

Plenary	Parallel	Parallel
Parallel	Networking	Break

Monday, September 9, 2024

8:30 – 9:00	Registration Area, Poster Area, Exhibition Area
REGISTRATION, COFFEE BREAK, POSTER MOUNTING	

9:00 – 9:15	Auditorium
OPENING CEREMONY	

9:15 – 10:15	Auditorium
MECHANISMS OF BACTERIAL BIOFILM FORMATION AND FUNCTIONS	

Chair: Neta Sal-Man, *BGU*

Knut Drescher, *Biozentrum, University of Basel*

10:15 – 10:45	Poster Area, Exhibition Area
COFFEE BREAK, POSTER VIEWING	

10:45 – 12:15	Auditorium
HOST-PATHOGEN INTERACTIONS I	

Chairs: Shai Bel, *BIU* and Erez Mills, *HUJI*

Elucidating stem cell innate immune responses

Moshe Biton, *WIS*

The frenemy within: on helminth regulation of the intestinal barrier

Danielle Karo-Atar, *BGU*

Mycoviruses: harmless hitchhikers or backseat drivers of fungal disease?

Neta Shlezinger, *HUJI*

The chicken reproductive tract microbiota and its roles

Erez Mills, *HUJI*

Virus entry is a major barrier for productive HCMV infection in monocytes

Yaarit Kitsberg, *WIS*

Fusolisin protease may regulate the tumor microenvironment

Nicole Haj, *HUJI*

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10:45 – 12:15	<i>Hall B</i>
MICROBIAL ECOLOGY AND EVOLUTION	

Chairs: Debbie Lindell, *TII* and Dror Mintz, *ARO*

Flagellar genes and cyclic-di-GMP modulate predation and biofilm formation in the bacterial predator *Bdellovibrio bacteriovorus*

Edouard Jurkevitch, *HUJI*

Pathogen contingency loci and the evolution of host specificity

Hadas Hawlena, *BGU*

Deconstructing the plant microbiome to discover plant protection traits

Omri Finkel, *HUJI*

Ecophysiological drivers and biogeochemical consequences of virus infection in marine diatoms

Chana Kranzler, *BIU*

Biogels decelerate the sinking of organic particles to the ocean depths

Uria Alcolombri, *TII*

The Dead Sea sinkhole pools: a source of microbial diversity in an extreme environment

Ke Li, *UH*

10:45 – 12:15	<i>Hall C</i>
FUNGAL BIOLOGY	

Chairs: Nir Osherov, *TAU* and Oded Yarden, *HUJI*

Exploring the diversity of antifungal drug tolerance

Judith Berman, *TAU*

Belowground carbon transfer across mycorrhizal networks among trees: facts, not fantasy

Tamir Klein, *WIS*

Genome-wide CRISPRi exploration of plant-derived compounds for antifungal potential

Ofri Levi, *MIGAL*

Cytokinin signaling and perception in fungi

Maya Bar, *ARO*

Crossing of the border: deciphering *fusarium oxysporum*'s mammalian host adaptation and immune modulation strategies

Marina Rocha, *HUJI*

12:15 – 12:45	<i>Exhibition Area</i>
LUNCH BREAK	

12:45 – 14:00	<i>Poster Area, Exhibition Area</i>
POSTER SESSION AND EXHIBITION	

Plenary	Parallel	Parallel
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14:00 – 15:30	<i>Auditorium</i>
CLINICAL VIROLOGY AND EPIDEMIOLOGY	

Chairs: Yonat Shemer Avni, *BGU* and Yaniv Lustig, *SHEBA*

Congenital cytomegalovirus: transmission and control at the maternal-fetal interface

Dana Wolf, *HUJI*

HPV in MSM with and without HIV

Orna Mor, *SHEBA*

SPRI - Navigating future pandemics with enhanced preparedness

Yael Weiss-Ottolenghi, *SHEBA*

How infected are we? Infection history to respiratory viruses during the Omicron outbreak in Israel

Tomer Hertz, *BGU*

Molecular diagnostics of respiratory viruses in the community - a possible contribution to health policy management

Ayelet Keren-Naus, *BGU*

Is Human Rhinovirus (HRV) a pathogen that causes significant morbidity or an "innocent bystander" carried by hospitalized patients?

