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a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU	UU		Eduardo Groisman
				19b. TELEPHONE NUMBER 203-737-7940	

RPPR Final Report

as of 04-Jun-2020

Agency Code:

Proposal Number: 75046LSCF

Agreement Number: W911NF-19-1-0339

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Principal: N

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

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Report Date: 19-Dec-2019

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Final Report for Period Beginning 20-May-2019 and Ending 19-Sep-2019

Title: 2019 Mechanisms of Microbial Transcription GRC

Begin Performance Period: 20-May-2019

End Performance Period: 19-Sep-2019

Report Term: 0-Other

Submitted By: Nancy Gray

Email: grants@grc.org

Phone: (401) 360-1505

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

STEM Degrees: 0

STEM Participants: 71

Major Goals: The goals of the Mechanisms of Microbial Transcription Gordon Conference is to provide a forum for scientists using different approaches to gather in an effort to understand microbial responses to environmental changes. The conference brings together scientists using a wide range of experimental avenues: from investigation of atomic-level resolution of protein and nucleic acid structures to system and global explorations of microbial physiology and adaptation to changes, as well computational analysis of gene expression behavior. We aim to develop a molecular understanding of microbial adaptations to different conditions so that this information can be harnessed and used for synthetic biology purposes in the engineering of microbes with desired properties.

Accomplishments: The 2019 Mechanisms in Microbial Transcription GRC was a new conference that focused on transcription and its regulation in microbes. Regulation of gene expression at the level of transcription is critical for the response to environmental stimuli, cell-cell communication, and development. Transcription is carried out by a molecular machine called "RNA polymerase," which is highly conserved in sequence, structure and function from bacteria to humans. Regulation of the activity of RNA polymerase is the central node and can occur at multiple steps of the transcription cycle. In recent years, research on microbial transcription has expanded rapidly due to new atomic-level structures of RNA polymerases and their respective transcription factors as well as systems-wide profiling of gene regulatory events. The paradigms that emerge from studies of transcription in microbes inform our understanding of transcription in all cells. In addition, RNA polymerase is a proven target for antimicrobial therapy. Thus, principles that emerge from investigations of RNA polymerase and its regulation in microbial systems permit development of new strategies to control microbial pathogens.

This conference was attended by a diverse group of internationally renowned investigators presenting cutting-edge research related to the central theme of microbial transcription. Attendees expected a wide range of talks from systems-level analysis of transcription in cells to structural and single molecule studies. The meeting also explored RNA-based control, transcriptional networks, and connections between cell topology and gene expression. We encouraged junior scientists to attend this meeting, as there will be numerous opportunities to interact with established investigators, foster new collaborations, and learn the current state of the field. In addition, poster presenters had an opportunity to highlight their posters in 1-2 slides. Short talks were selected from the poster abstracts, giving attendees the opportunity to present within sessions. We encouraged friendly exchange of ideas

RPPR Final Report as of 04-Jun-2020

during the discussion sessions and stimulating scientific discourse and networking during free time and informal gatherings.

Training Opportunities: Speakers, discussion leaders, poster presenters and attendees simultaneously contributed to and benefited from the collective skills and experience shared throughout the conference. The funding provided by was invaluable to the success of the Conference.

Results Dissemination: The final program was posted on the GRC website.

Honors and Awards: Nothing to Report

Protocol Activity Status:

