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| ***ISF Workshop and German-Israeli Minerva School***  **MITOCHONDRIA: FUNCTION AND DYSFUNCTION**  **February 15 – 18, 2015,**  **L:\Workshop Ein Gedi 2015\MITO 2015\Minerva Symbol.giftopKibbutz Ein Gedi, Dead Sea, Israel**  **Israel Science Foundation**  **MINERVA Foundation** |
| SCIENTIFIC PROGRAM All lectures and poster sessions will be held at the Avni Auditorium. |
| Sunday, February 15, 2015 |

12:00- **LUNCH**

**Registration and Distribution of Meeting Material**

13:45- **Welcome and opening address:** **Ophry Pines, Jerusalem**

### Mitochondrial architecture and membranes

14:00- 14:25 **Thomas Langer,** **Cologne**

Proteolytic control of mitochondrial dynamics

14:25- 14:50 **Maya Schuldiner, Rehovot**

Intra-cellular communication revisited: Regulating the extent of contact between mitochondria and other organelles.

14:50- 15:15 **Israel Sekler, Beer-Sheva**

The mitochondrial 3Na+/Ca2+ exchanger NCLX is a major hub for cellular and mitochondrial Ca2+ signaling

15:15-15:30 **Arnon Henn, Haifa**

Myosin 19 is a novel mitochondrial membrane-anchored molecular motor and a regulator of the mitochondrial network

15:30- 16:00 **Coffee Break**

### Protein and mRNA targeting to mitochondria

16:00- 16:25 **Johannes Herrmann, Kaiserslautern**

A genetic screen to identify components relevant for the precision of mitochondrial protein sorting

16:25- 16:50 **Doron Rapaport, Tuebingen**

New and old tricks in the biogenesis of the mitochondrial outer membrane

16:50- 17:15 **Dejana Mokranjac**, **Munich**

Molecular mechanisms of protein translocation across the mitochondrial inner membrane

17:15-17:30 **Nils Wiedemann, Freiburg**

Conservative sorting: a general import pathway for mitochondrial biogenesis

17:30- 18:00 **Coffee Break**

18:00- 18:25 **Jeffrey Gerst,** **Rehovot**

mRNA trafficking to mitochondria and its role in mitochondrial function

18:25- 18:50 **Yoav Arava, Haifa**

Novel factors controlling co-translational import into the mitochondria

18:50-19:05 **Mary Bakhanashvili, Ramat Gan**

Import of p53 mRNA into mitochondria

19:15  **DinNer**

20:30 **POSTER SESSION I & BEER**

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| Monday, February 16, 2015 |

### 07:00-09:00 Breakfast

### Inheritance, DNA replication and evolution

09:00-09:25 **Claes Gustafson, Gothenburg**

MtDNA synthesis: Primer formation and removal

09:25-09:50 **Ophry Pines,** **Jerusalem**

Evolution of protein dual-targeting and dual-function

09:50-10:15 **Dan Mishmar, Beer-Sheva**

The secrets of a two-billion-years marriage: Mito-nuclear coevolution affects protein-protein interactions, human health and speciation

10:15-10:30 **Ester Kalef-Ezra, Heraklion**

Human glutamate dehydrogenase presequences: structure, function and evolution

10:30-11:00 **Coffee Break**

11:00-11:25 **Eli Arama, Rehovot**

Got used and dumped: The tale of the fly spermatid mitochondria

11:25-11:50 **Joseph Shlomai,** **Jerusalem**

UMSBP proteins function in the regulation of DNA replication and segregation in the mitochondrial and nuclear genomes of trypanosomatids

11:50-12:05 **Vladimír Pevala, Prague**

The structure and DNA-binding properties of Mgm101 from a yeast *Candida parapsilosis* with a linear mitochondrial genome

12:05-14:00 **Poster session I and light lunch**

### Transcription, translation, degradation and stress

14:00-14:25 **Eric Shoubridge, Montreal**

Mitochondrial RNA granules are centers for posttranscriptional RNA processing and ribosome biogenesis

14:25-14:50 **Gadi Schuster**, **Haifa**

The search for the enzyme responsible for RNA degradation in human mitochondria; identification of LACTB2, a novel endoribonuclease of the metallo--lactamase superfamily

14:50-15:15 **Nils-Goran Larsson, Cologne**

An unexpected link between Mitofusin 2 and respiratory chain function

15:15-15:40 **Oren Ostersetzer-Biran,** **Jerusalem**

From gene expression to respiratory complexes assembly: the roles of nuclear encoded maturases in mitochondrial biogenesis in plants

15:40-16:15 **Coffee break**

16:15-16:40 **Agnieszka Chacinska, Warsaw**

Fates of mitochondrial proteins: do mitochondria regulate cellular protein homeostasis?

