

Program

Monday, July 4, 2022

09:00-09:45 Registration, Coffee, Bldg. 73 - Sonnenfeld Foyer

09:00 Registration, Coffee

09:45-10:30 Plenary Lecture I, Bldg. 73 - Sonnenfeld Aud.

Chair: Avigdor Eldar, Tel Aviv University

09:45 BACTERIOPHAGES MOBILISE PATHOGENICITY ISLANDS ENCODING IMMUNE SYSTEMS AS WEAPONS TO ERADICATE COMPETITORS

José R. Penadés¹

Centre for Molecular Bacterology and Infection, Imperial College London, UK

10:30-10:45 Opening Ceremony, Bldg. 73 - Sonnenfeld Aud.

Anat Herskovits – President of the Israel Society of Microbiology

Daniel A. Chamovitz - President of Ben-Gurion University of the Negev

10:45-11:30 Coffee Break and Exhibition, Bldg. 35 - Foyer

10:45 Coffee Break and Exhibition

11:30-13:15 Session 1: Clinical Microbiology & Epidemiology of Infectious Diseases, Bldg. 35 - Hall 1

Chairs: Jacob Moran-Gilad, Ben-Gurion University of the Negev; Neta Zuckerman, Israel Ministry of Health

11:30 THE CHANGING LANDSCAPE OF DRUG-RESISTANT INVASIVE CANDIDIASIS

Ronen Ben-Ami¹

Infectious Disease Unit, Tel Aviv Sourasky Medical Center, Israel

11:50 THE HUNT FOR SARS-CoV-2 VARIANTS IN ISRAEL

Neta Zuckerman¹

Central Virology Laboratory, Israel Ministry of Health, Israel

12:30 IDENTIFICATION OF HEPATITIS E VIRUS GENOTYPES 3 AND 7 IN ISRAEL: A PUBLIC HEALTH THREAT?

Orna Mor^{1,5}, Rachel Shirazi¹, Paolo Pozzi², Yael Gozlan¹, Marina Wax¹, Yaniv Lustig^{1,5}, Michal Linial³, Svetlana Bardenstein⁴, Ella Mendelson^{1,5}

¹*Central Virology Laboratory, Ministry of Health, Israel*

²*Department of Veterinary Sciences, University of Torino, Italy*

³*Institute of Life Sciences, The Hebrew University of Jerusalem, Israel*

⁴*Department of Virology, Kimron Veterinary Institute, Israel*

⁵*Sackler School of Medicine, Tel-Aviv University, Israel*

12:45 GENOMIC SURVEILLANCE OF VANCOMYCIN RESISTANT ENTEROCOCCI BACTEREMIA IN AN ENDEMIC REGION

Omer Murik¹, Omar Abu-labda², Yonatan Oster³, Marc Assous⁴, Tzvia Mann¹, David Zeevi¹, Shmuel Benensson³, Yonit Wiener-Well²

¹*Translational Genomics, Medical Genetics Institute, Shaare Zedek Medical Center, Israel*

²*Infectious Disease Unit, Shaare Zedek Medical Center, Israel*

³*Department of Clinical Microbiology and Infectious Diseases, Hadassah Hebrew University Medical Center, Israel*

⁴*Microbiology and Immunology Laboratory, Shaare Zedek Medical Center, Israel*

13:00 ANTIMICROBIAL RESISTANCE IN ENVIRONMENTALLY DISCHARGED WASTEWATER AND LIVESTOCK SAMPLES FROM OFF-GRID VILLAGES

Hillary Craddock¹, Ikram Salah¹, Zubaida Ezery¹, Lydia Abass¹, Keren Resnick¹, Alona Rogad¹, Boris Khalfin¹, Jacob Moran-Gilad¹

Microbiology, Advanced Genomics and Infection Control Application Laboratory (Magical), Ben-Gurion University of the Negev, Israel

11:30-13:15 Session 2: Molecular Virology, Bldg. 35 - Hall 2

Chairs: Ella Mendelson, Sheba Medical Center; Moshe Dessau, Bar-Ilan University

11:30 HCV INFECTION INCREASES THE EXPRESSION OF ACE2 RECEPTOR, LEADING TO ENHANCED ENTRY OF BOTH HCV AND SARS-CoV-2 INTO HEPATOCYTES AND A HCV-SARS-CoV2 CO-INFECTION STATE

Tom Domovitz¹, Samer Ayoub¹, Michal Werbner¹, Joel Alter¹, Lee Izhaki Tavor¹, Yfat Yahalom-Ronen², Evgeny Tikhonov¹, Tomer Meirson¹, Yaakov Maman¹, Nir Paran², Tomer Israely², Moshe Dessau¹, **Meital Gal-Tanamy**¹

¹*The Azrieli Faculty of Medicine, Bar-Ilan University, Israel*

², *Israel Institute for Biological Chemical and Environmental Sciences, Israel*

11:50 DETERMINANTS AND CONSEQUENCES OF DIFFERENT HUMAN CYTOMEGALOVIRUS INFECTION OUTCOMES IN MYELOID CELLS

Miri Shnayder¹, Aharon Nachshon¹, Tamar Arazi¹, Yaarit Kitsberg¹, Roi Levi¹, Michael Lavi¹, Reuven Tsabari², Noam Stern-Ginossar¹, **Michal Schwartz**¹

¹*Department of Molecular Genetics, Weizmann Institute of Science, Israel*

²*Pediatric Pulmonology and CF Unit, Department of Pediatrics, Hadassah Hebrew University Medical Center, Israel*

12:10 STRUCTURAL INSIGHTS INTO RNA SILENCING SUPPRESSION (RSS) BY HIGH PLAINS WHEAT MOSAIC VIRUS

Moshe Dessau¹, Sagi Hamo¹, Tatineni Satyanarayana²

¹*Azrieli Faculty of Medicine, Bar-Ilan University, Israel*

²*Agricultural Research Service, USDA, USA*

12:30 INFERRING PROTEIN FUNCTION IN AN EMERGING VIRUS: DETECTION OF THE NUCLEOPROTEIN IN TILAPIA LAKE VIRUS

Reem Abu Rass¹, Talia Kustin¹, Rachel Zamostiano¹, Nechama Smorodinsky¹, Daniella Ben Meir¹, Daniel Feder², Nischay Mishra³, W Ian Lipkin³, Avi Eldar⁴, Marcelo Ehrlich¹, Adi Stern^{1,5}, Eran Bacharach¹

¹*The Shmunis School of Biomedicine and Cancer Research, Tel Aviv University, Israel*

²*School of Neurobiology, Biochemistry & Biophysics, Tel Aviv University, Israel*