Michal Mandelboim, *SHEBA*

14:00 – 15:30	<i>Hall B</i>
COMPUTATIONAL BIOLOGY AND GENOMICS OF MICROBES	

Chairs: Eran Bosis, *BRAUDE* and Tal Pupko, *TAU*

Navigating a fine balance: point-mutant cheater viruses disrupt the viral replication cycle

Adi Stern, *TAU*

Escherichia coli adaptation under prolonged resource exhaustion is characterized by extreme parallelism and frequent historical contingency

Ruth Hershberg, *TIIIT*

A user-friendly web server for the analysis of large-scale microbial genomics data

Yair Shimony, *TAU*

Ancient origin of innate immune components in bacteria

Tanita Wein, *WIS*

Insights into bacterial adaptation to hosts through massive-scale genomic analysis

Ofir Segev, *HUJI*

Plasmids fight back: anti-defense systems boost conjugation efficiency

Bruria Samuel, *TAU*

Plenary	Parallel	Parallel
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14:00 – 15:30	Hall C
CLINICAL BACTERIOLOGY AND EPIDEMIOLOGY	

Chair: Ronen Ben-Ami, *TASMC*

Fundamental insight into non-growing bacterial states for the tailoring of effective antibiotic treatments

Nathalie Balaban, *HU*

Genetic determinants underlying antimicrobial resistance (AMR) in wildlife in Israel

Beyioku Babatunde, *BGU*

Bacterial physiology and antibiotic action

Uri Alon, *WIS*

FT-IR in infection control: from local outbreak detection to national epidemiological surveillance

Alona Keren-Paz, *MOH*

The changing epidemiology of invasive group a streptococcus infections in Israel during 2019-2023 and the emergence of successful lineages

Merav Ron, *MOH*

15:30 – 16:00	Poster Area, Exhibition Area
COFFEE BREAK, POSTER VIEWING	

16:00 – 17:30	Auditorium
VIRUSES OF EUKARYOTES	

Chairs: Ronit Sarid, *BIU* and Ran Taube, *BGU*

SARS-CoV-2 nucleocapsid protein transfer from infected to uninfected cells induces antibody-mediated complement attack

Alexander Rouvinski, *HUJI*

Numb-associated kinases are essential for Sandfly-borne Toscana virus entry

Ella Sklan, *TAU*

A cytomegalovirus encoded lncRNA blocks cell cycle progression

Tal Fisher, *WIS*

Elucidating the role of type-II interferon stimulated genes in the antiviral response to respiratory viruses

Yiska Weisblum, *HUJI*

Discovery of an unrecognized nidovirus associated with granulomatous hepatitis in rainbow trout

Sharon Karniely, *KVI*

Plenary	Parallel	Parallel
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16:00 – 17:30	<i>Hall B</i>
PLANT-MICROBE INTERACTIONS	

Chairs: Maggie Levy, *HUJI* and Maya Bar, *ARO*

Pseudozyma aphidis plays hide-and-seeK with its host plant

Maggie Levy, *HUJI*

Unveiling the mechanisms determining tissue specificity in the plant pathogen *Clavibacter michiganensis* using experimental evolution

Doron Teper, *ARO*

Ecological implications of introducing the Endophytic Bacterium *Frateuria defendens* on Melon Plant Health and Endophytic Community Dynamics

Lilach Iasur Kruh, *BRAUDE*

Rhizosphere microbiome rewilding for enhancing crop productivity

Elisa Korenblum, *ARO*

Rhizobial trickster: legume symbiont simultaneously fixes atmospheric nitrogen and denitrifies nitrate, inducing high nodule biomass

Moshe Alon, *HUJI*

Impact of soil type on plants productivity and assembly seed endophytic communities of *Setaria viridis* L

Kumar Uttam, *BGU*

16:00 – 17:30	<i>Hall C</i>
THE MICROBIOME	

Chairs: Naama Geva-Zatorsky, *TIIT* and Nissan Yissachar, *BIU*

A role for the gut microbiome in the first 1000 of life

Omry Koren, *BIU*

Enteric pathogens communication can be intercepted by microbiome-produced metabolites

Neta Sal-Man, *BGU*

Diet affects gut microbe-host interactions by altering bacterial immune-modulatory functionality

Noa Mandelbaum, *TIIT*

Metaproteomic analysis of cancer immunotherapy modulation by the gut microbiome

Lior Lobel, *BIU*

CoSMIC - A hybrid approach for large-scale, high-resolution microbial profiling of novel niches

Maor Knafo, *WIS*

Gut fermentability of edible architectures: impact of insect chitin or amyloid-like fibrils on microbiota trajectories

