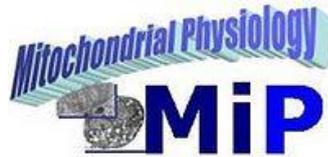




UiT / NOREGS ARKTISKE
UNIVERSITET



MiPschool Tromsø-Bergen 2018

Coastal Express Tromsø - Bergen, Norway
2018 October 20-24

Training School jointly organized by the Mitochondrial Physiology Society and COST Action MitoEAGLE.

Sessions C:

Selected abstracts 10+5 - 10 min presentation (ppt) + 5 min discussion, strict timing enforced by the chairs

Sessions E1 - E3:

Meet the expert - open MitoEAGLE topics - MitoEAGLE Early Career Investigator Forum

11 senior scientists (mentors) will be available for discussions in small groups of about 6, dispersed on separate tables, without slide projection (but with paper and pencil). All participants can 'book' mentors in advance, and rotate after 20-30 min to another booked table. The topics are open, with some 'titles' mentioned in the programme. Students may raise the topic of their abstract for discussion, without formal presentation (you may bring along some printed material or A4-size copy of a poster). Mentors may join to form slightly enlarged groups as appropriate.

Session E4:

Open programme lectures: Programme decisions made during and by the MitoEAGLE/MiPschool

The Early Career Investigators (ECIs) will shape the programme for Session E4. The options range from topics selected for a round-table discussion, extended elaboration of any topic covered in the programme, selected summaries of Sessions E1 - E3, continuation of 'Meet the expert' sessions, parallel working group meetings on a list of selected topics, or other great ideas on which our ECIs will take a group decision.



Programme



Saturday, October 20 - Evening

Arrival	
21:00-23:30	Registration (Skarven Bar, close to Tromsø harbour terminal)
23:45-01:30	Boarding the Coastal Express and late registration



Sunday, October 21 – Morning

07:30-08:30	Breakfast
09:00-09:30	Terje Larsen, Karin Akselsen: Welcome and practical information
A1	Mitochondrial physiology: pathways and coupling Chairs: Kidere Dita and Uwe Schlattner
09:30-10:15	Gnaiger Erich Mitochondrial states and rates 1: Electron transfer pathways and respiratory control
10:15-10:45	Coffee/tea break
10:45-11:30	Gnaiger Erich Mitochondrial states and rates 2: Coupling control
11:30-11:45	Short break/refreshments
B1	Energy transfer and movement of molecules in cardiomyocytes Chairs: Isola Raffaella and Terje Larsen
11:45-12:15	Vendelin Marko Restrictions to intracellular diffusion of ATP and ADP in cardiomyocytes - impact on cardiac E-C coupling
12:15-12:45	Schlattner Uwe Mitochondrial kinases (CK and NDPK) and the stimulation of these kinases by their substrates (creatine, GDP)
13:00-14:30	Lunch and sightseeing (Hurtigruten Museum)



Sunday, October 21 – Afternoon

C1	Selected abstracts: Adipose and liver mitochondria Chairs: Marina Makrecka-Kuka and Rafal Kampa
15:15-15:30	Ma Tao Cardiolipin synthesis in brown and beige fat mitochondria is essential for systemic energy homeostasis
15:30-15:45	Silva Rui Subchronic in vivo study for the evaluation of hepatic mitochondrial toxicity induced by silver nanoparticles

15:45-16:00	Pereira Susana Obesity - induced mitochondrial hepatic changes during pregnancy
C2	Selected abstracts: Cardioprotection Chairs: Adela Krajcova and Hoppel Charles L
16:00-16:15	Kampa Rafal Cardioprotective flavonoids as a natural modulators of mitoBKCa channel
16:15-16:30	Jansen Kirsten Dietary and pharmacological treatment of diet-induced obese mice – impact on mitochondrial function
16:30-17:00	<i>Coffee/tea break – fresh air (Trollfjord)</i>
17:00-17:15	Martins Joao Sweetheart: Cardiac consequences of fetal exposure to maternal gestational diabetes on the offspring mitochondrial function
17:15-17:30	Tuncay Erkan MitoTEMPO ameliorates hyperglycemia induced mitochondrial damage in cardiomyocytes
17:30-20:00	<i>Dinner</i>
18:30-20:00	<i>Sightseeing in Svolvær (optional)</i>



Monday, October 22 – Morning

D1	Cardiovascular disease and mitochondrial medicine Chairs: Maria Huete-Ortega and Vendelin Marco
08:00-09:00	<i>Breakfast</i>
09:00-09:45	Hoppel Charles Two populations of muscle mitochondria: heart and skeletal muscle - impact on cardiac E-C coupling
09:45-10:30	Harper Mary-Ellen OXPHOS efficiency in skeletal and cardiac muscles: Proton leaks, ROS and glutathione redox
10:30-11:00	<i>Coffee/tea break</i>
E1	MitoEAGLE Early Career Investigator Forum Meet the expert E1 E2 E3
11:00-12:00	Gnaiger Erich Harper Mary-Ellen Hoppel Charles L Iglesias-Gonzalez Javier Larsen Terje Makrecka-Kuka Marina Murray Andrew J Schlattner Uwe Vendelin Marco Wiesner Rudolf Wuest Rob

12:00-12:15

Short break/refreshments

E2

MitoEAGLE Early Career Investigator Forum

Meet the expert

12:15-13:00

Experts and topics

Students may raise the topic of their abstract for discussion with a selected mentor, without formal presentation

Cardoso Luiza: Concomitant respiration and ATP production measurements to analyse P_o/O₂ ratios at physiological normoxia