³*Center for Infection and Immunity, Columbia University, USA*

⁴*Department of Virology, The Kimron Veterinary Institute, Israel*

⁵*Edmond J. Safra Center for Bioinformatics, Tel Aviv University, Israel*

12:45 Characterization of glycoproteins from insect specific Goutanap and Negev viruses

Kathakali Das¹, M. Stolovich Rain¹, Sujata Kumari¹, Leora Gidon¹, T Schlosser¹, M Kumar², Reuven Wiener², Alexander Rouvinski¹

¹*The Microbiology and Molecular Genetics, The Hebrew University of Jerusalem, Israel*

²*The Biochemistry and Molecular Biology, The Hebrew University of Jerusalem, Israel*

- 13:00** UNIDIRECTIONAL RECRUITMENT RELATIONS BETWEEN PROTEINS CAN BE DETERMINED BY A CRISPR/dCas9 RECRUITMENT ASSAY
Ido Lavi¹, Supriya Bhattacharya¹, Ola Orgil¹, Nir Avital¹, Guy Journo¹, Vyacheslav Gurevich¹, **Meir Shamay**¹
Azrieli Faculty of Medicine, Bar-Ilan University, Israel

11:30-13:15 Session 3: Microbial Genetics, Bldg. 35 - Hall 3

Chairs: Dor Salomon, Tel Aviv University; Raz Zavirach, Ben-Gurion University of the Negev

- 11:30** PHYSIOLOGICAL ROLES AND REGULATION OF A MYCOBACTERIAL PROTEOLYTIC SYSTEM
Eyal Gur
- 11:50** A COMPARATIVE GENOMICS METHODOLOGY FOR THE IDENTIFICATION OF TYPE VI SECRETION SYSTEM EFFECTORS
Chaya M. Fridman¹, Biswanath Jana¹, Dor Salomon¹, **Eran Bosis**²
¹*Department of Clinical Microbiology and Immunology, Sackler Faculty of Medicine, Tel Aviv University, Israel*
²*Department of Biotechnology Engineering, Braude College of Engineering, Israel*
- 12:10** ACTIVE LYSOGENY IN LISTERIA MONOCYTOGENES – A BACTERIA-PHAGE COOPERATIVE INTERACTION
Anat Herskovits¹
The Shmunis School of Biomedicine and Cancer Research, Tel Aviv University, Israel
- 12:30** PrrT/A a *Pseudomonas aeruginosa* Bacterial Encoded Toxin-Antitoxin System Involved in Prophage Regulation and Biofilm Formation
Esther Shmidov¹, Ilana Lebenthal-Loinger¹, Shira Roth², Itzhak Zander¹, Sivan Shoshani¹, Amos Danielli², Ehud Banin¹
¹*The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Israel*
²*Faculty of Engineering, Bar-Ilan University, Israel*
- 12:45** MRNA EDITING IN BACTERIA AFFECTS PROTEIN SEQUENCE AND FUNCTION WITH CONSEQUENCES FOR BACTERIAL FITNESS
Dan Bar Yaacov¹, Orna Dahan², Yitzhak Pilpel²
¹*The Shraga Segal Department of Microbiology and Immunology, Ben-Gurion University of the Negev, Israel*
²*Molecular Genetics, Weizmann Institute of Science, Israel*
- 13:00** THE DEFENCE ISLAND REPERTOIRE OF THE *ESCHERICHIA COLI* PAN-GENOME
Dina Hochhauser¹, Adi Millman¹, Rotem Sorek¹
Department of Molecular Genetics, Weizmann Institute of Science, Israel

11:30-13:15 Session 4: Marine Microbial Ecology, Bldg. 41 - Hall 4

Chairs: Einat Segev, Weizmann Institute of Science; Laura Steindler, University of Haifa

- 11:30** DIATOM HOST-VIRUS INTERACTIONS AND BIOGEOCHEMICAL CONSEQUENCES IN THE OCEAN
Chana Kranzler¹
Faculty of Life Sciences, Bar-Ilan University, Israel
- 11:50** AEROBIC BACTERIA PRODUCE NITRIC OXIDE THROUGH DENITRIFICATION AND TRIGGER ALGAL POPULATION COLLAPSE
Adi Abada¹, Martin Sperfeld¹, Roni Beiralas¹, **Einat Segev**¹
Plant and Environmental Sciences, Weizmann Institute of Science, Israel
- 12:10** MICROBES IN DEEP-SEA BRINE POOLS OFFSHORE ISRAEL

Maxim Rubin-Blum¹, Tal Zv-Kedem², Sophi Marmen^{1,2}, Yizhaq Makovski³, Gilad Antler^{4,5}

¹*Marine Biology, Israel Oceanographic and Limnological Research, Israel*

²*Morris Kahn Marine Research Station, Department of Marine Biology, Leon H. Charney School of Marine Sciences, University of Haifa, Israel*

³*The Dr. Moses Strauss Department of Marine Geosciences, Charney School of Marine Sciences, University of Haifa, Israel*

⁴*Department of Earth and Environmental Sciences, Ben-Gurion University of the Negev, Israel*

⁵*Geochemistry, The Interuniversity Institute for Marine Sciences, Israel*

12:30 IMPACT OF VIRAL INFECTION ON ALKALINITY AND NUTRIENT UPTAKE RATES OF THE BLOOM-FORMING COCCOLITHOPHORE EMILIANIA HUXLEYI

Tamar Dikstein^{1,3}, M. J Frada^{1,3}, Dafna Bitton³, Gilad Antler^{2,3}

¹*Department of Ecology, Evolution and Behavior - Alexander Silberman Institute of Life Sciences, The Hebrew University of Jerusalem, Israel*

²*Department of Earth and Environmental Sciences, Ben-Gurion University of the Negev, Israel*

³*., The Interuniversity Institute for Marine Science, Israel*

12:45 QUANTIFYING THE CONTRIBUTION OF HETEROTROPHIC DIAZOTROPHS ASSOCIATED WITH AGGREGATES TO TOTAL N₂ FIXATION IN FRESHWATER ECOSYSTEMS

Eyal Geisler^{1,2}, Hagar Siebner¹, Shai Arnon¹, Eyal Rahav², Edo Bar-Zeev¹

¹*Zuckerberg Institute for Water Research, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel*

²*National Institute of Oceanography, Israel Oceanographic and Limnological Research, Israel*

13:00 VIRAL ENCODED N₂ FIXATION PROTEINS ARE DIRECTLY INVOLVED IN DEGRADATION OF PHOTOSYNTHETIC ANTENNAS IN INFECTED MARINE CYANOBACTERIA

Omer Nadel¹, Omer Nadel¹, Oded Beja¹

Biology, Technion - Israel Institute of Technology, Israel

13:15-14:00 Lunch, and Exhibition, Bldg. 35 - Foyer

13:15 Lunch, and Exhibition

14:00-15:30 Poster Session I, Bldg. 41 - Foyer

15:30-16:30 Session 5: Plant-Microbe Interactions, Bldg. 35 - Hall 1

Chairs: Dror Mintz, Volcani Institute; Omri Finkel, The Hebrew University of Jerusalem