Technology Transfer: Nothing to Report



GORDON RESEARCH CONFERENCES

FINAL PROGRESS REPORT

Army Research Office

Mechanisms of Microbial Transcription GRC

Grant Number W911NF1910339

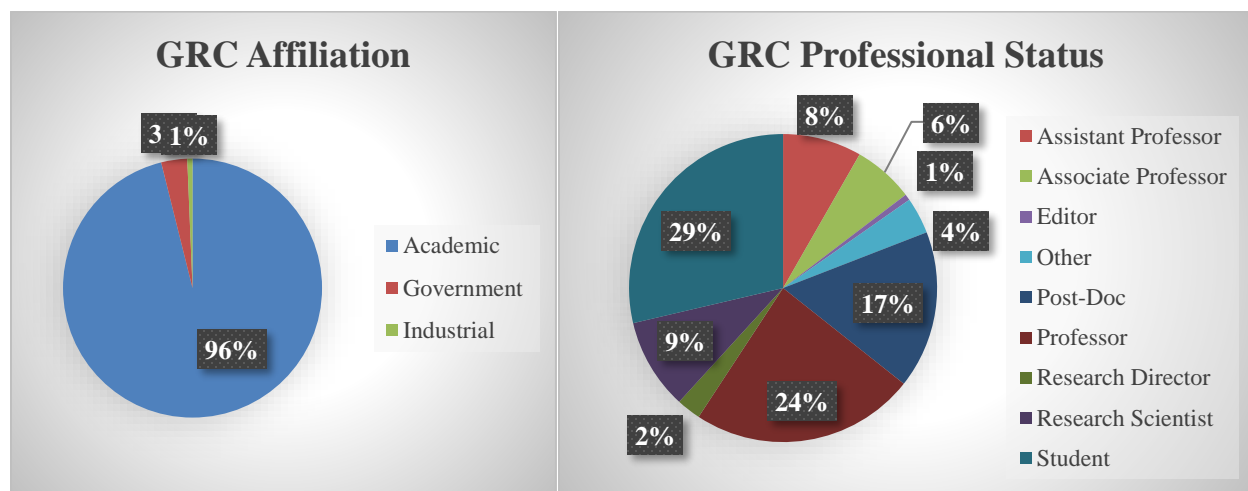
Operational Summary

The *NEW* Gordon Research Conference (GRC) on Mechanisms of Microbial Transcription was held at Bates College in Lewiston, Maine from July 28-August 2, 2019. 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 157 participants. Scientists from academia represented 96% of the participants while attendees from government accounted for 3% 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 45% of all attendees. Approximately 37% of the participants at the 2019 meeting were women.



Conference Program

The 2019 Mechanisms in Microbial Transcription GRC was a new conference that focused on transcription and its regulation in microbes. Regulation of gene expression at the level of transcription is critical for the response to environmental stimuli, cell-cell communication, and development. Transcription is carried out by a molecular machine called "RNA polymerase," which is highly conserved in sequence, structure and function from bacteria to humans. Regulation of the activity of RNA polymerase is the central node and can occur at multiple steps of the transcription cycle. In recent years, research on microbial transcription has expanded rapidly due to new atomic-level structures of RNA polymerases and their respective transcription factors as well as systems-wide profiling of gene regulatory events. The paradigms that emerge from studies of transcription in microbes inform our understanding of transcription in all cells. In addition, RNA polymerase is a proven target for antimicrobial therapy. Thus, principles that emerge from investigations of RNA polymerase and its regulation in microbial systems permit development of new strategies to control microbial pathogens.

This conference was attended by a diverse group of internationally renowned investigators presenting cutting-edge research related to the central theme of microbial transcription. Attendees expected a wide range of talks from systems-level analysis of transcription in cells to structural and single molecule studies. The meeting also explored RNA-based control, transcriptional networks, and connections between cell topology and gene expression. We encouraged junior scientists to attend this meeting, as there will be numerous opportunities to interact with established investigators, foster new collaborations, and learn the current state of the field. In addition, poster presenters had an opportunity to highlight their posters in 1-2 slides. Short talks were selected from the poster abstracts, giving attendees the opportunity to present within sessions. We encouraged friendly exchange of ideas during the discussion sessions and stimulating scientific discourse and networking during free time and informal gatherings.

Conference Budget

Funding provided by the Army Research Office supported partial registration for 3 postdocs and 5 graduate students at the GRC.

