



70th Annual Wind River Conference on Prokaryotic Biology

June 17-20, 2026
Beaver Run Conference Center
Breckenridge, Colorado, USA

***Prokaryotic Biology:
~ The Key to Understanding the Complexity of Life ~***

WELCOME TO THE 70th ANNUAL WIND RIVER CONFERENCE ON PROKARYOTIC BIOLOGY JUNE 17-20, 2026

Wind River Executive Committee:

- Dr. Eduardo Robleto, University of Nevada, Las Vegas
- Dr. Helen Wing, University of Nevada, Las Vegas
- Dr. Erin Murphy, Ohio University
- Dr. R. Martin (Marty) Roop, East Carolina University
- Dr. Michael Schurr, University of Colorado Anschutz Medical Campus
- Dr. Shaun Brinsmade, Georgetown University
- Dr. David Fujimoto, Monserate Biotechnology Group

2026 Scientific Program Chair:

- Dr. N. Cecilia Martinez-Gomez, University of California - Berkeley

2027 Scientific Program Chair:

- Dr. David Fujimoto, Monserate Biotechnology Group

Contributions from the following sponsors helped make this year's Wind River conferences possible, and are gratefully acknowledged:

- NIH
- New England BioLabs
- Monserate Biotechnology Group
- Rocky Mountain Branch American Society Microbiology
- UNLV, College of Sciences
- UNLV, School of Life Sciences
- Ohio University Infectious and Tropical Diseases Institute



for



Funding provided by the National Institutes of Health allows us to support the travel of graduate students and post-doctoral fellows to the conference: R13AI183723-01

Special acknowledgements:

- Special thanks are due to Rychelle Tomlin and Whitney Kizer at UNLV for expert administrative assistance.
- Special thanks to all trainees who volunteered their time to help with the meeting.
- Special thanks to Eduardo Robleto and Helen Wing at UNLV for invaluable academic and administrative support.
- Special thanks to the Executive Committee members and previous WR conference conveners for grant writing activities.

Statement of commitment to provide a safe environment

The organizing committee of the Wind River Conference is committed to providing a safe environment for conference attendees.

Expectations of behavior

It is expected that all conference attendees conduct themselves in a professional and respectful manner at all times.

- Harassment of any kind will not be tolerated.
- Examples of harassment behavior can be related to:
 - o Age
 - o Disability
 - o Marital status
 - o Pregnancy
 - o Race/ethnicity
 - o Religion
 - o Sex or gender
 - o Sexual orientation
 - o Any other personal characteristic (such as trans identities, non-binary, physical appearance)
- Types of harassing behavior include (but are not limited to):
 - o Offensive jokes/banter/comments
 - o Ostracizing, “freezing-out”, ignoring, staring
 - o Patronizing comments
 - o Mimicking
 - o Use of derogatory terms
 - o Inappropriate personal comments
 - o Offensive comments about appearance or clothing
 - o Behavior indicating a non-acceptance of other attendees
 - o Inappropriate touching/physical contact

Violations of the expected behavior policy may be reported to the conference organizers in a variety of ways including:

1. Reporting violations confidentially to hotel staff or any other independent third party (e.g., other conference attendee), who will pass the report on to Conference organizers and Conference Chair.
2. Directly reporting the violation (in person or via email) to Conference Chair (ceci-martinez@berkeley.edu) or any member of Conference organizing committee (if comfortable to do so).

Alleged violations of the expected behavior policy will be assessed by the Conference Chair (Dr. N. Ceci Martinez-Gomez) in consultation with the Diversity Liaison officer. If deemed necessary (e.g., following serious allegations) a meeting of the entire organizing committee may be convened to discuss the allegation(s) and consider appropriate consequences. Consequences for violating the expected behavior policy will be dependent on the severity of the infraction. Consequences will range from verbal warning to expulsion from conference and exclusion from future conferences.

Individuals who have questions, concerns, or complaints related to harassment are encouraged to contact the conference chair or the HHS Office for Civil Rights (OCR).

Information on how to file a complaint with HHS OCR can be found at the following web site (<https://www.hhs.gov/civil-rights/filing-a-complaint/index.html>). Please note that filing a complaint with the conference chair is not required before filing a complaint of discrimination with HHS OCR, and that seeking assistance from the conference chair in no way prohibits filing complaints with HHS OCR.