15:30 UNVEILING A NOVEL FUNCTION FOR METHYLATED METABOLITES IN ALGAL-BACTERIAL CROSSTALK

Martin Sperfeld¹, Delia Narváez¹, Einat Segev¹

Department of Plant and Environmental Sciences, Weizmann Institute of Science, Israel

15:50 Rhizosphere social influencers - bacteria mediate root metabolite exudation

Elisa Korenblum¹

Plant Science Institute, The Volcani Center, Israel

16:10 DECONSTRUCTING THE PLANT MICROBIOME

Omri Finkel¹

Plant and Environmental Sciences, The Hebrew University of Jerusalem, Israel

15:30-16:30 Session 6: Bacteriophages and Viruses, Bldg. 35 - Hall 2

Chairs: *Uri Gophna, Tel Aviv University, Sarit Avrani, Haifa University*

15:30 PHAGE THERAPY 2022: PERSONALIZING INFECTIOUS DISEASES MEDICINE

Ronen Hazan²

Institute of Biomedical and Oral Research (Ibor), Faculty of Dental Medicine, The Hebrew University of Jerusalem, Israel, Israel

15:50 TRANSLATIONAL REMODELING BY SARS-CoV-2 INFECTION

Noam Ginossar¹

Molecular Genetics, Weizmann Institute of Science, Israel

16:10 THE TRADEOFF BETWEEN RESISTANCE TO PHAGES AND NITROGEN FIXATION IN BLOOM-FORMING CYANOBACTERIA

Sarit Avrani¹, **Dikla Kolan**¹, **Eti Cattan-Tsaushu**¹

Department of Evolutionary and Environmental Biology, University of Haifa, Israel

15:30-16:30 Session 7: Applied Microbiology, Biotechnology & Nanotechnology, Bldg. 35 - Hall 3

Chair: *Livnat Afriat-Jurnou, MIGAL and Natalie Elia, Ben-Gurion University of the Negev*

15:30 RANDOM PEPTIDE MIXTURES AS SAFE AND EFFECTIVE ANTIMICROBIALS IN MOUSE MODELS OF BACTEREMIA AND PNEUMONIA

Zvi Hayouka¹

Institute of Biochemistry, Food Science and Nutrition, The Hebrew University of Jerusalem, Israel

15:50 SEEING IS BELIEVING: RATE LIMITING STEPS AND SNAPSHOTS OF GLYCOSYNTASE REACTIONS

Yuval Shoham¹, **Oleg Chmelink**¹, **Noam Hadad**, **Noam Hadad**, **Noam Hadad**², **Alon Ben-David**¹, **Shifra Lansky**², **Gil Shoham**²

¹*Department of Biotechnology and Food Engineering, Technion, Israel*

²*Institute of Chemistry, The Hebrew University of Jerusalem, Israel*

16:10 IDENTIFYING AND DESIGNING NEW ENZYMES FOR MICROBIAL SIGNAL DISRUPTION

Livnat Afriat-Jurnou¹

Molecular and Computational Biosciences and Biotechnology, MIGAL - Galilee Technology Center, Israel

15:30-16:30 Session 8: Microbial Ecology I, Bldg. 41 - Hall 4

Chair: *Eddie Cytryn, Volcani Insitute; Jonathan Friedman, The Hebrew University of Jerusalem*

15:30 MICROBIAL DIVERSITY AND COMPETITION FOR RESOURCES IN A MODEL SEASONAL ECOSYSTEM

Amir Erez¹, **Jaime G. Lopez**², **Yigal Meir**³, **Ned S. Wingreen**²

¹*Racah Institute of Physics, The Hebrew University of Jerusalem, Israel*

²*Lewis-Sigler Institute for Integrative Genomics, Princeton University, USA*

³*Physics, Ben Gurion University of the Negev, Israel*

15:50 PEAT MOSS MICROBIOME: THE POWER OF THE METHANOTROPHIC MINORITY

Max Kolton¹

French Associates Institute for Agriculture and Biotechnology of Drylands, Ben-Gurion University of the Negev, Israel

16:10 COMMUNITY COMPOSITION OF MICROBIAL MICROCOSMS FOLLOWS SIMPLE ASSEMBLY RULES AT EVOLUTIONARY TIMESCALES

Nittay Meroz¹, Nesli Tovi¹, Yael Sorokin¹, **Jonathan Friedman**¹
Institute of Environmental Sciences, Hebrew University, Israel

16:30-17:00 Coffee Break and Exhibition, Bldg. 35 - Foyer

16:30 Coffee Break and Exhibition

17:00-17:45 Session 9: Plant-Microbe Interactions (Continued), Bldg. 35 - Hall 1

Chairs: Dror Mintz, Volcani Institute; Omri Finkel, The Hebrew University of Jerusalem

17:00 CYTOKININ DRIVES ASSEMBLY OF THE PHYLLOSHERE MICROBIOME THROUGH STRUCTURAL AND CHEMICAL CUES

Rupali Gupta¹, Dorin Elkabetz¹, Meirav Leibman-Markus¹, Tali Sayas², Anat Schneider¹, Elie Jami³, Maya Kleiman^{2,4}, Maya Bar¹

¹*Department of Plant Pathology and Weed Research, Plant Protection Institute, Volcani Institute, Israel*

²*Department of Vegetable and Field crops, Plant Sciences Institute, Volcani Institute, Israel*

³*Department of Ruminant Science, Animal Science Institute, Volcani Institute, Israel*

⁴*Agro-NanoTechnology and Advanced Materials Center, Volcani Institute, Israel*

17:15 IMMUNE RECOGNITION OF THE SECRETED SERINE PROTEASE CHPG RESTRICTS THE HOST RANGE OF CLAVIBACTER MICHIGANENSIS

Doron Teper¹, **Raj Verma**¹

Plant Pathology and Weed Research, Volcani Institute, Israel

17:30 FROM FRUIT ‐ TO BIRD ‐ TO GERMINATION - TRANSMISSION OF BACTERIA FROM FRUITS TO BIRD'S GUT IMPROVE DIGESTIBILITY AND SPROUTS GROWTH

Beny Trabelsy¹, Ido Izhaki¹, Yoram Gerchman^{1,2}

¹*Evolutionary and Environmental Biology, Haifa University, Israel*

²*Environmental Biology, Oranim College, Israel*

17:00-17:45 Session 10: Bacteriophages and Viruses (Continued), Bldg. 35 - Hall 2