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 regarding ample time to discussion patterns, feedback provided at the poster presentations and the stimulating discussions.

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. Elizabeth Campbell, GRC Chair
Rockefeller University

Dr. Eduardo Groisman, GRC Chair
Yale School of Medicine

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

Mechanisms of Microbial Transcription GRC Registration List

Name	Organization	Participation
Adhya, Sankar L	National Cancer Institute, NIH	Discussion Leader
Anderson, Brent	University of Wisconsin-Madison	Poster Presenter
Arroyo-Mendoza, Melissa	NIH and Iowa State University	Poster Presenter
Artsimovitch, Irina	Ohio State University	Speaker
Babitzke, Paul	Pennsylvania State University	Discussion Leader
Banerjee, Priyajit	Reginal Centre For Biotechnology	Poster Presenter
Beggs, Grace A	Duke University	Speaker
Belogurov, Georgiy	University of Turku	Speaker
Bergkessel, Megan	California Institute of Technology	Poster Presenter
Binkley, Christiana	University of Wisconsin-Madison	Poster Presenter
Bird, Jeremy G	Rutgers University	Poster Presenter
Blombach, Fabian	University College London	Speaker
Boyaci Selcuk, Hande	The Rockefeller University	Speaker
Brackston, Rowan D	Imperial College London	Poster Presenter
Brennan, Richard G	Duke University School of Medicine	Discussion Leader
Brewer, Joshua	Rockefeller University	Attendee
Brodolin, Konstantin	INSERM	Poster Presenter
Busby, Steve	University of Birmingham	Speaker
Buttner, Mark J	John Innes Centre	Speaker
Cackett, Gwenny A S	University College London	Poster Presenter
Campbell, Elizabeth	Rockefeller University	Chair
Cao, Xinyun	University of Wisconsin Madison	Poster Presenter
Chakraborty, Shweta	National Centre for Biological Sciences (NCBS)	Poster Presenter
Charoenlap, Nisanart	Chulabhorn Research Institute	Poster Presenter
Chen, Xiu-Lan	State Key Laboratory of Microbial Technology, Shandong University	Attendee
Chen, James	The Rockefeller University	Poster Presenter
Cockram, Charlotte A	Institut Pasteur	Poster Presenter
Crosson, Sean D	Michigan State University	Speaker
Danson, Amy E	Imperial College London	Poster Presenter
Darst, Seth A	The Rockefeller University	Speaker
Degen, David	Rutgers University	Poster Presenter
Demey, Lucas M	Michigan State University	Poster Presenter
Dove, Simon L	Boston Children's Hospital	Speaker
Du Toit, Andrea A	Nature Reviews Microbiology	Attendee
Ebright, Richard H	Rutgers University	Speaker
El Syyed, Hafez E	Oxford University, Department of Physics	Poster Presenter
Fei, Jingyi	The University of Chicago	Speaker
Fleming, Eleanor	Harvard Medical School	Poster Presenter
François, Stransky A	Centre de Recherche Interdisciplinaire (CRI Association)	Poster Presenter
Friedman, Larry J	Brandeis University	Poster Presenter
Froom, Ruby M	Rockefeller University	Attendee
Garcia, George A	University of Michigan	Poster Presenter

