

THE 22nd INTERNATIONAL
LAKE ARROWHEAD MICROBIAL GENOMICS CONFERENCE

SCIENTIFIC PROGRAM

September 16-20, 2018
UCLA Conference Center
Lake Arrowhead, California
909 / 337-2478

SUNDAY, SEPTEMBER 16

4:00-6:00 pm Arrival and Check-in at Lake Arrowhead Conference Center
6:15-7:45 pm Dinner (Dining Room)

Opening of Meeting (Pineview Room)

8:00-8:10 pm Jeffrey H. Miller
University of California, Los Angeles
“Welcome: Introduction to Arrowhead”

8:10-8:40 pm Tanja Woyke
DOE Joint Genome Institute, Walnut Creek, CA
“From Single Cells to Giant Viruses”

8:40-9:10 pm Rachel Dutton
University of California San Diego, La Jolla, CA
“Long-read Metagenomics of Fermented Foods”

9:10 pm Reception (Iris Room)

MONDAY, SEPTEMBER 17

7:45-8:30 AM Breakfast (Dining Room)

Opening Session **(Pineview Room)**

8:45-9:00 am Introduction/Announcements

Session I**Microbial Communities I: Microbial Interactions**

Session Chair	Ashlee Earl, Broad Institute MIT and Harvard, Cambridge, MA
9:00-9:30 am	Martin Ackermann ETH Zurich, Switzerland “A Microscale Perspective on Microbial Interactions”
9:30-10:00 am	Lindsay Kalan University of Wisconsin-Madison, Madison, WI “Cutaneous Microbiome Interactions in Health and Disease”
10:00-10:30 am	Michelle E. Afkhami University of Miami, Miami, FL “Multispecies Mutualisms: Transcriptomic Approaches to Understanding Tripartite Interactions among Rhizobia, Mycorrhizal Fungi, and Plants”
10:30-10:50 am	Break
10:50-11:20 am	Megan T. Baldridge Washington University, St. Louis, MO “Regulation of Enteric Norovirus Infection by the Commensal Bacteria”
11:20-11:50 am	Otto X. Cordero Massachusetts Institute of Technology, Cambridge, MA “The Consequences of Spatial Behavior and Cell-Cell Interactions for Microbial Genome Evolution”
11:50-12:20 am	Andrew L. Kau Washington University, St. Louis, MO “Immunology-microbiota Interactions in the Pathogenesis of Allergic Diseases”
12:30 pm	Lunch (Dining Room)
4:00-6:00 pm	Poster Session (Lakeview Room) Social/Mixer (Lakeview Room)
6:15-7:45 pm	Dinner (Dining Room)
Session II	Microbial Communities II
7:45-8:15 pm	Ophelia Venturelli University of Wisconsin-Madison, Madison, WI “Understanding and Controlling Microbial Communities”
8:15-8:45 pm	Carolina Tropini Stanford University, Stanford, CA “Connecting Gut Microbiota Biogeography to Function”

8:45-9:00 pm	Break
9:00-9:30 pm	Karen Guillemin University of Oregon, Eugene, OR “Teaming with Microbes: Lessons from the Zebrafish Intestine”
9:30	Reception (Iris Room)

TUESDAY, SEPTEMBER 18

7:45-8:30 am	Breakfast (Dining Room)
Session III	Viruses and the Microbiome, Virus and Microbial Evolution
9:00-9:30 am	Andrew J. Hryckowian Stanford University, Stanford, CA “<i>Bacteriodes thetaiotaomicron</i> as a Chassis for Understanding Gut-Resident Bacteriophages”
9:30-10:00 am	Robert A. Edwards San Diego State University, San Diego, CA “Global and Local Evolution of the Ubiquitous Human Gut Phage crAssphage”
10:00-10:30 am	Shannon Bennett California Academy of Sciences, San Francisco, CA “Evolutionary and Ecological Drivers in the Transmission of Viral Diseases from Animals to Humans”
10:30-10:50 am	Break
10:50-11:20 am	David Pride University of California, San Diego School of Medicine San Diego, CA “Role of Viruses in the Human Microbiome”
11:20-11:50 am	Ashlee Earl The Broad Institute of MIT and Harvard, Cambridge, MA “Making of a Pathogen”
11:50-12:20 pm	Samuel Diaz-Munoz University of California, Davis, CA “Uncovering How Virus-Virus Interactions Shape Viral Genomes”
12:30 pm	Lunch (Dining Room)