Information on how individuals can notify NIH about concerns of harassment and other forms of inappropriate conduct at NIH-supported conferences can be found at (<https://grants.nih.gov/grants/policy/harassment/find-help.htm>)

An announcement regarding expected behavior will be made by the conference chair at the beginning of the conference. During this announcement will be included in the conference abstract booklet provided to each attendee.

The safety plan will be included in the abstract book provided to all conference attendees. During the opening remarks of the conference, the conference chair will summarize some aspects of the safety plan and draw attention to the complete safety plan in the abstract book.

The organization committee will ensure at least one committee member is present at all talks and poster sessions to monitor for harassing behavior (e.g. aggressive questioning of trainees, belittling of research). If aggressive or inappropriate questions/comments are made the committee member will immediately intervene.

Committee members will also be present at social gatherings and mealtimes and monitor for inappropriate conduct. Committee members will wear specific "Wind River Committee" badges at all times so trainees (who don't necessarily know who the organizers are) can easily identify conference organizers.

THE WIND RIVER HALL OF FAME: *PAST AND PRESENT PLENARY SPEAKERS*

2026	Dr. Wilmara Salgado-Pabon Dr. Clayton Caswell Dr. Denise Akob	University of Wisconsin - Madison Virginia Polytechnic Institute and State University U.S. Geological Survey
2025	Dr. Briana Burton Dr. Katherine Lemon Dr. Carlos Orihuela Dr. Joseph Bondy-Denomy	University of Wisconsin - Madison Baylor College of Medicine University of Alabama – Birmingham University of California- San Francisco
2024	Dr. Kelly Doran Dr. Tamia Harris-Tryon Dr. Marvin Whiteley Dr. Matthew Wolfgang	University of Colorado Anschutz Medical Campus University of Texas Southwestern Medical Center Georgia Institute of Technology University of North Carolina School of Medicine
2023	Dr. Sophie Helaine Dr. Cecilia Martinez-Gomez Dr. Christina Stallings Dr. Michael Federle	Harvard Medical School University of California, Berkeley Washington University School of Medicine University of Illinois at Chicago
2022	Dr. Heran Darwin Dr. Hazel Barton Dr. Angela Wilks Dr. Peggy Cotter	New York University University of Akron University of Maryland, Baltimore University of North Carolina, Chapel Hill
2021	Dr. Beronda L. Montgomery Dr. Michael D. L. Johnson	Michigan State University University of Arizona
2020	<i>Meeting cancelled due to pandemic</i>	
2019	Dr. Christine Jacobs-Wagner Dr. Elizabeth Rucks Dr. Clay Fuqua Dr. Christopher Waters	Yale University University of Nebraska Medical Center Indiana University Bloomington Michigan State University
2018	Dr. Denise M. Monack Dr. Anthony Maurelli Dr. Amy Vollmer Dr. Alfredo Torres	Stanford University University of Florida, Emerging Pathogens Institute Swarthmore College University of Texas Medical Branch at Galveston
2017	Dr. Melody Mills Dr. Catherine Drennan Dr. Matthew Parsek Dr. Forest Rohwer	NIH, NIAID Massachusetts Institute of Technology University of Washington San Diego State University
2016	Dr. Graham Walker Dr. Evgeny Nudler Dr. Victor Nizet Dr. Peter Setlow	Massachusetts Institute of Technology NYU School of Medicine University of California, San Diego University of Connecticut Health Sciences Center
2015	Dr. Victor Torres Dr. Nancy Freitag Dr. David Weiss Dr. Franz Narberhaus	NYU School of Medicine University of Illinois-Chicago Emory University Ruhr University
2014	Dr. Michael Gilmore Dr. Gisela Storz	Harvard Medical School National Institutes of Health