Gelles, Jeff	Brandeis University	Poster Presenter
Gopalkrishnan, Saumya	University of Wisconsin-Madison	Poster Presenter
Gottesman, Max	Columbia University	Speaker
Gourse, Richard L	University of Wisconsin-Madison	Speaker
Grainger, David	University of Birmingham	Speaker
Groisman, Eduardo A	Yale School of Medicine	Chair
Hao, Min	Imperial College London	Poster Presenter
Hawwari, Abbas	King Abdullah International Medical Research Center	Attendee
Haycocks, James RJ	University of Birmingham	Poster Presenter
Henry, Kemardo K	University of Wisconsin-Madison	Poster Presenter
Hillen, Hauke S.	Max Planck Institute for Biophysical Chemistry	Speaker
Hinton, Deborah M	National Institute of Diabetes and Digestive and Kidney Diseases, NIH	Speaker
Hochschild, Ann	Harvard Medical School	Speaker
Hohng, Sungchul	Seoul National University	Poster Presenter
Huang, Yongheng	Freie Universität Berlin	Poster Presenter
Hustmyer, Christine M	University of Wisconsin	Poster Presenter
Jain, Deepti	Regional Centre for Biotechnology	Speaker
Jaramillo Cartagena, Alexis	The Rockefeller University	Poster Presenter
Jensen, Drake	Washington University School of Medicine	Poster Presenter
Johnson, Grace	Massachusetts Institute of Technology	Poster Presenter
Ju, Xiangwu	The Rockefeller University	Poster Presenter
Kang, Jin Young	Korea Advanced Institute of Science and Technology	Poster Presenter
Kapanidis, Achillefs	University of Oxford	Speaker
Knauer, Stefan H	University of Bayreuth	Poster Presenter
Konovalov, Kirill A	HKUST	Poster Presenter
Kotta-Loizou, Ioly	Imperial College London	Poster Presenter
Kryptou, Aimilia	Yale University	Poster Presenter
Lagator, Mato	University of Manchester	Poster Presenter
Landick, Robert	University of Wisconsin-Madison	Speaker
Li, Gene-Wei	Massachusetts Institute of Technology	Speaker
Lilic, Mirjana	Rockefeller University	Poster Presenter
Lin, Chih-Tsung	Rutgers University/Waksman Institute of Microbiology	Poster Presenter
Liu, Tina Y	University of California, Berkeley	Speaker
Liu, Yu	Waksman Institute	Poster Presenter
Liu, Shixin	The Rockefeller University	Speaker
Llewellyn, Eliza C	Rockefeller University	Attendee
Lundgren, Benjamin R	State University of New York - College of Environmental Science and Forestry	Poster Presenter
Mäkinen, Janne J	University of Turku	Poster Presenter
Malone, Brandon F	Rockefeller University	Attendee
Mandell, Zachary F	Penn State University	Attendee
McQuail, Josh	Imperial College London	Speaker
Michalet, Xavier	UCLA	Poster Presenter
Mishanina, Tatiana V	University of California San Diego	Poster Presenter
Molodtsov, Vadim	Rutgers University	Poster Presenter
Mongkolsuk, Skorn	Chulabhorn Research Institute, Laboratory of Biotechnology	Attendee