Chairs: Uri Gophna, Tel Aviv University, Sarit Avni, Haifa University

17:00 THE PARASITE OF MY PARASITE IS STILL MY PARASITE: THREE GENERATIONS OF MOBILE GENETIC ELEMENTS PARASITIZING ON THE HAPTOPHYTE PHAEOCYSTIS GLOBOSA

Sheila Roitman¹, Andrey Rozenberg¹, Tali Lavy¹, Oded Kleifeld¹, Oded Beja¹
Faculty of Biology, Technion - Israel Institute of Technology, Israel

17:15 DORMANT PHAGES COMMUNICATE VIA ARBITRIUM TO CONTROL EXIT FROM LYSOGENY

Nitzan Aframian¹, Shira Omer-Bendori¹, Stav Hen¹, Polina Guler¹, Avigail Stokar-Avihail², Erica Manor¹, Kholod Msaeed¹, Valeria Lipsman³, Ilana Grinberg¹, Alaa Mahagna¹, Avigdor Eldar¹

¹*Microbiology, Tel Aviv University, Israel*

²*Molecular Genetics, Weizmann Institute of Science, Israel*

³*Plant and Environmental Sciences, Weizmann Institute of Science, Israel*

17:30 SYSTEMATIC DISCOVERY OF PHAGE DETERMINANTS THAT TRIGGER BACTERIAL IMMUNE SYSTEMS

Avigail Stokar-Avihail¹, Taya Fedorenko¹, Jeremy Garb¹, Azita Leavitt¹, Nitzan Tal¹, Adi Millman¹, Aude Bernheim², Gabriela Shulman¹, Nicole Wojtania¹, Rotem Sorek¹

¹*Molecular Genetics, Weizmann Institute of Science, Israel*

²*Université de Paris, IAME, UMR 1137, INSERM, France*

17:00-17:45 Session 11: Applied Microbiology, Biotechnology & Nanotechnology (Continued), Bldg. 35 - Hall 3

Chairs: *Livnat Jurnao, MIGAL and Natalie Elia, Ben-Gurion University of the Negev*

17:00 SENSING BACTERIAL ADHESION & SINGLE CELL INITIAL ATTACHMENT AS A MIRROR OF BIOFILM FORMATION

Tal Duanis-Assaf¹, Meital Reches¹

Institute of Chemistry and the Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Israel

17:15 AN INSIDE LOOK AT A BIOFILM: *PSEUDOMONAS AERUGINOSA* FLAGELLA BIOTRACKING

Karin Yaniv², Eden Ozer¹, Einat Chetrit⁴, Anastasya Boyarski¹, Michael M. Meijler³, Ronen Berkovich⁴, Ariel Kushmaro², Lital Alfonta¹

¹*Department of Life Sciences, Ben-Gurion University of the Negev, Israel*

²*Department of Biotechnology Engineering, Ben-Gurion University of the Negev, Israel*

³*Department of Chemistry, Ben-Gurion University of the Negev, Israel*

⁴*Department of Chemical Engineering, Ben-Gurion University of the Negev, Israel*

17:30 ENCAPSULATION OF DSRNA WITHIN NANO-CLAY SHEETS REDUCES *BOTRYTIS CINEREA* COLONIZATION AND GRAY-MOLD IN HARVESTED FRUITS

Danielle Duanis-Assaf^{1,2}, Ortal Galsurker¹, Ilya Shlar^{1,2}, Olga Davydov³, Dalia Maurer¹, Oleg Feygenberg¹, Elena Poverenov¹, Robert Fluhr³, Noam Alkan¹

¹*Department of Postharvest and Food Science, Volcani Institute, Israel*

²*Plant Science, Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Israel*

³*Department of Plant and Environmental Sciences, Weizmann Institute of Science, Israel*

17:00-17:45 Session 12: Microbial Ecology I, Bldg. 41 - Hall 4

Chairs: *Eddie Cytryn, Volcani Insitute; Jonathan Friedman, The Hebrew University of Jerusalem*

17:00 UNDERSTANDING BACTERIAL COMMUNITY ASSEMBLY

Omer Lavy¹, Sarah Winkler¹, Liron Levin¹, Stav Eyal¹, Anke Trautwein-Schult², Dörte Becher², Itzhak Mizrahi¹

¹*Life sciences, Ben Gurion University of the Negev, Israel*

²*Institut für Mikrobiologie, Universität Greifswald, Germany*

17:15 STOCHASTIC AND DETERMINISTIC FORCES CO-GOVERNED THE MICROBIAL COMMUNITY OF PERIPHYTON-BASED BIOFILTER IN AN INTEGRATED MULTI-TROPHIC AQUACULTURE SYSTEM

Dzung Nguyen^{1,2}, Matan Masasa^{1,2}, Ofer Ovadia³, Lior Guttman²

¹*Marine Biology and Biotechnology Program, Department of Life Sciences, Eilat Campus, Ben-Gurion University of the Negev, Israel*

²*Israel Oceanographic and Limnological Research, The National Center for Mariculture, Israel*

³*Department of Life Sciences, Ben-Gurion University of the Negev, Israel*

17:30 PROTOZOA POPULATIONS ARE ECOSYSTEM ENGINEERS THAT SHAPE PROKARYOTIC COMMUNITY STRUCTURE AND FUNCTION OF THE RUMEN MICROBIAL ECOSYSTEM

Ronnie Solomon^{1,2}, Tanita Wein³, Bar Levy², Shahar Eshed², Rotem Dror², Veronica Reiss², Tamar Zehavi¹, Ori Furman¹, Itzhak Mizrahi¹, Elie Jami²

¹*Department of Life Science, Ben-Gurion University of the Negev, Israel*

²*Department of Ruminant Science, Volcani Institute, Israel*

³*Department of Molecular Genetics, Weizmann Institute of Science, Israel*

Tuesday, July 5, 2022

09:00-09:45 Registration, Coffee, Bldg. 73 - Sonnenfeld Foyer

09:00 Registration, Coffee

09:45-10:30 Plenary Lecture II, Bldg. 73 - Sonnenfeld Aud.