	Dr. Ferran Garcia-Pichel Dr. Barbara Funnell	Arizona State University University of Toronto
2013	Dr. Nina Salama Dr. Shelley Payne Dr. Renee Tsolis Dr. Ralph Isberg	Fred Hutchinson Cancer Institute University of Texas at Austin University of California Davis Tufts University
2012	Dr. David Rudner Dr. Esther Angert Dr. Mark Gomelsky Dr. Dennis A. Bazylinski	Harvard Medical School Cornell University University of Wyoming University of Nevada, Las Vegas
2011	Dr. James Bardwell Dr. Sean Crosson Dr. Jo Handelsman Dr. R. Martin Roop, II	University of Michigan University of Chicago Yale University East Carolina University
2010	Dr. Peter Christie Dr. Richard Gourse Dr. Dan Kearns Dr. Rolf Thauer	University of Texas-Houston Medical School University of Wisconsin University of Indiana Max Planck Institute for Terrestrial Microbiology, Marburg
2009	Dr. Jim Imlay, Dr. Andy Camilli Dr. Jade Wang Dr. Norman Pace	University of Illinois at Urbana-Champaign Tufts University, Howard Hughes Medical Institute Baylor College of Medicine University of Colorado at Boulder
2008	Dr. Roberto Kolter, Dr. Graham Hatfull, Dr. Roberto Belas, Dr. William Jacobs,	Harvard Medical School University of Pittsburgh University of Maryland Albert Einstein College of Medicine
2007	Dr. Jared Leadbetter, Dr. Tina Henkin, Dr. Harry Mobley, Dr. Lynn Zechiedrich,	California Institute of Technology Ohio State University University of Michigan Medical School Baylor College of Medicine
2006	Dr. David Figurski, Dr. Karl E. Klose, Dr. John Helmann, Dr. Victor Dirita,	Columbia University Medical Center University of Texas-San Antonio Cornell University University of Michigan School of Medicine
2005	Dr. Samuel Kaplan, Dr. George O'Toole, Dr. Dianne Newman, Dr. Tom Silhavy,	University of Texas Houston Medical School Dartmouth Medical School California Institute of Technology Princeton University
2004	Dr. Curtis Suttle, Dr. Paul Gollnick, Dr. Heidi Kaplan, Dr. Jorge Galán,	University of British Columbia State University of New York-Buffalo University of Texas Houston Medical School Yale University School of Medicine
2003	Dr. Vincent Fischetti, Dr. Robert Landick, Dr. Bonnie Bassler, Dr. Neil Welker,	Rockefeller University University of Wisconsin Princeton University Northwestern University

2002	Dr. Stephen Farrand, Dr. Barry Wanner, Dr. Sanford A. Lacks, Dr. Janet Yother, Dr. Malcolm Winkler,	University of Illinois-Urbana Purdue University Brookhaven National Laboratory University of Alabama-Birmingham Lilly Research Laboratories
2001	Dr. Kim Lewis, Dr. Austin Newton, Dr. Julie Theriot, Dr. Dale Kaiser,	Tufts University Princeton University Stanford University Stanford University
2000	Dr. Thomas A. Trautner, Dr. Ryland F. Young, Dr. Abigail A. Salyers, Dr. John W. Costerton, Dr. Tony Romeo,	Max-Planck Institute for Molecular Genetics Texas A&M University University of Illinois Montana State University University of North Texas Health Science Center
1999	Dr. Frederick Neidhardt, Dr. Olaf Schneewind, Dr. Roger W. Hendrix, Dr. Eugene Nester,	University of Michigan University of California at Los Angeles University of Pittsburgh Bacteriophage Institute University of Washington
1998	Dr. Scott Hultgren, Dr. Susan M. Rosenberg, Dr. Mary Lou Guerinot, Dr. Peter Greenberg,	Washington University School of Medicine Baylor College of Medicine Dartmouth College University of Iowa
1997	Dr. Malcolm Winkler, Dr. John Baross, Dr. Philip Harriman, Dr. Susan Golden,	University of Texas Houston Medical School University of Washington National Science Foundation Texas A&M University

Welker-Streips Memorial Plenary Address

Neil E. Welker left us after a short, but brave, battle with cancer on Wednesday, Aug. 11, 2004, at age 72. Neil, born in Darien Center, NY on April 21, 1932, received his PhD from Western Reserve in Cleveland, OH, and moved to the Chicago area where he was a Professor of Biochemistry, Molecular Biology, and Cell Biology at Northwestern University in Evanston, IL from 1964 to present. He is noted for promoting excellence in undergraduate science education and supporting students' participation in the Wind River Conference each year in Colorado. He was one of the original participants in the Wind River Conference, originally called The Transformation Meetings. Neil is survived by his loving wife, Fatima Vilich, and her children, Ines and Adis Kurtovic; his three children, Thomas and Douglas Welker and Jennifer Burger and their spouses and children; his three stepchildren, Don and Jon Pollack and JoAnn Carbray and their spouses and children; his sister, Arlene Coccari and brother, Wallace Welker and their spouses, children and grandchildren; and numerous nieces and nephews.