Gil Refael, *TIIT*

Plenary	Parallel	Parallel
Parallel	Networking	Break

Tuesday, September 10, 2024

8:45 – 9:15	Registration Area, Poster Area, Exhibition Area
REGISTRATION, COFFEE BREAK, POSTER MOUNTING	

9:15 – 10:15	Auditorium
RAPID EVOLUTION OF PATHOGENS WITHIN PATIENTS	

Chair: Dor Salomon, *TAU*

Jesse Shapiro, *McGill University*

10:15 – 10:45	Poster Area, Exhibition Area
COFFEE BREAK, POSTER VIEWING	

10:45 – 12:15	Auditorium
HOST-PATHOGEN INTERACTIONS II	

Chairs: Roi Avraham, *WIS* and Ilan Rosenshine, *HUJI*

Antibodies produced following monkeypox infection in humans effectively block monkeypox virus in a complement-dependent manner

Natalia Freund, *TAU*

Genomic features of bacterial adaptation to host, animals, and plants

Asaf Levy, *HUJI*

Rare infection phenotypes and how to find them

Camilla Ciolli Mattioli

Immune checkpoints pathways during acute viral infection

Yotam Bar-On, *TIIT*

The role of host poly-LacNAc N-glycosylation in EPEC infection

Klil Cohen, *HUJI*

Plenary	Parallel	Parallel
Parallel	Networking	Break

10:45 – 12:15	<i>Hall B</i>
APPLIED MICROBIOLOGY AND BIOTECHNOLOGY	

Chairs: Gilad Bachrach, *HUJI* and Sima Yaron, *TIIT*

Biotic-abiotic semiartificial cells for light-driven chiral molecule production

Omer Yehezkeili, *TIIT*

Tackling fundamental challenges in biotechnology with computational models and AI

Tamir Tuller, *TAU*

Development of non-surgical sterilization/contraception methods by vaccinia virus based vaccine against sexual development hormones

Elad Eliahoo, *HUJI*

Saliva based Diagnostics – a novel approach

Omer Deutsch, *Salignostics*

Self-reporting porous silicon arrays for microbial infection diagnosis and their resistance

Xin Jiang, *TIIT*

10:45 – 12:15	<i>Hall C</i>
BACTERIAL PHYSIOLOGY	

Chairs: Daniel Dar, *WIS* and Eyal Gur, *BGU*

The establishment of an intercellular nanotube bridge in bacteria

Sigal Ben-Yehuda, *HUJI*

Correlation and causation in the bacterial cell cycle

Ariel Amir, *WIS*

Quantitative characterization of the onset of bacterial swarm in *Bacillus subtilis*

Jose Ajesh, *BGU*

L-methionine production in *Escherichia coli*: a pathway shift from trans- to direct sulfurylation

Itamar Yadid, *MIGAL*

Dissecting the phenotypic landscape of bacterial populations via imaging transcriptomics

Zohar Persky, *WIS*

12:15 – 12:45	<i>Exhibition Area</i>
LUNCH BREAK	

12:45 – 14:00	<i>Poster Area, Exhibition Area</i>
POSTER SESSION AND EXHIBITION	

13:30 – 14:00	<i>Auditorium</i>
ISM Annual Members' Assembly (for members only)	

Plenary	Parallel	Parallel
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14:00 – 15:30	Auditorium
MICROBIAL TOXINS	

Chairs: Asaf Levy, *HUJI* and Emanuel Hanski, *HUJI*

Antimicrobial peptides (AMPs) as the next-generation antimicrobial drugs against bacterial and fungal pathogens

Netanel Tzarum, *HUJI*

The impact of bacterial endoribonuclease toxins on multigenerational host-bacteria interactions

Ilana Kolodkin-Gal, *RUNI*

Double trouble: a novel T6SS effector with two toxic domains

Chaya-Mushka Fridman, *TAU*

Gamma-Mobile-Trio systems define a new class of mobile elements rich in bacterial defensive and offensive tools

Eran Bosis, *BRAUDE*

Unveiling the Extracellular Contractile Injection Systems (eCIS) Target Specificity Determinants

Nimrod Nachmias, *HUJI*

Unmasking the metabolically active growth arrest induced by VapC in *E. coli*

Irine Ronin, *HUJI*

14:00 – 15:30	Hall B
PARASITES	

Chair: Danielle Karo-Atar, *BGU*

Targeting parasites with peptides: a focus on leishmania and trypanosoma treatment strategies