4:00-6:00 pm Poster Session (Lakeview Room)
Social/Mixer (Lakeview Room)

6:15-7:45 pm Dinner (Dining Room)

Session IV Microbial Evolution

7:45-8:15 pm Michael Baym
Harvard University, Cambridge, MA
“Antibiotic Resistance: Experimental Evolution to Diagnostics”

8:15-8:45 pm Stephanie Porter
Washington State University, Vancouver, WA
“Subject of Adaptation vs Coevolution”

8:45-9:00 pm Break

9:00-9:20 pm Nandita Garud
University of California, San Francisco, CA
“Adaptation of Commensal Gut Bacteria in the Human Microbiome”

9:20 pm Reception (Iris Room)

WEDNESDAY, SEPTEMBER 19

7:45-8:30 am Breakfast (Dining Room)

Session V Molecular Interactions

9:00 - 9:30 am Mohamed S. Donia
Princeton University, Princeton, NJ
“Small-Molecule-Mediated Interactions in the Human Microbiome”

9:30-10:00 am Michi Taga
University of California, Berkeley, CA
“Decoding Nutritional Interactions in Microbial Communities”

10:00-10:30 am Marc Strous
University of Calgary, AB, Canada
“An Omics Journey Through Microbial Ecophysiology”

10:30-10:50 am Break

10:50-11:20 am	Jesse Shapiro University of Montreal, Quebec, CAN “Origins of Pandemic Cholera from Environmental Gene Pools, and Its Fate Within Patients”
11:20-11:50 am	Allison Hansen University of California, Riverside, CA “Small RNAs Regulate Gene Expression in a Reduced Sybiont Genome”
11:50-12:20 am	Anna Edlund J. Craig Venter Institute, La Jolla, CA “Applications of an Experimental Model for a Systems Level of the Human Oral Microbiome”
12:30 pm	Lunch (Dining Room)

Session VI

4:30-5:00 pm	Genomics, Metagenomics Neslihan Tas Lawrence Berkeley National Laboratory, Berkeley, CA “Deep Look Into Deep Permafrost: Multi-omics Insights into Carbon Cycling upon Thaw”
5:00-5:30 pm	Christopher T. Brown University of California, Berkeley, CA “Analysis of Genome Diversity Across the Bacterial Domain”
5:30-6:00 pm	Rojellio Mejia Baylor University, Waco, TX “Impact of Intestinal Parasites on the Microbiome/Metagenomics of Childhood Nutrition and Growth Delays”
6:15-7:45 pm	Dinner (Dining Room)

Session VII

7:45-8:10 pm	Awards Presentations
8:10 -8:30 pm	Terence Crofts Washington University St. Louis, St. Louis, MO (TBA)
8:30-9:00 pm	Irene G. Newton Indiana University, Bloomington, IN “The Royal Treatment: How Honey Bee Microbes Contribute to Queen Physiology”

9:00-9:30 pm	Jonathan Eisen University of California, Davis, CA “Arrowhead and Microbial Genomics”
9:30 pm	Reception/Party (Iris Room)

THURSDAY, SEPTEMBER 20

7:30-8:30 am Breakfast (Dining Room)

9-9:30 am Janina Krumbbeck
Zymo Research Corporation, Irvine, CA
“TBA”

9:30-9:50 am TBA

9:50-10:10 am TBA

10:15-10:25 am Closing remarks

10:25-10:50 am **Checkout**

11:00 am **Departure of Bus for LAX**

1:00 pm **Departure of Bus for LAX**