Mooney, Rachel	University of Wisconsin	Poster Presenter
Morita, Teppei	Suzuka University of Medical Science	Poster Presenter
Murakami, Katsuhiko	Pennsylvania State University	Speaker
Murayama, Yuko	RIKEN BDR	Poster Presenter
Nickels, Bryce	Rutgers University	Vice Chair
Ostrofet, Eugeniu	Interdisciplinary Center for Clinical Research, Friedrich Alexander University Erlangen-Nürnberg	Poster Presenter
Patel, Smita S	Rutgers University	Speaker
Peterson, Celeste N	Suffolk University	Poster Presenter
Pilotto, Simona	UCL	Poster Presenter
Plaskon, Dylan	University of Wisconsin-Madison	Poster Presenter
Portman, James R	Centre de Recherche Interdisciplinaires (CRI Association)	Poster Presenter
Qayyum, Mohammad Z	The Pennsylvania State University	Poster Presenter
Ragazzone, Nicholas J	The University of Michigan	Speaker
Ramsey, Kathryn M	University of Rhode Island	Attendee
Rasouly, Aviram	NYU/HHMI	Poster Presenter
Roberts, Jeffrey W	Cornell University	Speaker
Ross, Wilma E	University of Wisconsin-Madison	Discussion Leader
Rothman-Denes, Lucia B.	The University of Chicago	Discussion Leader
Saba, Johnson J	UW-Madison	Poster Presenter
Saecker, Ruth M	The Rockefeller University	Poster Presenter
Said, Nelly	Freie Universität Berlin	Poster Presenter
Sanchez, Kevin	University of Notre Dame	Poster Presenter
Sanders, Travis J	Colorado State University	Poster Presenter
Santangelo, Thomas J	Colorado State University	Speaker
Sastry, Anand V	University of California, San Diego	Poster Presenter
Savery, Nigel	University of Bristol	Poster Presenter
Schumacher, Maria A	Duke University	Speaker
Sekine, Shun-ichi	RIKEN	Poster Presenter
Sen, Ranjan	Centre for DNA Fingerprinting and Diagnostics	Speaker
Shell, Scarlet S	Worcester Polytechnic Institute	Discussion Leader
Shin, Yeonoh	Penn State University	Poster Presenter
Sokolova, Maria L	Skolkovo Institute of Science and Technology	Poster Presenter
Stevenson, Brian	University of Kentucky	Poster Presenter
Storz, Gisela	National Institute of Child Health and Human Development, NIH	Speaker
Strick, Terence R	École Normale Supérieure	Discussion Leader
Sun, Zhe	NCI-Frederick	Poster Presenter
Sunday, Nicholas	The Ohio State University	Poster Presenter
Svenningsen, Sine L	University of Copenhagen	Poster Presenter
Tagami, Shunsuke	RIKEN	Poster Presenter
Temiakov, Dmitry	Thomas Jefferson University	Discussion Leader
Tenenbaum, Debora	Brandeis University	Poster Presenter
Torres, Nathaniel J	University of South Florida	Poster Presenter
Travis, Brady A	Duke University	Poster Presenter
Trouillon, Julian	CNRS - Université Grenoble Alpes	Poster Presenter
Tsang, Jennifer	Addgene	Attendee
Uhm, Heesoo	University of Oxford	Poster Presenter

Unarta, Ilona Christy	The Hong Kong University of Science and Technology	Poster Presenter
Urrutia Irazabal, Iñigo	University of Bristol	Poster Presenter
Vogel, Joerg	Helmholtz Institute for RNA-Based Infection Research	Speaker
Vu, Hoa	Rutgers University	Attendee
Wade, Joseph	Wadsworth Center, New York State Department of Health	Discussion Leader
Wahl, Markus C.	Freie Universität Berlin	Attendee
Wang, Jade	University of Wisconsin-Madison	Speaker
Wang, Bing	Ohio State University	Attendee
wang, chengyuan	Waksman institute	Poster Presenter
Wargo, Matthew J	University of Vermont	Poster Presenter
Warman, Emily A	University of Birmingham	Poster Presenter
Weixlbaumer, Albert	GIE - CERBM	Poster Presenter
Wigneshweraraj, Ramesh	Imperial College London	Vice Chair
Wing, Helen J.	University of Nevada, Las Vegas	Poster Presenter
Winkelman, Jared	Rutgers University	Poster Presenter
Wu, Xiaoxian	CAS Center for Excellence in Molecular Plant Sciences, Chinese Academy of Sciences	Poster Presenter
Yakhnin, Alexander v	Pennsylvania State University	Speaker
Yang, Shuya	Rutgers University-New Brunswick	Poster Presenter
Yin, Liang	University of Washington	Speaker
Zeilstra-Ryalls, Jill	Bowling Green State University	Poster Presenter
Zhang, Yu	Shanghai Institute of Plant Physiology and Ecology, Chinese Academy of Sciences	Poster Presenter
Zhang, Xiaodong	Imperial College London	Speaker
Zhang, Yu-Zhong	State Key Laboratory of Microbial Technology, Shandong University	Attendee
Zuber, Philipp K	Biopolymers, University of Bayreuth	Poster Presenter
157 Attendees		