Nir Qvit, *BIU*

Dynamic imaging: kinetics, morphologies and regulation of organelle biogenesis throughout plasmodium cell cycle

Anat Florentin, *HUJI*

Synthetic antimicrobial peptides to combat drug resistance in the malaria parasite *Plasmodium falciparum*

Edo Kiper, *WIS*

An important role of the SRP-independent targeting pathway in protein export in *Plasmodium falciparum*

Karina Simantov, *HUJI*

UMSBP2 is a chromatin modeler protein that functions in regulation of gene expression and suppression of antigenic variation in trypanosomes

Awakash Soni, *HUJI*

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14:00 – 15:30	<i>Hall C</i>
MICROBIAL SOCIETIES AND MICROBIAL INTERACTIONS	

Chairs: Yael Helman, *HUJI* and Einat Segev, *WIS*

Reversion to metabolic autonomy underpins evolutionary rescue in a bacterial obligate mutualism

Jonathan Fridman, *HUJI*

Deep sea gas seeps are hotspots of microbial productivity and biotic interactions

Maxime Rubin-Blum, *IOLR*

The effect of phage peptide communication on bacterial social behavior

Bat El Hagbi Lazar, *BGU*

Bacterial physiology in an environmental context

Einat Segev, *WIS*

Deciphering the identity of native molecular cargo transported via nanotubes among bacterial community members

Saurabh Bhattacharya, *HUJI*

15:30 – 16:00	<i>Poster Area, Exhibition Area</i>
COFFEE BREAK, POSTER VIEWING	

16:00 – 17:30	<i>Auditorium</i>
BACTERIOPHAGES	

Chairs: Avigdor Eldar, *TAU* and Sarit Avrani, *UH*

Predicting antibiotic resistance

Roy Kishony, *TIIT*

The bully phage: a Shiga toxin-encoding phage suppresses host-sharing prophages

Yael Litvak, *HUJI*

A bacterial host factor confines phage localization for excluding the infected compartment through cell division

Osher Pollak-Fiyaksel, *HUJI*

Lysogeny in cyanobacteria

Sarit Avrani, *UH*

Biases in viral transmission modes can be explained by Bayesian inference

Nitzan Aframian, *TAU*

Phages reconstitute NAD⁺ to counter bacterial immunity

Ilya Osterman, *WIS*

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16:00 – 17:30	<i>Hall B</i>
BENEFICIAL MICROBES	

Chairs: Omry Koren, *BIU* and Elhanan Tzipilevich, *MIGAL*

Functional plasticity in the gut microbiota-host interactions

Naama Geva-Zatorsky, *TIIT*

Systematic discovery of prokaryotic symbionts of ciliate protozoa in the rumen

Elie Jami, *ARO*

Harnessing plant-microbe interactions for sustainable agriculture: complementary approaches for identifying novel plant growth-promoting bacteria

Alexander Evenko-Greenapple, *HUJI*

Auxin secretion by soil bacteria accelerated immune system maturation in young seedlings

Elhanan Tzipilevich, *MIGAL*

From harsh environments to sustainable agriculture: the biocontrol potential of BSC microalgae

Hagai Raanan, *ARO*

Bacterial DNA inversion regions as predictors of response to melanoma immunotherapy

Roni Keshet-David, *TIIT*

16:00 – 17:30	<i>Hall C</i>
MICROBIAL GENETICS	

Chair: Dan Bar Yaacov, *BGU*

A phage lysis-lysogeny decision is guided by a toxin-antitoxin system of unique nature

Avigdor Eldar, *TAU*

Studying small RNAs - the challenge

Shoshy Altuvia, *HUJI*

Long-term impact: bacteriophage-driven DNA inversions shape bacteroides fragilis functionality

Jia Zhang, *TIIT*

Small RNAs orchestrate bacterial-phage dynamics

Sahar Melamed, *HUJI*

Understanding the emergence of phenotypic heterogeneity in motility and virulence traits in *Pseudomonas aeruginosa*

Knán Mijal Ztion Harris, *WIS*

A-to-I mRNA editing enables bacteria to produce two protein versions from a single gene and affects bacterial growth

Eyal Elias, *BGU*

Israel Society for Microbiology - ISM 2024 Annual Meeting

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17:30 – 17:45	<i>Auditorium</i>
BEST POSTER PRIZE ANNOUNCEMENT AND CLOSING REMARKS	