Chair: Avigdor Eldar, Tel Aviv University

09:45 ENGINEERING MICROBIAL CONSORTIA FROM THE TOP-DOWN

Alvaro Sanchez^{1,2}

Department of Microbial Biotechnology, National Biotechnology Center CNB-CSIC, Spain

Department of Ecology and Evolutionary Biology & Microbial Sciences Institute, Yale University, USA

10:30-11:15 Coffee Break and Exhibition, Bldg. 35 - Foyer

10:30 Coffee Break and Exhibition

11:15-13:00 Session 13: Host - Pathogen Interactions I, Bldg. 35 - Hall 1

Chairs: Yael Litvak, The Hebrew University of Jerusalem; Orly Laufman, Weizmann Institute of Science

11:15 Rapidly emerging viral motifs target evolutionarily constrained binding pockets in host proteins

Tzachi Hagai¹, Gal Shuler¹

Shmunis School of Biomedicine and Cancer Research, Tel Aviv University, Israel

11:35 AUTOPHAGY SHAPES THE COLONIC MICROBIOME AND SUSCEPTIBILITY TO INFECTION VIA CONTROL OF THE MUCUS LAYER

Shai Bel¹

Faculty of Medicine, Bar-Ilan University, Israel

11:55 ENTEROVIRUSES HIJACK LIPID DROPLETS TO FUEL THE BIOGENESIS OF REPLICATION COMPARTMENTS

Orly Laufman¹

Molecular Genetics, Weizmann Institute of Science, Israel

12:15 ACTIVATION OF INFLAMMASOME-MEDIATED CELL DEATH BY A *VIBRIO* TYPE VI SECRETION SYSTEM

Hadar Cohen^{1,2}, Dor Salomon^{1,2}, Motti Gerlic^{1,2}

¹*Immunology and Clinical Microbiology, Tel-Aviv University, Israel*

²*Immunology and Clinical Microbiology, Tel-Aviv University, Israel*

12:30 Host succinate is an activation signal for *Salmonella* virulence during intracellular infection

Gili Rosenberg¹, Dror Yehezkel¹, Dotan Hoffman¹, Camilla Colli Mattioli¹, Moran Fremder³, Hadar Ben-Arosh¹, Leia Vainman¹, Noa Nissani¹, Shelly Hen-Avivi¹, Maxim Itakin², Sergey Malitsky², Ehud Ohana³, Noa Bossel Ben-Moshe¹, Roi Avraham¹

¹*Biological Regulation, Weizmann Institute of Science, Israel*

²*Life Sciences Core Facilities, Weizmann Institute of Science, Israel*

³*Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel*

12:45 BACTERIAL GASDERMINS REVEAL CONSERVATION OF IMMUNE MECHANISMS FROM BACTERIA TO HUMAN

Tanita Wein¹, Alex Johnson^{2,3}, Megan L. Mayer⁴, Brianna Duncan-Lowey^{2,3}, Erez Yirmiya¹, Yaara Oppenheimer-Shaanan¹, Gil Amitai¹, Philip J. Kranzusch^{2,3,5}, Rotem Sorek¹

¹*Molecular Genetics, Weizmann Institute of Science, Israel*

²*Department of Microbiology, Harvard Medical School, USA*

³*Department of Cancer Immunology and Virology, Dana-Farber Cancer Institute, USA*

⁴*Harvard Center for Cryo-Electron Microscopy, Harvard Medical School, USA*

⁵*Parker Institute for Cancer Immunotherapy, Dana-Farber Cancer Institute, USA*

11:15-13:00 Session 14: Microbial Eukaryotes, Bldg. 35 - Hall 2

Chairs: Elie Jami, Volcani Institute; Itay Onn, Bar-Ilan University

11:15 THE MANY ROLES OF ELG1, A MASTER GUARDIAN OF GENOMIC STABILITY

Martin Kupiec¹, Karan Choudhary¹, Matan Arbel¹, Shaked Nir-Heyman¹, Mika Golan¹, Ziv Itzkovich¹, Pragyana Singh¹, Yael Berneman¹, Batia Liefshitz¹

The Shmunis School of Biomedicine & Cancer Research, Tel Aviv University, Israel

11:35 DIMETHYL SULFIDE ACTS AS EAT-ME SIGNAL DURING MICROBIAL PREDATOR-PREY INTERACTIONS IN THE OCEAN

Adva Shemi¹, Uria Alcolombri², Daniella Schatz¹, Viviana Farstey³, Flora Vincent¹, Ron Rotkopf⁴, Shifra Ben-Dor⁴, Miguel Frada^{3,5}, Dan Tawfik⁶, Assaf Vardi¹

¹*Department of Plant and Environmental Sciences, Weizmann Institute of Science, Israel*

²*Department of Civil, Environmental and Geomatic Engineering, ETH Zurich, Switzerland*

³*The Interuniversity Institute for Marine Sciences, The Interuniversity Institute for Marine Sciences, Israel*

⁴*Department of Life Sciences Core Facilities, Weizmann Institute of Science, Israel*

⁵*Department of Ecology, Evolution and Behavior, Alexander Silberman Institute of Life Sciences, The Hebrew University of Jerusalem, Israel*

⁶*Department of Biomolecular Sciences, Weizmann Institute of Science, Israel*

11:55 UNCOVERING THE RELATIONSHIP BETWEEN CILIATE PROTOZOA AND THEIR PROKARYOTIC NEIGHBORS IN THE RUMEN

Elie Jami¹

Department of Ruminant Science, Agricultural Research Organization (ARO), Volcani Institute, Israel

12:15 CNM1 MEDIATES NUCLEUS-MITOCHONDRIA CONTACT SITE FORMATION IN RESPONSE TO PHOSPHOLIPID LEVELS

Naama Zung¹, Michal Eisenberg-Bord*¹, Javier Collado^{2,3}, Layla Drwesh⁴, Emma Fenech¹, Amir Fadel¹, Nili Dezarella⁵, Yury Bykov¹, Doron Rapaport⁴, Ruben Fernandez Busnadiego^{2,3}, Maya Schuldiner¹

¹*Department of Molecular Genetics, Weizmann Institute of Science, Israel*

²*Institute for Neuropathology, Georg-August-Universität Göttingen, Germany*

³*Cluster of Excellence "Multiscale Bioimaging: from Molecular Machines to Networks of Excitable Cells" (MBExC), University of Göttingen, Germany*

⁴*Interfaculty Institute of Biochemistry, University of Tuebingen, Germany*

⁵*Electron Microscopy Unit, Chemical Research Support, Weizmann Institute of Science, Israel*

12:30 DISSECTING THE FLAGELLAR SCAFFOLD: NEW INSIGHTS INTO AN OLD ORGANELLE

Ron Orbach¹

Faculty of Medicine, Bar-Ilan University, Israel

12:45 CYTOKININ INHIBITS FUNGAL DEVELOPMENT AND REGULATES ENERGY UTILIZATION IN BOTRYTIS CINEREA

GAUTAM ANAND¹, Rupali Gupta¹, Lorena Pizarro^{1,2}, Dana Laor³, Neta Kovetz¹, Noa Sela¹, Tal Yehuda³, Ehud Gazit³, Maya Bar¹

¹*Department of Plant Pathology and Weed Research, ARO, Volcani Institute, Israel*

²*Institute of Agri-food, Animal and Environmental Sciences, Universidad de O'Higgins, Chile*

³*The Shmunis School of Biomedicine and Cancer Research, Tel Aviv University, Israel*

11:15-13:00 Session 15: Applied Microbiology, Biotechnology & Nanotechnology II, Bldg. 35 - Hall 3