Mechanisms of Microbial Transcription
Gordon Research Conference
Microbial Transcription from Atomic Resolution to Cellular Landscapes
July 28 - August 2, 2019
Chairs Elizabeth Campbell and Eduardo A. Groisman

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	Keynote Session: The State of Regulation in Microbial Systems Discussion Leader: Sankar Adhya (National Cancer Institute, NIH, USA)
7:40 pm - 7:50 pm	Opening Remarks
7:50 pm - 7:55 pm	Introduction by Discussion Leader
7:55 pm - 8:30 pm	Jeffrey Roberts (Cornell University, USA) "A Historical Perspective on the Discovery of Sigma and the Structure of RNA Polymerase"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:15 pm	Mark Buttner (John Innes Centre, United Kingdom) "c-di-GMP Arms an Anti- σ to Block <i>Streptomyces</i> Development"
9:15 pm - 9:25 pm	Discussion
9:25 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	The Structural Basis of Microbial Transcription Discussion Leader: Lucia Rothman-Denes (The University of Chicago, USA)
9:00 am - 9:25 am	Seth Darst (The Rockefeller University, USA) "Structural Studies of the Bacterial Transcription Cycle"
9:25 am - 9:35 am	Discussion
9:35 am - 9:45 am	Hande Boyaci Selcuk (The Rockefeller University, USA) "Capturing Transcription Initiation Intermediates by Cryo-EM"

9:45 am - 9:50 am	Discussion
9:50 am - 10:15 am	Xiaodong Zhang (Imperial College London, United Kingdom) "Structures and Mechanisms of Sigma54-Dependent Transcription Initiation"
10:15 am - 10:25 am	Discussion
10:25 am - 10:55 am	Coffee Break
10:55 am - 11:20 am	Richard Ebright (Rutgers University, USA) "RNA Polymerase: The Molecular Machine of Transcription"
11:20 am - 11:30 am	Discussion
11:30 am - 11:55 am	Katsuhiko Murakami (Pennsylvania State University, USA) "Structural Study of Archaeal RNA Polymerase Transcription"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	Poster Previews
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
3:00 pm - 4:00 pm	The GRC Power Hour™ <i>The GRC Power Hour™ is designed to address challenges women face in science and issues of diversity and inclusion.</i> <i>The program supports the professional growth of all members of our communities by providing an open forum for discussion and mentoring.</i> Organizers: Deborah Hinton (National Institute of Diabetes and Digestive and Kidney Diseases, NIH, USA) and Scarlet Shell (Worcester Polytechnic Institute, USA)
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Mechanisms of Initiation and Catalysis Discussion Leader: Wilma Ross (University of Wisconsin-Madison, USA)
7:30 pm - 7:55 pm	Steve Busby (University of Birmingham, United Kingdom) "Activation at Simple and Complex Bacterial Promoters"
7:55 pm - 8:05 pm	Discussion
8:05 pm - 8:30 pm	Georgiy Belogurov (University of Turku, Finland) "Sequence-Dependent Control of RNA Polymerase Translocation"

8:30 pm - 8:40 pm

Discussion

8:40 pm - 9:05 pm

Richard Gourse (University of Wisconsin-Madison, USA)
"Transcriptional Responses to ppGpp and DksA"

9:05 pm - 9:15 pm

Discussion

9:15 pm - 9:25 pm

Liang Yin (University of Washington, USA)
"Bacterial Longevity Requires a Stringent Response and a General Stress Response Alternative Sigma Factor"

9:25 pm - 9:30 pm

Discussion

Tuesday

7:30 am - 8:30 am

Breakfast

9:00 am - 12:30 pm

Regulation of Elongation and Termination
Discussion Leader: **Paul Babitzke** (Pennsylvania State University, USA)

9:00 am - 9:25 am

Jingyi Fei (The University of Chicago, USA)
"Dynamic Interactions Between Hfq and RNA in Live Bacterial cells"