In February 2019, the Wind River Conference on Prokaryotic Biology lost another friend, Dr. **Uldis Streips**. Uldis was Born in Riga, Latvia on February 1, 1942. In 1944, Uldis, his parents Hugo and Elenora Streips, and older brother Laimonis fled from their homeland due to war. With nowhere to go, his family lived in displaced persons camps in Germany and Poland for seven years. They came to the US in 1951 and eventually settled in Chicago. He graduated from Valparaiso University in 1964 with a B.A. in Biology and Chemistry and then entered Northwestern University where he worked on his Ph.D. in the laboratory of Dr. Neil Welker. Uldis received his doctoral degree in 1969 and then pursued postdoctoral studies in the laboratory of Dr. Frank E. Young (another founding member of the Transformation Meetings), first located at Scripps Clinic and Research Foundation, and then at the University of Rochester, School of Medicine and Dentistry, where he met his future wife, Patricia Williams. In 1972, Uldis became an Assistant Professor of Microbiology at the University of Louisville, Medical Center and was promoted to Associate Professor in 1978 and Professor in 1988. He remained at UL until his retirement in 2017. Uldis received several teaching awards, as well as the AMWA Gender Equity Award. His commitment to medical and graduate student education was specifically recognized by his university and carried over to the leadership and guidance he provided during his entire career at the Wind River Conference. Uldis was the Executive Director of the Conference from 1968 to 2016. He worked tirelessly to keep the conference moving forward as a place where students would be of primary importance.

Everything Uldis did he did with passion and commitment. This was demonstrated most clearly by his commitment to his family; his wife Pat, his daughter Krista, his son, daughter-in-law, and grandchildren Krisjans, Sarah, Anja, Zander, Nora & Maia, respectively. Uldis never forgot his Latvian heritage or his love of music. He worked to help Latvia before and after it gained independence from the Soviet Union and was recognized for his tireless work by being made a member of the Latvian Academy of Science. He mentored 17 M.S. and doctoral students who trained under him while he was at UL. He also guided countless number of medical students. For 40 years, Uldis was a proud, loyal bass guitarist, vocalist, and comedian for the band Cikagas-Piecisi, as it grew from its Latvian roots into international fame. Uldis was truly a mensch and he is missed.

In honor of these two extraordinary scientists and mentors, the trainees who attended previous Wind River conferences helped select an outstanding scientist and mentor to give the **Welker-Streips Memorial Plenary Address**. This year's Welker-Streips speaker, **Professor Kelly Doran, University of Colorado, Anschutz Medical Campus**, is known for her dedication to effective mentorship and promoting an inclusive and diverse environment in academic research. We are truly honored and appreciate her participation in this year's conference.



3:00-6:00 PM Registration

6:30-8:00 PM	Dinner & Opening remarks
--------------	--------------------------

9:00 PM + Informal Networking

8:00-8:30 AM Breakfast provided

8:30–8:45 AM

Molecular Mechanisms Determining Rare Earth Element Selectivity in Bradyrhizobium, Sinorhizobium, and Methylobacterium During Methanol Metabolism

8:45–9:15 AM

Douglas D. Risser

Functional Genomics Tools for the Model Filamentous Cyanobacterium *Nostoc punctiforme*

9:15–9:30 AM

Elizabeth Huezo

Uncovering the Role of the Novel Co-Component Signal Transduction System in *Shigella flexneri*

9:30–9:45 AM

Subarna Roy

Battle for Metals: How *Yersinia pestis* Outsmarts Host Calprotectin



9:45–10:00 AM

Jessica Grifaldo

Antibiotic Resistance as Regulatory Rewiring: RpoB Mutations Reshape Mfd-Dependent Pathways in Bacillus subtilis

