

SCIENTIFIC PROGRAM

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)

7:45 – 8:05 pm Jeffrey H. Miller
University of California, Los Angeles
“Welcome”

8:05 – 9:00 pm **Keynote Address**
Jonathan Eisen
University of California, Davis, CA
“Phylogeny-Driven Approaches to Genomics and Metagenomics”

9:00 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: Microbiomes/Biodiversity**

Session Chair: Ashlee Earl, Broad Institute MIT and Harvard, Cambridge, MA

9:00 – 9:30 am Nina R. Salama
Fred Hutchinson Cancer Research Center, Seattle, WA
“*H. pylori* – Microbiome Interactions in the Esophagus and Stomach”

9:30 – 10:00 am Frederic Bushman
University of Pennsylvania, Philadelphia, PA
“Host-Microbe Interactions in the Human Microbiome”

- 10:00 – 10:30 am Kristine Wylie
Washington University, St. Louis, MO
“Novel Organisms and Viruses in the Human Microbiome”
- 10:30 – 10:50 am Break
- 10:50 – 11:20 am Janet K. Jansson
Lawrence Berkeley National Laboratory, Berkeley, CA
“Prairie Soil Metagenome”
- 11:20 – 11:50 am Forest Rohwer
San Diego State University, San Diego, CA
“Metagenomics of the Global Virome”
- 11:50 – 12:20 pm Curtis Huttenhower
Harvard School of Public Health, Boston, MA
“The Human Microbiome Project: A Systems Biology Approach”
- 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: Metagenomics/Biodiversity/Pathogens

- 7:45 – 8:15 pm Tanja Woyke
DOE Joint Genome Institute, Walnut Creek, CA
“Providing a Glimpse into the Coding Potential of Microbial Dark Matter”
- 8:15 – 8:45 pm Maomeng Tong
David Geffen School of Medicine, University of California, Los Angeles, CA
“Redefining the Ecology of Intestinal Microflora Through Mucosal Functional Neighborhoods”
- 8:45 – 9:00 pm Break
- 9:00 – 9:30 pm Jeffrey Cox
University of California, San Francisco, CA
“Host-Pathogen Interactions Responsible for *M. tuberculosis* Virulence”
- 9:30 – 10:00 pm Susannah Tringe
DOE Joint Genome Institute, Walnut Creek, CA
“Wetland Metagenomics”

TUESDAY, SEPTEMBER 18

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

Session III Pathogens/Antibiotics/Resistance

9:00 – 9:30 am Julian Parkhill
Welcome Trust Sanger Institute, Cambridge, UK
“Comparative Genomics of Pathogens”

9:30 – 10:00 am **Extremophiles/Evolution**
Rustem F. Ismagilov
California Institute of Technology, Pasadena, CA
**“Complex Networks of Reactions, Cells and Organisms
in Microbial Communities”**

10:00 – 10:30 am Gautam Dantas
Washington University School of Medicine, St. Louis, MO
**“Disseminating Antibiotic Resistomes of Human and
Environmental Microbiota”**

10:30 – 10:50 am Break

10:50 – 11:20 am Pamela Yeh
Portland State University, Portland, OR
“Evolution of Bacteria in Multidrug Environments”

11:20 – 11:50 am Mike Gilmore
Harvard Medical School, Boston MA
**“Evolution of Enterococci and Staphylococci into Multidrug
Resistant Hospital Pathogens”**

11:50 – 12:20 pm Lance B. Price
Translational Genomics Research Institute, Flagstaff, AZ
“Livestock-associated MRSA ST398: The Birth of a Superbug”

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 Microbiology of the Built Environment

“Alfred P. Sloan Foundation Workshop”

Session Chair: Jonathan Eisen, University of California, Davis, CA

7:45 – 8:15 pm James Meadow
University of Oregon, Eugene, OR
“Microbial Ecology of the Built Environment”

8:15 – 8:45 pm Jason E. Stajich
University of California, Riverside, CA
“Fungi in the Built Environment”

8:45 – 9:15 pm Laura Sauder
University of Waterloo, Waterloo, Ontario
“Archaea in the Built Environment”

9:15 – 9:25 pm Break

9:25 – 9:55 pm Scott Kelley
San Diego State University, San Diego, CA
**“The Indoor Microbiome: Bacterial and Metagenomic Approaches
for Studying the Built Environment”**

9:55 – 10:25 pm Susanna Remold
University of Louisville, Louisville, KY
“Pseudomonas as a Model for Studies of Microbes in the Home”

WEDNESDAY, SEPTEMBER 19

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

Session V Networks, Metabolomics, Synthetic Biology

9:00 – 9:30 am Bernhard Palsson
University of California, San Diego, CA
**“iKnow *E. coli* and its GEMS: The New Generation of
Genome-Scale Models”**

9:30 – 10:00 am Anca Segall
San Diego State University, San Diego, CA
**“Artificial Neural Networks Trained to Detect Phage
Structural Proteins”**

10:00 – 10:30 am Trent Northern
Lawrence Berkeley National Laboratory, Berkeley, CA
**“Enigma Biotechnology: Systems Approaches to Studying
Microbial Communities”**

10:30 – 10:50 am Break

10:50 – 11:20 am Rick Morgan
New England Biolabs, Ipswich, MA
“The Complete Methylome of Six Bacterial Strains”

11:20 – 11:50 am Beth Shank
Harvard Medical School, Boston, MA
“Microbial Interspecies Interactions”

11:50 – 12:20 am TBA

12:30 pm Lunch (Dining Room)

Session VI A Strategies

4:30 – 5:00 pm Peter Karp
SRI International, Menlo Park, CA
“Pathway Annotation in Microbial Genomics”

5:00 – 5:30 pm Tatiana Tatusova
NIH/NLM/NCBI
“Paradigm Shift: From Reference Genome to Pan-Genome”

5:30 – 6:00 pm Timothy Harkins
Life Technologies, Inc., Beverly, MA
**“Microbial and Megagenomic Sequencing using Ion Torrent's
PGM™ System”**

6:15 – 7:45 pm Dinner (Dining Room)

Session VI B Poster Talks

7:45 – 8:00 pm **Nanopore Poster Awards Presentations**

8:00 – 8:20 pm Poster Presentation 1

8:20 – 8:40 pm Poster Presentation 2

8:40 – 9:00 pm Poster Presentation 3

9:00 – 9:10 pm General Comments/Business Meeting

9:15 pm Reception/Party (Iris Room)

THURSDAY, SEPTEMBER 20

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

Session VII Bioenergetics/Regulatory and Metabolic Pathways/Modeling

8:45 – 9:15 am Ee-Been Goh
Joint BioEnergy Institute, Lawrence Berkeley National Laboratory,
Berkeley, CA
“Engineering of Bacterial Methyl Ketones Synthesis for Biofuels”

9:15 – 9:45 am Shota Atsumi
University of California, Davis, CA
“Alternative Biofuel Production in Non-Natural Hosts”

9:45 – 10:15 am Howard Xu
California State University, Los Angeles, CA
**“Antisense RNA Modulated Essential Gene Expression
for Antibacterial Drug Discovery”**

10:15 – 10:20 am Closing Remarks

10:45 am **Checkout**

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

12:00 noon **Lunch**

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