



Leopoldina
Nationale Akademie
der Wissenschaften



Microbiology 2015 - Health and Environment

Hagsholim, Upper Galilee, **March 29 - March 31, 2015.**

March 29

12:00 - 13:30 - **Registration**

13:30 - 14:00 - **Opening session**

Avishai Levi - CEO Migal

Yossi Kalifa - Ministry of Science, Technology and Space

Uri Marchaim - CEREHA - Centre of Excellence for Health, Environment and Aging

Joerg Hacker - Leopoldina - German National Academy of Science

Eliora Ron - FEMS - Federation of European Microbiological Societies

14:00 - 18:00 - **Host Bacterial Interaction**

Chairs: Juergen Kreft, Itamar Shalit

14:00 - 14:30 - Stephen Lory: Insights into regulatory networks controlling the fitness determinants of *Pseudomonas aeruginosa* in the environmental and in an infected host

14:30 - 15:00 - Ilan Rosenshine: The stealth strategy of attaching and effacing pathogens

15:00 - 15:30 - Ohad Gal-mor: The virulence plasmid (pESI) of emerging *Salmonella Infantis* has evolved to facilitate horizontal transfer in the gut

15:30 - 16:00 - Coffee

16:00 - 16:30 - Ulrich Dobrindt: Genome dynamics and in vivo adaptation of *E. coli*

16:30 - 17:00 - Catharina Svanborg: Genetic control of host susceptibility to infection- the UTI model

17:00 - 17:30 - Anat Hershkovits: Prophages serve as dynamic regulatory switches of bacteria

17:30 - 18:00 - Trinad Chakraborty: TBA

18:00 - 19:00 - Dinner

19:00 - 20:30 - **Microbiology 2015 - overview talks**

Ruth Arnon, Martin Lose

19:00 - 19:30 - Ehud Gazit: Molecular self-assembly: Physiological and pathological significance

19:30 - 20:00 - Eugene Rosenberg: The hologenome concept: Lamarckian (environmental) aspects

20:00 - 20:30 - Rino Rappuoli: Future of Vaccinology

20:30 - 21:00 - Joerg Hacker: Science and Society – Infectious Diseases as an Example

21:00 - Posters and alcohol

March 30

08:30 - 12:30 - **Micro and Macrobiomes**

Chairs: Moshe Meverch, Yossi Paitan

08:30 - 09:00 - Ron Milo: Rewiring *E. coli* central metabolism for carbon fixation

09:00 - 09:30 - Dror Minz: What does the microbiome teach us about life in the plant root zone?
09:30 - 10:00 - Oded Beja: Viral 'Photosynthesis'
10:00 - 10:30 - Assaf Vardi: Sphingolipid metabolism is "engineered" by marine viruses that infect algal blooms in the ocean
10:30 - 11:00 - Coffee
11:00 - 11:30 - Itzik Mizrahi: Insights into the rumen microbiome
11:30 - 12:00 - Ed Bayer: Fiber-degrading bacteria in the gut: Of rumen and human
12:00 - 12:30 - Uri Gophna: Pouchitis is associated with a decrease of key bacterial taxa
12:30 - Lunch and excursion

March 31

09:00 - 10:00 - **Novel approaches to vaccine development**
Chairs: Jacob Pitcovski

09:00 - 09:30 - Mariagrazia Pizza: A journey through the development of a new vaccine against meningococcus B

09:30 - 10:00 - Chen Katz: A new approach for developing bacterial vaccines

10:00 - 10:30 - Coffee

10:30 - 12:30 - **DNA repair and replication**
Chairs: Shiri Navon

10:30 - 11:00 - Miguel Vicente: An intramolecular FtsA switch involved in the initial assembly of the *Streptococcus pneumoniae* divisome

11:00 - 11:30 - Lene Rasmussen: The role of microbial pathogenesis in genome instability of human host: deregulation of DNA repair and mitochondrial bioenergetics

11:30 - 12:00 - Tone Tonjum: Genome dynamics driving evolution in *Mycobacterium tuberculosis*

12:00 - 13:00 - Lunch

13:00 - 14:30 - Posters

14:30 - 18:30 - **Microbial systems - physiology, metabolism, functional genomics**
Chairs: Yair Aharonowitz, Ilana Gal-Kolodkin

14:30 - 15:00 - Dror Noy: Screening systems for artificial water-soluble analogs of photosynthetic proteins

15:00 - 15:30 - Milton da Costa: Compatible microbial solutes for biotechnology and health

15:30 - 16:00 - Eyal Gur: Mycobacterial survival under starvation and the Pup-proteasome system

16:00 - 16:30 - Coffee

16:30 - 17:00 - Doerte Becher: Microbial Proteomics – Methods and Applications

17:00 - 17:30 - Joerg Bernhardt: Omics meets aesthetics - Requirements for data visualization in functional genomics

17:30 - 18:00 - Victor de Lorenzo: Gene expression in *Pseudomonas putida*: the software and the hardware

18:00 - Closing of the workshop