10:00–10:10 AM

Session Discussion & Questions

10:10–10:40 AM

Coffee Break

Morning Session II

10:40–10:55 AM

Elan Tran

Lanthanide–Iron Imbalance Reveals Functional Divergence of Structurally Similar Metallophores, Methyloanthanin and Rhodopetrobactin B

10:55–11:10 AM

Ryan Hemphill

Regulation of luxR in Vibrio fischeri: Evidence for Antisense RNA-Mediated Repression

11:10–11:40 AM

Trusha Parekh

A Novel Formaldehyde Responsive Protein FlhT Co-Regulates Methylo-trophic Growth with FlhSR in Paracoccus denitrificans

11:40–11:55 AM

Anneliese Wagoner

Characterization of an Intergenic RNA Thermometer Controlling the Post-Transcriptional Regulation of MxiG Production in Shigella dysenteriae

11:55 AM–12:05 PM

Session Discussion & Questions



Afternoon Session I

3:00–3:15 PM

Trinity Reimer

Identification of a Novel Lanthanide-Binding PepSY-Domain Protein in Methylobacterium extorquens AM1

3:15–3:30 PM

Candice Churaman

Shigella c-di-GMP Phosphodiesterases Regulate Virulence and Biofilm Formation

3:30–3:45 PM

Reygan E. Braga

Insights into Calcium Signaling and Its Role in Pseudomonas aeruginosa Host-Cell Interactions

3:45–4:00 PM

Emily S. Brovey

DegQ and SwrA Differentially Modulate Protease Production and Flagellar Motility in Bacillus subtilis

4:00–4:10 PM

Session Discussion & Questions

4:30–6:30 PM

Poster Session

6:30–7:30 PM

Dinner

8:00–9:00 PM

Plenary Lecture

Beyond Superantigenicity: Novel Pathogenic Mechanisms of Staphylococcus aureus Superantigens

Dr. Wilmara Salgado-Pabon

9:00–9:10 PM

Questions & Discussion



9:10 PM+

Informal Networking

Friday, June 19, 2026 – Day 3

8:00-8:30 AM

Breakfast provided

Morning Session III

8:30–8:45 AM

Julia K. Hilliard

Omega-3 Fatty Acid Docosahexaenoic Acid Inhibits Staphylococcus aureus Growth Mediated by FadA β -Oxidation and Alters S. aureus Pathogenesis

8:45–9:15 AM

Alex Alleman

Eco-Evolutionary Dynamics of a Synthetic Methylobacterium Community: Substrate-Driven Assembly and Rapid Adaptation to Stress

9:15–9:30 AM

Rayne Jacob

Investigation of Novel Pathways Controlling the Regulation of VirB Activities in Shigella flexneri

9:30–9:45 AM

Sydney Granack

Exploring the Impact of Surface-Associated Virulence Factors on Hypervirulence in Staphylococcus aureus

9:45–10:00 AM

Sam Golon

Interdisciplinary Aerobiology: Investigating a Potential Role for Glycolipid Biosurfactants in Bioaerosol Generation

10:00–10:10 AM

Session Discussion & Questions

10:10–10:40 AM

Coffee Break



4:30–6:30 PM

Poster Session / Informal Scientific Discussion

6:30–7:30 PM

Dinner

8:00–9:00 PM

Plenary Lecture

Linking Microbial Diversity to Environmental Health in Ecosystems Impacted by Energy Development

Dr. Denise Akob

9:00–9:10 PM

Questions & Discussion

9:10 PM+

Farewell Happy Hour

Saturday, June 20, 2026 — Day 4

7:00–10:30 AM

Breakfast Available

11:00 AM

Hotel Checkout and Departures

Safe Travels Home!



