

# Young Mito Investigator Symposium

# Mitochondria in life, death and disease

September 15<sup>th</sup>–17<sup>th</sup>

## PROGRAM

**Wednesday, 15<sup>th</sup> September 2021**

13.00 – 13.15      Opening remarks  
Nora Voegtle

### Session 1: Mitochondrial protein import and biogenesis

Chair: Daiana Moretti

13.15 – 13.30      Vinzent Schulz  
*Human mitochondrial ferredoxins 1 and 2 perform different biosynthetic functions*

13.30 – 13.45      Ana Kalichava  
*Ultrastructure expansion microscopy in Trypanosoma brucei*

13.45 – 14.00      Yury Bykov  
*Mitochondrial ribosomal proteins developed unconventional mitochondrial targeting signals due to structural constraints*

14.00 – 14.15      Ana Sierra  
*Structural heterogeneity of the respiratory chain ensures optimal OXPHOS performance*

14.15 – 14.45      Coffee break

Chair: Maria Gomez-Fabra Gala

14.45 – 15.00      Christin Albus  
*Investigating sub-mitochondrial localisation of translation machinery components*

15.00 – 15.15      Meichel Herrade  
*Peculiar post-transcriptional modification of Chlamydomonas reinhardtii mitochondrial mRNAs*

15.15 – 15.30      Ross Eaglesfield  
*Unconventional protein import pathways for dually localised proteins present in the intermembrane space*

15.30 – 16.00      Coffee break

### Session 2: Mitochondria in infection, inflammation and immunity

Chair: Matthijs Hermeling

16.00 – 16.15      Manuel M. Gomez de las Heras  
*Mitochondrial T cell dysfunction accelerates intestinal ageing*

16.15 – 16.30      Hanna Salmonowicz  
*Sub-lethal apoptotic stress enables mtDNA release and drives the senescence-associated secretory phenotype*

16.30 – 16.45      Andreas Jenner  
*Direct interaction with DRP1 activates BAX and induces apoptosis*

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**Thursday, 16<sup>th</sup> of September 2021**

### Session 2 (continued): Mitochondria in infection, inflammation and immunity

Chair: Tania Mêdeiros

|               |   |
|---------------|---|
| 13.00 – 13.15 | Pankaj Deo<br><i>Bacterial outer membrane vesicles induce mitochondrial dysfunction and intrinsic apoptosis</i>                     |
| 13.15 – 13.30 | Lena Kraemer<br><i>The Proteasome: Friend or Foe of Mitochondrial Protein Import?</i>   |
| 13.30 – 13.45 | Anna Smith<br><i>The impact of age-associated mitochondrial alterations in intestinal tumour development</i>                        |
| 13.45 – 14.00 | Carolina Garcia-Poyatos<br><i>Homo-dimerization of the mitochondrial complex IV and its role in muscle biology and regeneration</i> |
| 14.00 – 14.30 | Round Table Discussion<br><i>Research abroad: opportunities and challenges</i><br>Lena Pernas                                       |
| 14.30 – 15.00 | Coffee Break  |

### Session 3: Mitochondrial dynamics and quality control

Chair: Cansu Küçükköse

|               |  |
|---------------|--|
| 15.00 – 15.15 | Tiago Branco-Fonseca<br><i>A hypomorphic mouse model identified Fis1 as required protein for mitochondrial ultrastructure and function</i> |
| 15.15 – 15.30 | Sebastien Leterme<br><i>Lipid transport to mitochondria during plant adaptation to phosphate starvation</i>                                |
| 15.30 – 15.45 | Victoria Hewitt<br><i>Decreasing pdzd8-mediated mitochondrial-ER contacts in neurons improves fitness by increasing mitophagy</i>          |
| 15.45 – 16.15 | Coffee break   |

Chair: Cansu Küçükköse

|               |   |
|---------------|---|
| 16.15 – 16.30 | Tim König<br><i>Mechanisms of MDV biogenesis: MIRO1/2 and DRP1 mediate removal of assembled protein complexes</i>                           |
| 16.30 – 16.45 | Katherine Labbe<br><i>The modified mitochondrial outer membrane carrier MTCH2 regulates mitochondrial fusion in response to lipogenesis</i> |
| 16.45 – 17.00 | Jake Winter<br><i>Co-deletion of ATAD1 with PTEN primes cells for BIM-mediated apoptosis</i>  |

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### Session 3 (continued): Mitochondrial dynamics and quality control

Chair: Harshita Kaul

- 13.00 – 13.15 Caroline Dewar  
*Deciphering the mitochondrial quality control mechanism in the parasite Trypanosoma brucei*

- 13.15 – 13.30 Minji Kim  
*Maintenance of proteostasis by mitochondrial stress response*

- 13.30 – 13.45 Jessica Spinelli  
*Leveraging mass spectrometry to uncover mitochondrial adaptations to hypoxia exposure*

- 13.45 – 14.15 Coffee break

### Session 4: Mitochondria in metabolic signalling and control of metabolism

Chair: Soni Deshawal

- 14.15 – 14.30 Vasiliki Mavridou  
*Mapping the substrate binding site of the mitochondrial ADP/ATP carrier*

- 14.30 – 14.45 Chrysanthi Moschandrea  
*Mitochondrial OXPHOS regulates dietary lipid transport in enterocytes*

- 14.45 – 15.00 Michela Carraro  
*F-ATP synthase mutagenesis and its implication on formation and regulation of the permeability transition pore*

- 15.00 – 15.15 Greg McElroy  
*Reduced expression of mitochondrial complex I subunit NDUFS2 does not impact healthspan in mice*

- 15.15 – 15.45 Coffee break

Chair: Hien Rozsivalova

- 15.45 – 16.00 Corvin Walter  
*Global kinome profiling reveals DYRK1A as critical activator of the human mitochondrial import machinery*

- 16.00 – 16.15 Bruna Garcia Martins  
*A role for mitochondria in the regulation of cholesterol biosynthesis*

- 16.15 – 16.30 Yilin Kang  
*Mutant mitochondrial DNA polymerase impairs acute antiviral immunity*

- 16.30 – 16.45 Closing remarks  
 Aleksandra Trifunovic