9:25 am - 9:35 am

Discussion

9:35 am - 10:00 am

Ranjan Sen (Centre for DNA Fingerprinting and Diagnostics, India)
"The Transcription Terminator Rho, a Pleiotropic Controller of the Bacterial Physiology"

10:00 am - 10:10 am

Discussion

10:10 am - 10:20 am

Alexander Yakhnin (Pennsylvania State University, USA)
"Genome-Wide Identification of NusG-Dependent RNA Polymerase Pausing in *B. subtilis*"

10:20 am - 10:25 am

Discussion

10:25 am - 10:55 am

Coffee Break

10:55 am - 11:20 am

Robert Landick (University of Wisconsin-Madison, USA)
"Structure-Function of Bacterial Transcription Elongation Complex Regulation"

11:20 am - 11:30 am

Discussion

11:30 am - 11:55 am

Achillefs Kapanidis (University of Oxford, United Kingdom)
"*In Vivo* Super-Resolution Imaging of RNA Polymerase Organization and Its Coupling to Translation"

11:55 am - 12:05 pm

Discussion

12:05 pm - 12:30 pm

Poster Previews

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

Transcription in Archaea, Mitochondria and Phage

Discussion Leader: **Dmitry Temiakov** (Thomas Jefferson University, USA)

7:30 pm - 7:55 pm

Smita Patel (Rutgers University, USA)

"Mechanism and Regulation of Mitochondrial RNA Polymerases"

7:55 pm - 8:05 pm

Discussion

8:05 pm - 8:30 pm

Thomas Santangelo (Colorado State University, USA)

"The Archaeal Transcription Termination Factor FttA"

8:30 pm - 8:40 pm

Discussion

8:40 pm - 9:00 pm

Fabian Blombach (University College London, United Kingdom)

"Post-Recruitment Regulation Modulates Transcription in Archaea Globally"

9:00 pm - 9:05 pm

Discussion

9:05 pm - 9:25 pm

Hauke Hillen (Max Planck Institute for Biophysical Chemistry, Germany)

"Structural Basis of Transcription by a Viral Multisubunit RNA Polymerase"

9:25 pm - 9:30 pm

Discussion

Wednesday

7:30 am - 8:30 am

Breakfast

9:00 am - 12:30 pm

Regulatory RNA Networks and Metabolic Control of Transcription

Discussion Leader: **Scarlet Shell** (Worcester Polytechnic Institute, USA)

9:00 am - 9:25 am

Gisela Storz (National Institute of Child Health and Human Development, NIH, USA)

"Astonishing Diversity and Redundancy in Small RNA-Mediated Regulation"

9:25 am - 9:35 am

Discussion

9:35 am - 10:00 am

Gene-Wei Li (Massachusetts Institute of Technology, USA)

"Probing Co-Transcriptional Translation and RNA Processing in *B. subtilis*"

10:00 am - 10:10 am

Discussion

10:10 am - 10:20 am

Josh McQuail (Imperial College London, United Kingdom)

"An Unusual Feature in the Post-Transcriptional Landscape of Long-Term Nitrogen Starved *Escherichia coli*"

