Presenter	Registered
Koehler, Carla	University of California, Los Angeles	Speaker	Registered
Kooij, Taco W.A.	Radboud University Medical Centre	Poster Presenter	Registered
Kuehl, Inge	Max Planck Institute for Biology of Ageing	Speaker	Registered
Kuzmenko, Anton	M.V. Lomonosov Moscow State University	Poster Presenter	Registered
Larkin, Robert	Huazhong Agricultural University	Speaker	Registered
Lee, Dong Wook	Pohang University of Science and Technology	Speaker	Registered
Lee, Junho	Pohang University of Science and Technology	Poster Presenter	Registered
Lee, Young-Kyoung	Ajou university school of medicine	Poster Presenter	Registered
Liao, Jui-Yun	Cornell University	Poster Presenter	Registered
Liu, Jun	Michigan State University	Poster Presenter	Registered
Loiacono, Filomena	Max Planck Institute of Molecular Plant Physiology	Poster Presenter	Registered
Maior, Nunziata	NIH	Poster Presenter	Registered
Maliga, Pal	Rutgers University	Speaker	Registered
Matsuoka, Aki AM	University of Lethbridge	Poster Presenter	Registered
McDermott, James J	University of Oregon	Poster Presenter	Registered
McFadden, Geoffrey	University of Melbourne	Speaker	Registered
Meinke, David	Oklahoma State University	Speaker	Registered
Meisinger, Chris	University of Freiburg	Speaker	Registered
Merchant, Sabeeha	University of California, Los Angeles	Speaker	Registered
Millar, A. Harvey	The University of Western Australia	Speaker	Registered
Min, Seongki	Ajou University School of Medicine	Poster Presenter	Registered
Miranda, Maria	Max Planck Institute for Biology of Ageing	Poster Presenter	Registered
Mishmar, Dan	Ben-Gurion University	Poster Presenter	Registered
Mokranjac, Dejana	University of Munich	Poster Presenter	Registered
Montandon, Cyrille	Cornell University	Poster Presenter	Registered
Mootha, Vamsi	Harvard University	Speaker	Registered
Moreno Beltran, Juan	Max Planck Institute of Molecular Plant Physiology	Poster Presenter	Registered
Nakai, Masato	Osaka University	Speaker	Registered
Nakamura, Sakuya	Tohoku University	Poster Presenter	Registered
Naumenko, Nataliia	University Medical Center Goettingen	Poster Presenter	Registered

Neupane, Nirajan	University of Helsinki	Poster Presenter	Registered
Nielsen, Brent L	Brigham Young University	Poster Presenter	Registered
Niemann, Moritz	University of Bern	Poster Presenter	Registered
Nikkanen, Lauri	University of Turku	Poster Presenter	Registered
Nsiah-Sefaa, Abena	Hudson Institute of Medical Research	Poster Presenter	Registered
O'Brien, Thomas W	University of Florida	Attendee	Registered
Ochsenreiter, Torsten	University of Bern	Speaker	Registered
Osteryoung, Katherine	Michigan State University	Poster Presenter	Registered
Otegui, Marisa	University of Wisconsin-Madison	Speaker	Registered
Owusu-Ansah, Edward	Columbia University Medical Center	Poster Presenter	Registered
Pacheu-Grau, David	University Medical Center Goettingen	Poster Presenter	Registered
Pogson, Barry J	Australian National University	Speaker	Registered
Rampello, Anthony J	Stony Brook University	Poster Presenter	Registered
Rapaport, Doron	University of Tuebingen	Discussion Leader	Registered
Rehling, Peter	University of Gottingen	Speaker	Registered
Reichert, Andreas S	Heinrich-Heine-Universitat Dusseldorf	Discussion Leader	Registered
Richardson, Lynn GI	Michigan State University	Poster Presenter	Registered
Richter, Uwe	University of Helsinki	Poster Presenter	Registered
Riemer, Jan	University of Cologne	Speaker	Registered
Rowland, Elden E	Cornell University	Poster Presenter	Registered
Ryan, Mike	Monash University	Speaker	Registered
Schendzielorz, A	George-August University Goettingen	Poster Presenter	Registered
Schmidt, Jennifer A	Cornell University	Poster Presenter	Registered
Schneider, Andre	University of Bern	Attendee	Registered
Schnell, Danny	Michigan State University	Speaker	Registered
Schon, Eric A	Columbia University	Poster Presenter	Registered
Schuenemann, Danja	Ruhr-University Bochum	Speaker	Registered
Scorrano, Luca	University of Padua	Speaker	Registered
Sen, Aditya	HJF/USUHS	Poster Presenter	Registered
Sheiner, Lilach	University of Glasgow	Poster Presenter	Registered
Shi, Xiaowen	Cornell University	Poster Presenter	Registered
Shikanai, Toshiharu	Kyoto University	Speaker	Registered
Shoubridge, Eric A	McGill University	Discussion Leader	Registered
Si, Yaguang	Agios Pharmaceuticals	Attendee	Registered
Siegmund, Stephanie	Columbia University	Poster Presenter	Registered
Sinzel, Monika	University of Tübingen	Poster Presenter	Registered
Suen, Der-Fen	Academia Sinica, Taiwan	Poster Presenter	Registered

