

Journal of Internal Medicine Symposium:

MITOCHONDRIA IN HUMAN DISEASE

Time: September 16-18, 2019 (lunch-lunch)

Venue: Vår Gård, Saltsjöbaden, Stockholm, Sweden.

Participants: 150

Programme

Day 1 – 16 September 2019

- 12:00-13:30 Lunch and registration
13:45-14:00 **Welcome and introductory remarks**
Nils-Göran Larsson and Anna Wedell, Karolinska Institutet
Ulf de Faire, Journal of Internal Medicine.
- Session 1: MECHANISMS IN MITOCHONDRIAL DISEASE**
Chair: Nils-Göran Larsson, Karolinska Institutet, Stockholm, Sweden
- 14:00-14:30 **Mitochondrial disease phenotypes in children**
Shamima Rahman, Great Ormond Street Hospital, London, UK
- 14:30-15:00 **Mitochondrial RNA processing in disease**
Aleksandra Filipovska, University of Western Australia, Perth, Australia
- 15:00-15:15 **Poster talk 1**
15:15-15:30 **Poster talk 2**
- 15:30-16:00 Coffee break
- 16:00-16:30 **Mitochondrial disease and optic atrophy**
Valerio Carelli, University of Bologna, Italy
- 16:30-17:00 **Malfunction of the mitochondrial replisome and mtDNA mutations**
Maria Falkenberg, Göteborgs Universitet, Sweden
- 17:00-17:30 **Principles of human mtDNA inheritance**
Patrick Chinnery, University of Cambridge, UK
- 17:30- 19.30 Dinner

Session 2: REGULATION OF MITOCHONDRIAL FUNCTION

Chair: Anna Wedell, Karolinska Institutet, Stockholm, Sweden

19:30-20:00 **Mitochondrial import of S-adenosyl methionine and the mitochondrial methylproteome**

Anna Wredenberg, Karolinska Institutet, Sweden

20:00-20:30 **The in vivo role of mitophagy**

Ian Ganley, University of Dundee, UK

20.30-22.00 Poster session and drinks

Day 2 – 17 September 2019

Session 3: THE ARCHITECTURE OF MITOCHONDRIA

Chair: Nils-Göran Larsson, Karolinska Institutet, Sweden

09:00-09:30 **Protein complexes organizing mitochondrial compartments**

Klaus Pfanner, University of Freiburg, Germany

09:30-09:45 **Poster talk 3**

09.45-10:00 **Poster talk 4**

10:00-10:30 **Structures of respiratory chain complexes and supercomplexes**

Judy Hirst, Mitochondrial Biology Unit, MRC, Cambridge

10:30-11:00 Coffee break

11:00-11:30 **Superresolution microscopy of mitochondrial organization and dynamics**

Stefan Jakobs, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

11.30-12.00 **Electron cryo-tomography of protein complexes in mitochondrial membranes**

Werner Kühlbrandt, Max Planck Institute for Biophysics, Frankfurt, Germany

12:00-13:00 Lunch

13:30-17:30 Excursion with guided tour of the Nobel museum and visit of the old town “Gamla Stan” in Stockholm.

17:30-19:30 Dinner

Session 4: MITOCHONDRIAL TRANSLATION

Chair: Anna Wredenberg, Karolinska Institutet, Stockholm, Sweden

19:30-20:00 **Coordination of mitochondrial translation and respiratory chain assembly**

Martin Ott, Stockholm University, Sweden

20:00-20:15 **Poster talk 5**

20.15-20:30 **Poster talk 6**

20:30-21:00 **Biogenesis of the mammalian mitochondrial ribosome**
Joanna Rorbach, Karolinska Institutet, Sweden

21:00 Poster sessions and drinks

Day 3 – 18 September 2019

Session 5: TREATMENT OF MITOCHONDRIAL DYSFUNCTION

Chair: Claes Gustafsson, Göteborgs Universitet, Göteborg, Sweden

09:00-09:30 **Gene therapy by enzymatic editing of mtDNA in the mouse**
Carlos Moraes, University of Miami, Miami, USA

09:30-10:00 **To be announced**

10:00-10:15 **Poster talk 7**

10:15-10:30 **Poster talk 8**

10:30-11.00 Coffee

11:00-11:30 **Nuclear effects caused by mtDNA mutations**
Ann Saada, Hadassah Medical Center, Jerusalem, Israel

11:30-12:00 **Strategies for treatment of mitochondrial disease**
Massimo Zeviani, Mitochondrial Biology Unit, MRC, Cambridge

12:00-12:30 **Cytoplasmic transfer in human oocytes to prevent mitochondrial disease**
Doug Turnbull, University of Newcastle, Newcastle, UK

12:30-14:00 Lunch and departure