10:20 am - 10:25 am

Discussion

10:25 am - 10:55 am	Coffee Break
10:55 am - 11:20 am	Shixin Liu (The Rockefeller University, USA) "Prevalent Bidirectional Transcription Terminators Revealed by Full-Length RNA Profiling in Bacteria"
11:20 am - 11:30 am	Discussion
11:30 am - 11:55 am	Joerg Vogel (Helmholtz Institute for RNA-Based Infection Research, Germany) "Predicting <i>In Vivo</i> Complexes of Proteins and RNA by Grad-Seq"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	Poster Previews
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 <i>Nominations for the Next Vice Chair; Fill in Conference Evaluation Forms; Discuss Future Site and Scheduling</i> <i>Preferences; Election of the Next Vice Chair</i>
7:30 pm - 9:30 pm	Diagnostics and Antimicrobials Discussion Leader: Richard Brennan (Duke University School of Medicine, USA)
7:30 pm - 7:55 pm	Maria Schumacher (Duke University, USA) "Dissection of the Regulatory Circuitry Controlling Virulence in <i>Francisella tularensis</i> "
7:55 pm - 8:05 pm	Discussion
8:05 pm - 8:15 pm	Grace Beggs (Duke University, USA) "Interrogating the Role of MtrR from <i>Neisseria gonorrhoea</i> in Gonococcal Stress Responses"
8:15 pm - 8:20 pm	Discussion
8:20 pm - 8:45 pm	Irina Artsimovitch (Ohio State University, USA) "Activation of Virulence Genes by NusG Paralogs"
8:45 pm - 8:55 pm	Discussion
8:55 pm - 9:20 pm	Ann Hochschild (Harvard Medical School, USA) "Transcription-Based Assays for Detecting Prion Formation"
9:20 pm - 9:30 pm	Discussion

Thursday

7:30 am - 8:30 am Breakfast

9:00 am - 12:30 pm **Regulation of Virulence Genes**
Discussion Leader: **Joseph Wade** (Wadsworth Center, New York State Department of Health, USA)

9:00 am - 9:25 am **Deborah Hinton** (National Institute of Diabetes and Digestive and Kidney Diseases, NIH, USA)
"Both c-di-GMP and Phosphorylation Regulate Activation of *V. cholerae* Biofilm Biogenesis Genes by the Atypical Enhancer Binding Protein VpsR"

9:25 am - 9:35 am Discussion

9:35 am - 10:00 am **Deepti Jain** (Regional Centre for Biotechnology, India)
"Transcription Regulation of Flagellar Gene Expression in *Pseudomonas aeruginosa*"

10:00 am - 10:10 am Discussion

10:10 am - 10:20 am **Nicholas Ragazzone** (The University of Michigan, USA)
"Investigating the Shigella Master Transcriptional Regulator, VirF, as an Anti-Virulence Target"

10:20 am - 10:25 am Discussion

10:25 am - 10:55 am Coffee Break

10:55 am - 11:20 am **Sean Crosson** (Michigan State University, USA)
"Environmental Response Systems in Alphaproteobacteria"

11:20 am - 11:30 am Discussion

11:30 am - 11:55 am **Simon Dove** (Boston Children's Hospital, USA)
"Co-Transcriptional Activities of Post-Transcriptional Regulators in *Pseudomonas aeruginosa*"

11:55 am - 12:05 pm Discussion

12:05 pm - 12:30 pm Poster Previews

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 **Transcriptional Coupling to Chromosomal Processes**
Discussion Leader: **Terence Strick** (École Normale Supérieure, France)

7:30 pm - 7:55 pm

Jade Wang (University of Wisconsin-Madison, USA)
"Resolving Transcription-Replication Conflicts"

7:55 pm - 8:05 pm

Discussion

8:05 pm - 8:30 pm

David Grainger (University of Birmingham, United Kingdom)
"Understanding Intragenic Transcription and Its Consequences"

8:30 pm - 8:40 pm

Discussion

8:40 pm - 8:50 pm

Tina Liu (University of California, Berkeley, USA)
"Target Preference of Type III-A CRISPR-Cas Complexes at the Transcription Bubble"

8:50 pm - 8:55 pm

Discussion

8:55 pm - 9:20 pm

Max Gottesman (Columbia University, USA)
"NusG Couples Transcription with Translation"

9:20 pm - 9:30 pm

Discussion

Friday

7:30 am - 8:30 am

Breakfast

9:00 am

Departure

Contributors



**Gordon Research
Conferences**
Frontiers of Science



**Carl Storm
Underrepresented
Minority Fellowship
Program**



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