Sun, Yueming K	The University of Western Australia	Poster Presenter	Registered
Sun, Yi	Concordia University	Poster Presenter	Registered
Suomi, Fumi	University of Helsinki	Poster Presenter	Registered
Szibor, Marten	University of Helsinki	Poster Presenter	Registered
Teige, Markus	University of Vienna	Poster Presenter	Registered
Teixeira, Pedro F	Stockholm University	Speaker	Registered
Terniakov, Dmitry	Rowan University	Speaker	Registered
Tetaud, Emmanuel	CNRS	Poster Presenter	Registered
Tikkanen, Mikko	University of Turku	Poster Presenter	Registered
Trifunovic, Aleksandra	University of Cologne	Speaker	Registered
Tyynismaa, Henna Rs	University of Helsinki	Poster Presenter	Registered
Van Wijk, Klaas J	Cornell University	Chair	Registered
Vidoni, Sara	Medical Research Council MBU	Poster Presenter	Registered
Vierling, Elizabeth	University of Massachusetts	Poster Presenter	Registered
Wagener, Nikola	LMU Munich	Attendee	Registered
Waller, Ross	University of Cambridge	Speaker	Registered
Wang, Xu	École polytechnique fédérale de Lausanne	Poster Presenter	Registered
Whelan, James	La Trobe University	Speaker	Registered
Winge, Dennis R	University of Utah	Discussion Leader	Registered
Wollman, Francis-A	Institut de Biologie Physico-Chimique, CNRS	Discussion Leader	Registered
Wrobel, Lidia	International Institute of Mol Cell Biology, Warsaw	Poster Presenter	Registered
Wu, Guo-Zhang	Max-Planck Institute of Molecular Plant Physiology	Speaker	Registered
Yamashita, Akihiro	The University of Tokyo	Poster Presenter	Registered
Yeh, Ellen	Stanford University	Poster Presenter	Registered
Youle, Richard J	NINDS, NIH	Speaker	Registered
Yu, Qiguo	Rutgers University	Poster Presenter	Registered
Zerges, William H	Concordia University, Biology	Poster Presenter	Registered

Mitochondria & Chloroplasts GRS – Registration List

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Chroscicki, Piotr	International Institute of Mol Cell Biology, Warsaw	Speaker	Registered
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Day Dowson, Amanda	University of Warwick	Poster Presenter	Registered
Eisenberg-Bord, M	Weizmann Institute of Science	Speaker	Registered
Englmeier, Robert	Max-Planck-Institute of Biochemistry	Poster Presenter	Registered
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Herrmann, Johannes	Technische Universität Kaiserslautern	Speaker	Registered
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Sinzel, Monika	University of Tübingen	Poster Presenter	Registered
Sun, Yueming K	The University of Western Australia	Poster Presenter	Registered

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Wrobel, Lidia	International Institute of Mol Cell Biology, Warsaw	Speaker	Registered
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