Participants

<u>First Name</u>	<u>Last Name</u>	<u>Institution or Company</u>	<u>Email</u>
Denise	Akob	U.S. Geological Survey	dakob@usgs.gov
Alberto	Alarcon	University of Nevada, Las Vegas	alarca5@unlv.nevada.edu
Alexander	Alleman	Western Colorado University	aalleman@western.edu
Nasibeh	Arabameri	University of Nevada, Las Vegas	nasibeh.arabameri@unlv.edu
Ailea	Blahm	University of Colorado, Colorado Springs	ablahm@uccs.edu
Reygan	Braga	Oklahoma State University	reygan.e.braga@okstate.edu
Emily	Brovey	Indiana University, Bloomington	ebrovey@iu.edu
Rebecca	Burgess	Center for Scientific Review, NIH	rebecca.burgess@nih.gov
Clayton	Caswell	Virginia Tech	caswellc@vt.edu
Candice	Churaman	University of Colorado, Colorado Springs	candicenicole.churaman@wmich.edu
Christine	Cummings	University of Colorado, Colorado Springs	ccummi9@uccs.edu
David	Fujimoto	Monserate Biotech, San Diego	fuji@monseratebiotech.com
Rooba	Gnanagobal	Virginia Tech	hajarroobag@vt.edu
Sam	Gosser-Wolfe	Western Michigan State University	samantha.gosser@wmich.edu
Sydney	Granack	University of South Florida	sgranack@usf.edu
Jessica	Grifaldo	University of Nevada, Las Vegas	grifaldo@unlv.nevada.edu
Jason	Heindl	Rowan University	heindl@rowan.edu
Ryan	Hemphill	University of Illinois Chicago	rhemp2@uic.edu
Julia	Hilliard	University of Colorado, Colorado Springs	Julia.Hilliard@colostate.edu
Elizabeth	Huezo	University of Nevada, Las Vegas	huezoe1@unlv.nevada.edu
Rayne	Jacob	University of Nevada, Las Vegas	jacobr8@unlv.nevada.edu
Mahendar	Kadari	University of Louisville	m0kada01@louisville.edu
Monika	Karney	University of Nevada, Las Vegas	monika.karney@unlv.edu
Waleed	Khursheed	Ohio University	wk141522@ohio.edu
Ben	Koestler	Western Michigan State University	benjamin.koestler@wmich.edu
Anjala	Krishen	University of Nevada, Las Vegas	anjala.krishen@unlv.edu
Jessica	Lysne	Michigan State University	lysnejes@msu.edu
Jillian	Marshall	Virginia Tech	jillianm@vt.edu
Norma Cecilia	Martinez-Gomez	University of California, Berkeley	cecimartinez@berkeley.edu
Nicole	Messner	Colorado University, Anschutz SOM	nicole.messner@cuanschutz.edu
Charlie	Mineo	University of California, Berkeley	charlotte_mineo@berkeley.edu
Anna	Moyer	University of Wisconsin Madison	aemoyer@wisc.edu
Erin	Murphy	Ohio University	murphye@ohio.edu
Toni	Nagy	University of Colorado, Boulder	toni.nagy@colorado.edu
Ruchi	Ojha	University of Chicago	ojharuchi@uchicago.edu
Trusha	Parekh	University of Texas at Dallas	trusha.parekh@utdallas.edu
Hunter	Ray	Ohio University	hr187817@ohio.edu
Trinity	Reimer	University of California, Berkeley	trinity.reimer@berkeley.edu
Douglas	Risser	University of Colorado, Colorado Springs	drisser@uccs.edu



Eduardo	Robleto	University of Nevada, Las Vegas	eduardo.robleto@unlv.edu
Subarna	Roy	University of Louisville	subarna.roy@louisville.edu
Jenna	Ryder	University of Colorado, Colorado Springs	jryder3@uccs.edu
Wilmara	Salgado-Pabon	University of Wisconsin Madison	wsalgado@wisc.edu
Carmen	Sánchez del Solar	University of Colorado, Colorado Springs	carmen.sanchez@ibvf.csic.es
Lindsey	Shaw	University of South Florida	shaw@usf.edu
Gabriel	Strong-Lundquist	University of Nevada, Las Vegas	stronglu@unlv.nevada.edu
Ahmed	Tajudeen	Oklahoma State University	ahmed.tajudeen@okstate.edu
Elan	Tran	University of California, Berkeley	elan_tran@berkeley.edu
Anneliese	Wagoner	Ohio University	aw327020@ohio.edu
Selina	Walker	University of South Florida	selina5@usf.edu
Yahan	Wei	University of Texas Rio Grande Valley	yahan.wei@utrgv.edu
Helen	Wing	University of Nevada, Las Vegas	helen.wing@unlv.edu