Chairs: Ramiz Daniel, Technion - Israel Institute of Technology; Lianet Noda Garcia, The Hebrew University

11:15 FUNCTIONAL PLASTICITY IN GUT MICROBIOTA-HOST INTERACTIONS

Naama Geva-Zatorsky¹, Nadav Ben-Assa¹, Shaqed Carasso¹, Noa Mandelbaum¹, Haitham Hajjo¹, Tal Gefen¹

Cell Biology and Cancer, Technion - Israel Institute of Technology, Israel

11:35 SOIL, WATER AND BIOSENSORS: APPLICATIONS DRIVEN BY THE NEW ISRAELI BIO-FOUNDRY

Yonatan Cohen¹, Itai Henn¹, Ofer Wilner¹, Roni Cohen², **Yuval Dorfan**^{1,2}

¹*Innovation Center, Reichman University, Israel*

²*SynBio, Alagene, Israel*

11:55 SYSTEMATIC DISCOVERY OF ANTIMICROBIAL POLYMORPHIC TOXINS

Asaf Levy¹

Plant Pathology and Microbiology, The Hebrew University of Jerusalem, Israel

12:15 GENE CIRCUIT FOR GROWTH RATE CONTROL

Evgeniy Reznik¹, Ramez Daniel¹

Biomedical Engineering, Technion - Israel Institute of Technology, Israel

12:30 ENGINEERING A CUSTOMIZABLE ANTIBACTERIAL T6SS-BASED PLATFORM IN *VIBRIO NATRIEGENS*

Jana Biswanath¹, Kinga Keppel¹, Dor Salomon¹

Department of Clinical Microbiology and Immunology, Sackler Faculty of Medicine, Tel Aviv University, Israel

12:45 METABOLITE AGGREGATION: FROM BASIC BIOLOGY TO DRUG DISCOVERY

Dana Laor Bar-Yosef¹, Ehud Gazit¹

The Shmunis School of Biomedicine and Cancer Research, Tel Aviv University, Israel

11:15-13:00 Session 16: Microbiome, Bldg. 41 - Hall 4

Chairs: Eran Elinav, Weizmann Institute of Science; Moran Yassour, The Hebrew University of Jerusalem

11:15 UNRAVELING PAN-MICROBIOME BIOLOGICAL INSIGHTS VIA THE DBBACT KNOWLEDGEBASE

Noam Shental¹, Yonatan Sher⁴, Eitan Ozel¹, Yael Haberman³, Amnon Amir²

¹*Department of Mathematics and Computer Science, The Open University of Israel, Israel*

²*Microbiome Center, Sheba Medical Center, Israel*

³*Microbiome Center and Children's Hospital, Sheba Medical Center, Israel*

⁴*Department of Molecular and Computational Biosciences and Biotechnology, MIGAL - Galilee Research Institute, Israel*

11:35 LIMITED MICROBIOTA OVERLAP BETWEEN HENS AND THEIR SPECIFIC PROGENY

Erez Mills¹, Naama Shterzer¹

Animal Sciences, The Hebrew University of Jerusalem, Israel

11:55 SCOPE AND POTENTIAL EPIDEMIOLOGICAL CONTRIBUTION OF THE AGRO-ENVIRONMENTAL RESISTOME

Edouard Jurkevitch², Roberto Marano^{1,2,4}, Chagai Davidovich¹, Chhedi Lal Gupta¹, Shlomo Blum³, **Eddie Cytryn**¹

¹*Institute of Soil, Water and Environmental Sciences, Volcani Institute, Israel*

²*The Department of Plant Pathology and Microbiology, The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Israel*

³*Department of Bacteriology, Kimron Veterinary Institute, Israel*

⁴*Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel*

12:15 THE EFFECT OF THE MICROBIOME ON LOWERING AGGRESSIVE BEHAVIOR IN DROSOPHILA MELANOGASTER

Rachel Levin¹, Michal Grinberg¹, Sondra Turjeman¹, Omry Koren¹

The Azrieli Faculty of Medicine, Bar-Ilan University, Israel

12:30 CHARACTERIZATION OF THE TUMOR MYCOBIOME

Lian Narunsky Haziza^{1,2}, Ilana Livvyatan^{1,3}, Omer Asraf², Deborah Nejman¹, Guy Amit⁴, Amir Bashan⁴, Yitzhak Pilpel², Ravid Straussman¹

¹*Department of Molecular Cell Biology, Weizmann Institute of Science, Israel*

²*Department of Molecular Genetics, Weizmann Institute of Science, Israel*

³*Computer Science and Applied Mathematics, Weizmann Institute of Science, Israel*

⁴*Department of Physics, Bar-Ilan University, Israel*

12:45 DEEP SOIL MICROBIOMES IN SANDY SOIL OF NORTHERN NEGEV HAVE EXTREMELY LOW BIOMASS AND ENCOMPASS DISTINCTIVE DOMINANT MICROBIAL TAXA

Yonatan Sher¹, Danny Zeevi², Dror Minz³, Itai Sharon¹

¹*Biotechnology, MIGAL - Galilee Research Institute, Israel*

²*Interdisciplinary School for Sciences, Health and Society, The Hebrew University of Jerusalem - Hadassah Medical Center, Israel*

³*Soil, Water and Environmental Sciences, Volcani Institute, Israel*

13:00-13:45 Lunch, and Exhibition, Bldg. 35 - Foyer

13:00 Lunch, and Exhibition

13:45-15:10 Poster Session II, Bldg. 41 - Foyer

14:40-15:10 ISM Annual Member's Assembly, Bldg. 35 - Hall 3

15:10-15:55 Session 17: Host - Pathogen Interactions II, Bldg. 35 - Hall 1

Chairs: Netta Sal-Man, Ben-Gurion University of the Negev; Neta Regev-Rudzki, Weizmann Institute of Science

15:10 THE STRUCTURAL BASIS FOR THE VIRULENCE AND HOST-PATHOGEN INTERACTIONS OF MICROBIAL AMYLOIDS

Nimrod Golan¹, Amit Parizat¹, Meytal Landau¹

Department of Biology, Technion – Israel Institute of Technology, Israel

15:25 ANALYSIS OF EXTRACELLULAR VESICLES FROM MALARIA-INFECTED ERYTHROCYTES BY FIELD FLOW FRACTIONATION REVEAL DISTINCT NANOPARTICLE SUBSETS

Paula Abou Karam¹, Mattia I. Morandi¹, Irit Rosenhek-Goldian², Hila Ben Ami Pilo¹, Anna Rivkin¹, Edo Kiper¹, Raya Sorkin³, Ana Claudia Torrecilhas⁴, Ori Avinoam¹, Alicia Rojas⁵, Neta Regev-Rudzki¹