Garipi Enis: Phenotyping mitochondrial metabolism in Barrett's metaplasia-dysplasia-adenocarcinoma sequence: respiratory capacity, extracellular proton flux and ROS production

Martins Ana: Mitochondrial Dynamics of Human Sertoli Cells Under the Effect of Leptin and Ghrelin

Siewiera Karolina: Effect of metformin treatment on blood platelet bioenergetics and platelet function in STZ-diabetic and non-diabetic rats

Fischer Christine: Analysis of mitochondrial function in iron deficiency anemia and iron overload

Kidere Dita: Cytoplasmic hybrid cells as a model to characterize the OXPHOS system: control sample with glutamate metabolism defect

Puurand Marju: Intracellular energy-transfer networks in health and disease – the results of oxygraphic studies

Alves Marco: Role for mitochondria on the response of highly proliferative and invasive bladder cancer cells to the combined inhibition of mTOR and SIRT1

Huete-Ortega Maria: High-Resolution FluoRespirometry: new perspectives for the study of bioenergetics in algae and plants

Storder Julie: Investigation on the role of the mitochondrial deacetylase Sirtuin 3 in adipose tissue

Krajcova Adela: High-resolution respirometry to assess function of mitochondria in native homogenates of human heart muscle

Li Puma Lance: Fads2 Exacerbates Myocardial Ischemia-Reperfusion Injury in Mice: Role of Mitochondria

13:00-14:30

Lunch



Monday, October 22 - Afternoon

A2

Mitochondrial physiology: protonmotive force

Chairs: Melanie Schartner and Murray Andrew J

14:30-15:15

Gnaiger Erich

The protonmotive force and respiratory control. 1. Coupling of electron transfer reactions to vectorial translocation of protons

15:15-15:45

Gnaiger Erich

The protonmotive force and respiratory control. 2. From Einstein's diffusion equation on gradients to Fick's law on compartments

15:45-17:00	<i>Sightseeing in Brønnøysund (optional)</i>
C3	Selected abstracts: Cardiac OXPHOS Chairs: Joanna Vella and Javier Iglesias Gonzalez
17:00-17:15	Torp May-Kristin Intracellular complement factor 3 in the heart - a link to metabolism?
17:15-17:30	Isola Raffaella AMPK deficiency elicits changes in OXPHOS in heart mitochondria
17:30-18:00	Early Career Investigator Forum ECIs will take a group decision on the programme of Session E4
18:30-19:00	<i>Fresh air with view of Torghatten</i>
19:00-20:30	<i>Dinner</i>



Tuesday, October 23 - Morning

07:00-08:00	<i>Breakfast</i>
08:00-10:00	<i>Sightseeing in Trondheim (optional)</i>
D2	Cardiac mitochondrial physiology and pathology Chairs: Harper Mary-Ellen and Damian Detraux
10:00-10:30	Hoppel Charles Mitochondrial function during ischemia/reperfusion injury
10:30-11:00	Vendelin Marko Actomyosin contraction and the dynamics of calcium changes in cardiomyocytes
11:00-11:15	<i>Short break/refreshments</i>
E3	MitoEAGLE Early Career Investigator Forum E2 Meet the expert
11:15-13:00	Experts and topics
13:00-14:30	<i>Lunch</i>



Tuesday, October 23 – Afternoon

E4	Open programme lectures: Programme decisions made during and by the MitoEAGLE/MiPschool Chairs: nominated by the ECI Forum
14:30-16:00	ECI programme Voted from the MitoEAGLE Early Career Investigator Forum
16:00-16:30	<i>Short break/refreshments</i>
C4	Selected abstracts: Mitochondrial disorders, remodeling, and degenerative diseases Chairs: Boardman Neoma and Wuest Rob
16:30-16:45	Musiol Eva

	Alpha-tomatine as a novel membrane-permeabilizing agent for mitochondrial respiration measurements
16:45-17:00	Bastos Sant'Anna Silva Ana Carolina
	Role of succinate in prostate cancer cells: uptake and mitochondrial respiratory function
17:00-17:15	Vujacic-Mirski Ksenija
	Development of analytical assays for the detection and quantification of reactive oxygen and nitrogen species in an animal model of type 1 diabetes - ROS formation involving mitochondrial and NADPH oxidase
17:15-17:30	Vella Joanna
	Exome analysis sheds light on mitochondrial disorders
17:30-17:45	Crisostomo Luis
	Mitochondrion at the crosstalk between metabolic disease and dysfunction in male fertility?
17:45-18:00	Zdrazilova Lucie
	Bioenergetic characterization of skin fibroblasts from patients with congenital disorders of glycosylation
19:00-20:30	<i>Dinner</i>



Wednesday, October 24 - Morning

07:30-08:30	<i>Breakfast</i>
D3	Mitochondrial function and cardioprotection Chairs: Ana Carolina Bastos Sant'Anna and Wiesner Rudof
09:00-09:45	Wuest Rob Metabolic flexibility and mitochondrial function in the diabetic heart
09:45-10:30	Boardman Neoma High fat-load induces cardioprotection in hearts from obese mice
10:30-11:00	<i>Coffee/tea break</i>
11:00-12:15	Conclusions, practical information
13:15-14:00	<i>Lunch</i>
14:30	Arrival in Bergen and Adjourn

Acknowledgements

Programme prepared for printing by Erich Gnaiger, Karin Akselsen, Marija Beno and Terje Larsen. We gratefully acknowledge the assistance by Verena Laner and Mario Plangger.

MiPschool support

MiPschool2018