16:40-17:05 **Michael Glickman, Haifa**

Reversible 26S Proteasome disassembly upon mitochondrial stress

17:05-17:30 **Anat Ben Zvi, Beer Sheva**

Disruption of HSP-6/Mortalin function in *Caenorhabditis elegans* induces the third larval stage developmental checkpoint

19:00 **Oriental Dinner**Departure from the Ein-Gedi Hotel lobby

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| Tuesday, February 17, 2015 |

### 07:00-09:00 Breakfast

### Disorders in humans

09:00-09:25 **Orian Shirihai, Boston & Beer Sheva**

Mitochondrial dynamics in the beta cell links energy efficiency and insulin secretion

09:25-09:50 **Orly Elpeleg,** **Jerusalem**

Low diagnosis rate using exome analysis

09:50-10:15 **Massimo Zeviani,** **Cambridge**

Identification and characterization of new mitochondrial disease genes

10:15-10:30 **Peter Bross**, **Aarhus**

A complex phenotype including infantile spasms and developmental delay is associated with heterozygosity for a mutation in the mitochondrial co-chaperone Hsp10.

10:30-11:00 **Coffee break**

11:00-11:25 **Haya Lorberboum-Galski, Jerusalem**

TAT-Fusion Proteins as a Protein Therapeutic Approach for Mitochondrial Disorders

11:25-11:50 **Ann Saada-Reisch, Jerusalem**

The use of patients’ fibroblasts in search of personalized treatment in mitochondrial disorders

11:50-12:05 **Sharon Karniely, Cambridge/Rehovot**

Human Cytomegalovirus infection induces upregulation of the mitochondrial host cell transcription and translation machineries

12:05-14:00 **Poster session II and LIGHT LUNCH**

14:00-17:00 **EIN GEDI SPRINGS (departure from the hotel lobby at 14:00)**

**Mitochondrial metabolism**

18:00-18:25 **Roland Lill, Marburg**

Biogenesis of cellular iron-sulfur proteins: From biochemical mechanism to the molecular basis of disease

18:25-18:50 **Eyal Gottlieb, Glasgow**

Pyruvate carboxylation is required for growth of succinate dehydrogenase-deficient cells

18:50-19:05 **Amir Sapir, Haifa**

A novel circuit coordinating mevalonate pathway metabolism with mitochondrial stress

19:15 **DINNER**

20:30 **Poster session II & Beer**

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| Wednesday, February 18, 2015 |

07:00-09:00 **Breakfast**

### Apoptosis, mitophagy and more metabolism

09:00-09:25 **Luca Scorrano, Padua**

Keeping mitochondria in shape: A matter of life and death

09:25-09:50 **Tom Fox, Ithaca**

Use of synthetic biology to identify a nuclear gene that controls expression of a yeast mitochondrial gene encoding the ribosomal protein Var1

09:50-10:15 **Joseph Orly, Jerusalem**

Expression of the steroidogenic acute regulatory (StAR) protein in cardiac myofibroblasts: potential anti-apoptotic new function during healing after myocardial infarction

10:15-10:30 **TBA**

10:30-11:00 **Coffee break**

**Mitochondria and cancer metabolism**

11:00-11:25 **Jean-Claude Martinou, Geneva**

The mitochondrial pyruvate carrier: regulation of its activity in cancer cell metabolism

11:25-11:50 **Varda Shoshan-Barmatz, Beer Sheva**

The mitochondrial protein VDAC1 as a new target: From concepts to cancer therapy

11:50-12:15 **Atan Gross, Rehovot**

Mitochondria metabolism: A critical player in regulating stem cell fate

12:15-12:30 **Ortal Cohen, Ramat Gan**

From sperm to malignant cells; A primary role of reprogrammed mitochondria in tumorigenesis

12:30- **Closing and farewell address:**  **Abdussalam Azem, Tel-Aviv**

13:00- 14:00 **Lunch**

**14:15 Departure from the hotel lobby**

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| Thursday, February 19, 2015 |

09:00 **Post meeting WALKING tour IN Jerusalem**

Departure from the Dan Boutique hotel in Jerusalem