¹*Biomolecular Sciences, Weizmann Institute of Science, Israel*

²*Chemical Research, Weizmann Institute of Science, Israel*

³*Raymond & Beverly Sackler School of Chemistry, Tel Aviv University, Israel*

⁴*Pharmaceutical Sciences, Federal University of São Paulo, Brazil*

⁵*Helminthology, Faculty of Microbiology, University of Costa Rica, Costa Rica*

15:40 CHARACTERIZATION OF PemB, A NOVEL EFFECTOR OF PSEUDOMONAS AERUGINOSA TYPE III SECRETION SYSTEM

Shira Zelikman¹, Reut Dudkevitch¹, Hadar Korenfeld-Tzemach¹, Noa Marchoom¹, Sivan Shoshani¹, David Burnstien², Tal Pupko², Shay Ben-Aroya¹, Doron Gerber¹, Sivan Korenblit¹, Ehud Banin¹

¹*The Mina & Everard Goodman Faculty of Life Sciences and The Institute for Nanotechnology and Advanced Materials, Bar-Ilan University, Israel*

²*George S. Wise Faculty of Life Sciences, Tel-Aviv University, Israel*

15:10-15:55 Session 18: COVID19, Bldg. 35 - Hall 2

Chair: Tomer Hertz, Ben-Gurion University of the Negev

15:10 SECOND GENERATION SARS-COV-2 DIAGNOSIS: RAPID CLASSIFICATION OF MAJOR SARS-COV-2 VARIANTS IN ISRAEL

Oran Erster¹, Ella Mendelson^{1,2}, Virginia Levy¹, Areej Kabat¹, Batya Mannasse¹, Hadar Asraf¹, Roberto Azar¹, Rachel Shirazi¹, Efrat Bucris¹, Orna Mor^{1,2}, Michal Mandelboim^{1,2}, Danit Sofer¹, Shai Fleishon¹, Itay Bar-Or¹, Neta Zuckerman¹

¹*Central Virology Laboratory, Israel Central Virology Laboratory, Israel*

²*School of Public Health, Sackler Faculty of Medicine, Tel-Aviv University, Israel*

15:25 WHAT MAKES A VARIANT? DRIVERS OF ADAPTIVE EVOLUTION DURING CHRONIC SARS-COV-2 INFECTIONS

Sheri Harari¹, Sheri HARARI²

¹*Life science, Tel Aviv University, Israel*

²*Life Science, Tel Aviv University, Israel*

15:40 THE ROLE of NSP1 in SARS-CoV-2 INFECTION

Tal Fisher¹, Avraham Gluck¹, Aharon Nachshon¹, Noam Stern-Ginossar¹

Molecular Genetics, Weizmann Institute of Science, Israel

15:10-16:00 Session 19: Computational & Systems Microbiology, Bldg. 35 - Hall 3

Chairs: Shiri Freilich, Volcani Institute; Tzachi Pilpel, Weizmann Institute of Science

15:10 BIG DATA IN INFECTIOUS DISEASES

Roy Kishony¹

Biology and Computer Science, Technion- Israel Institute of Technology, Israel

15:30 MICROBIAL SPATIAL TRANSCRIPTOMICS VIA HIGHLY MULTIPLEXED SINGLE-CELL IMAGING

Daniel Dar¹

Plant and Environmental Sciences, Weizmann Institute of Science, Israel

15:45 SYSTEMATIC DISCOVERY OF ANTIMICROBIAL POLYMORPHIC TOXINS

Nimrod Nachmias¹, Noam Dotan¹, Yaara Oppenheimer-Shaanan¹, Maor Shalom¹, Asaf Levy¹
Department of Plant Pathology and Microbiology, the Robert H. Smith Faculty of Food and Environment, The Hebrew University of Jerusalem, Israel

15:10-15:55 Session 20: Microbial Ecology II, Bldg. 41 - Hall 4

Chairs: Osnat Gilor, Ben-Gurion University of the Negev; Shai Pilosof, The Hebrew University of Jerusalem

15:10 ENGINEERING ROBUST CHEATER PREVENTION IN BACTERIAL DIFFERENTIATION VIA BIPHASIC FITNESS

David Glass¹, Anat Bren¹, Uri Alon¹
Molecular Biology of the Cell, Weizmann Institute of Science, Israel

15:25 WET-DRY CYCLES PROTECT SURFACE-COLONIZING BACTERIA FROM ANTIBIOTICS

Yana Beizman-Magen¹, Maor Grinberg¹, Tomer Orevi¹, Nadav Kashtan¹
Plant Pathology and Microbiology, The Hebrew University of Jerusalem, Israel

15:40 CONTROLS ON THE ISOTOPIC COMPOSITION OF METHANE IN NATURAL ENVIRONMENTS

Jonathan Gropp¹, Itay Halevy¹
Earth and Planetary Sciences, Weizmann Institute of Science, Israel

15:55-16:25 Coffee Break and Exhibition, Bldg. 35 - Foyer

15:55 Coffee Break and Exhibition

16:25-17:25 Session 21: Host - Pathogen Interactions II (Continued), Bldg. 35 - Hall 1

Chairs: Netta Sal-Man, Ben-Gurion University of the Negev; Neta Regev-Rudzki, Weizmann Institute of Science

16:25 CHEMICAL CROSSTALK BETWEEN OPPORTUNISTIC PATHOGENS AND THEIR COUNTERPARTS

Michael Meijler¹
Chemistry, Ben-Gurion University of the Negev, Israel

16:45 THE EFFECT OF EXTRACELLULAR ENVIRONMENT MOLECULES ON ENTEROPATHOGENIC *ESCHERICHIA COLI* VIRULENCE

Orna Gorelik¹, Lara Holoiovsky², Michael Meijler², Neta Sal-Man¹
¹*Microbiology and Immunology, Ben-Gurion University of the Negev, Israel*
²*Department of Chemistry, Ben-Gurion University of the Negev, Israel*

17:05 PROFESSIONAL MIXOLOGISTS: THE ROLE OF MIX DOMAINS IN TYPE 6 SECRETION SYSTEM TOXIN COCKTAILS

Chaya M Fridman¹, Biswanath Jana¹, Yasmin Dar¹, Eran Bosis², **Dor Salomon**¹
¹*Department of Clinical Microbiology and Immunology, Tel Aviv University, Israel*
²*Department of Biotechnology Engineering, ORT Braude College of Engineering, Israel*

16:25-17:25 Session 22: COVID19 (Continued), Bldg. 35 - Hall 2

Chair: Tomer Hertz, Ben-Gurion University of the Negev

16:25 THE BREADTH AND KINETICS OF THE ADAPTIVE IMMUNE RESPONSE FOLLOWING COVID-19 DISEASE AND VACCINE

Yariv Wine¹

The Shmunis School of Biomedicine and Cancer Research, Faculty of Life Sciences, Tel Aviv University, Israel

16:45 SARS-CoV-2 ESCAPE FROM T-CELL RESPONSE IN PATIENT WITH REFRACTORY B-CELL LYMPHOMA: A 318-DAYS STORY OF MUTAGENESIS

Oksana V. Stanevich¹, Evgeniia Alekseeva², Maria Sergeeva⁴, Anna-Polina Shurygina⁴, Kirill Vasilyev⁴, Ksenia Safina⁷, Sofya Garushyants⁷, Evgeny Bakin¹, Viktoria Ryabchikova⁵, Dmitry Lioznov⁴, Daria Danilenko⁴, Dmitriy Chudakov⁶, Andrey Komissarov³, Georgii Bazykin²

¹*Public Health Sciences Masters (Center for Science Communication), ITMO University in Saint-Petersburg, Russia*

²*Center for Molecular and Cellular Biology, Skolkovo Institute of Science and Technology (Skoltech), Russia*

³*Laboratory of Molecular Virology, Smorodintsev Research Institute of Influenza, Russia*

⁴*Immunology, Smorodintsev Research Institute of Influenza, Russia*

⁵*Oncohematology, City Hospital 31, Russia*

⁶*Laboratory of Molecular Technologies, Institute for Information Transmission Problems of the Russian Academy of Sciences (Kharkevich Institute), Russia*

⁷*Bioinformatics, A.A. Kharkevich Institute for Information Transmission Problems of the Russian Academy of Sciences, Russia*

17:05 IDENTIFYING CORRELATES OF PROTECTION FOR THE BNT162b2 VACCINE THREE AND FOUR DOSES DURING ANOMICRON OUTBREAK IN ISRAEL

Tomer Hertz¹, Shlomia Levy¹, Daniel Ostrovsky², Hannah Oppenheimer¹, Shosh Zismanov¹, Alona Kuzmina¹, Lilach Friedman¹, Sanja Trifkovic⁵, David Brice⁴, Lin Chun-Yang⁴, Yonat Shemer-Avni^{1,3}, Merav Cohen-Lahav⁶, Doron Amichay⁷, Ayelet Keren-Naus³, Olga Voloshin³, Gabriel Weber^{8,9}, Ronza Najjar-Debbiny^{8,9}, Bibiana Chazan^{9,10}, Maureen McGargill⁴, Richard Webby⁵, Michal Chowers^{11,12}, Lena Novack², Victor Novack², Ran Taube¹, Lior Neshet^{13,14}, Orly Weinstein¹⁵

¹*Department of Microbiology and Genetics, Faculty of Health Sciences, and the National Institute of Biotechnology in the Negev, Ben-Gurion University of the Negev, Israel*

²*Clinical Research Center, Soroka University Medical Center, Israel*

³*Virology laboratory, Soroka University Medical Center, Israel*

⁴*Immunology, St. Jude Children's Research Hospital, USA*

⁵*Infectious Diseases, St. Jude Children's Research Hospital, USA*

⁶*Laboratory of Management, Soroka University Medical Center, Israel*

⁷*Central Laboratory, Clalit Health Services, Israel*

⁸*Infectious Diseases Unit, Lady Davis Carmel Medical Center, Israel*

⁹*Rappaport Faculty of Medicine, Technion, Israel*

¹⁰*Infectious Diseases Unit, Emek Medical Center, Israel*

¹¹*School of Medicine, Tel Aviv University, Israel*

¹²*Infectious Diseases Unit, Meir Medical Center, Israel*

¹³*Infectious Diseases Unit, Soroka University Medical Center, Israel*

¹⁴*Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel*

¹⁵*Dept. of Health systems management, Ben-Gurion University of the Negev, Israel*

16:25-17:15 Session 23: Computational and Systems Microbiology (Continued), Bldg. 35 - Hall 3

Chairs: Shiri Freilich, Volcani Center, Tzachi Pilpel, Weizmann Institute of Science

16:25 COMMUNITY MODELLING: USING GENOMICS FOR DELINEATING TROPHIC NETWORKS IN NATURAL ECOSYSTEMS

Shiri Freilich¹

Agricultural Research Institute, Department of Natural Resources, Volcani Institute, Israel

16:45 HIGH THROUGHPUT ASSAY REVEALS A RESOURCE ALLOCATION-BASED TRADEOFF BETWEEN GROWTH AND DEATH RATES

Anat Bren¹, David Glass¹, Avi Mayo¹, Uri Alon¹

Mol. Cell. Biol, Weizmann Institute of Science, Israel

17:00 KINETIC MODELS OF CENTRAL CARBON METABOLISM – AN IMPORTANT STEP TOWARDS THE DESIGN OF OPTIMAL CELL-FACTORIES

Marina de Leeuw¹, Lars Keld Nielsen^{1,2,3}

¹*The Novo Nordisk Foundation Center for Biosustainability, Technical University of Denmark, Denmark*

²*Australian Institute for Bioengineering and Nanotechnology (AIBN), The University of Queensland, Australia*

³*Metabolomics Australia, The University of Queensland, Australia*

16:25-17:25 Session 24: Microbial Ecology II (Continued), Bldg. 41 - Hall 4

Chairs: Osnat Gilor, Ben-Gurion University of the Negev; Shai Pilosof, The Hebrew University of Jerusalem

16:25 THE CHEMICAL POTENTIAL OF *TREBONIA KVETII*, A NOVAL ACTINOBACTERIUM ISOLATED FROM LOW pH SOIL

Marketa Sagova-Mareckova¹

Crop Research Institute, Czech Republic

16:45 WHAT MICROBIOME TELLS US ABOUT THE CONDITIONS IN IT'S NICHE

Dror Minz

17:05 THE NETWORK STRUCTURE AND ECO-EVOLUTIONARY DYNAMICS OF CRISPR-INDUCED IMMUNE DIVERSIFICATION

Shai Pilosof¹, Sergio Alcalá², Tong Wang³, Sergei Maslov³, Rachel Whittaker³, Mercedes Pascual²

¹*Life Sciences, Ben Gurion University of the Negev, Israel*

²*Ecology and Evolution, University of Chicago, USA*

³*Carl R. Woese Institute for Genomic Biology, University of Illinois at Urbana-Champaign, USA*

17:25-18:10 Plenary Lecture III, Bldg. 41 - Hall 4

Chair: Itzhak Mizrahi, Ben-Gurion University of the Negev

17:25 MICROBIOME-HOST INTERACTION: A NEW FRONTIER FOR CELLULAR MICROBIOLOGY

Philippe Sansonetti¹

Laboratory of Molecular Microbial Pathogenesis, Pasteur Institute, France

18:10-18:30 Best Poster Prize Announcement and Closing Remarks, Bldg. 41 - Hall 4

