

Oroboros **Virtual TRANSMIT School** on respirometry and experimental protocol design, particularly related to cancer research



Version 01: 2021-03-17 ©2020 Oroboros
Updates: https://wiki.orooboros.at/index.php/TRANSMIT_School_2021_Virtual

Program

This event will be in virtual form using the GoTo Meeting platform. The program will focus on respirometry and experimental protocol design, particularly related to cancer research.



Monday, March 22nd	
Time	Session
09:30 – 09:40	Welcome by Dr. Erich Gnaiger
09:40 – 09:45	Announcement of Prof. Helmut Klocker's presentation
09:45 - 10:25	Prof. Helmut Klocker (Medical University of Innsbruck, AT): Prostate cancer with regard to metabolism and mitochondrial function
10:25– 10:40	Discussion with the expert (Prof. Helmut Klocker)
10:40 – 10:50	Coffee/tea break
10:50 – 11:50	Dr. Erich Gnaiger (Oroboros Instruments, Innsbruck, AT): Mitochondrial respiratory control - Coupling-control
11:50 – 11:55	Leg stretcher, set-up of next presentation
11:55 – 12:25	Dr. Erich Gnaiger (Oroboros Instruments, Innsbruck, AT): Mitochondrial respiratory control - Pathway control
12:25 – 12:40	Discussion with the expert (Dr. Erich Gnaiger)
12:40 – 14:00	Lunch break
14:00 – 14:30	Dr. Erich Gnaiger (Oroboros Instruments, Innsbruck, AT): From MitoEAGLE to Bioenergetics Communications (BEC)
14:30 – 14:35	Leg stretcher, set-up of next presentation
14:35 – 15:00	Dr. Erich Gnaiger (Oroboros Instruments, Innsbruck, AT): mitObesity and comorbidities: mitochondrial dysfunction in obesity, diabetes, cardiomyopathies, cancer, to Alzheimer's – lifestyle matters

Tuesday, March 23rd	
Time	Session
10:00 – 10:10	Dr. Carolina Doerrier-Velasco (Oroboros Instruments, Innsbruck, AT): Welcome and schedule for the day
10:10 - 10:30	Dr. Carolina Doerrier-Velasco (Oroboros Instruments, Innsbruck, AT): Sample types and mitochondrial preparations
10:30 – 10:35	Leg stretcher, set-up of next presentation
10:35 – 11:00	Mitochondrial preparations - Video on Shredder tissue homogenate - Video on Fiber permeabilization
11:00 – 11:15	Discussion with the expert (Dr. Carolina Doerrier-Velasco)
11:15 – 11:25	Coffee/tea break
11:25 – 11:30	Announcement of Dr. Luiza Cardoso's presentation
11:30 - 11:45	Dr. Luiza Cardoso (Oroboros Instruments, Innsbruck, AT) Mitochondrial hydrogen peroxide production under tissue normoxia and air-level hyperoxia
11:45– 12:00	Discussion with the expert (Dr. Luiza Cardoso)
12:00 – 14:00	Lunch break
14:00 – 14:05	Announcement of Dr. Zulfiya Orynbayeva's presentation
14:05 - 14:45	Dr. Zulfiya Orynbayeva (Warminster, PA USA) – Cancer Metabolism. What We Learned About Processes Behind the Warburg Effect?
14:45 - 15:00	Discussion with the expert (Dr. Zulfiya Orynbayeva)
15:00 – 15:10	Coffee/tea break
15:10 – 16:00	General Q&A and closing remarks

MitoFit Preprints



The Open Access preprint server for mitochondrial physiology and bioenergetics

» https://www.mitofit.org/index.php/MitoFit_Preprints

Bioenergetics Communications



The Open Access journal for publishing scientific and technical advances in bioenergetics and mitochondrial physiology as [Living Communications](#)

» <https://www.bioenergetics-communications.org>

Acknowledgements



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 722605 (TRANSMIT).

NextGen O2k

Oroboros - as a driving force in mitochondrial physiology - extends the analytical and diagnostic power of high-resolution respirometry by integration of NADH- and Q-redox monitoring in the **NextGen-O2k**. We aim at establishing the Oroboros quality control management for dissemination to our worldwide O2k-Network laboratories. This will become an effective contribution to address the acute *reproducibility crisis* of scientific investigation. In the spirit of Open Science and global networking, we will enable data sharing across projects and institutions in an Open Access database on mitochondrial physiology and pathology, to resolve the *inflation crisis* and ultimately the *value-impact crisis* of present academic publication.

This will support key developments in mitochondrial medicine. In addition, we expand our business to algal biotechnology and ecology with the photobiology module of the NextGen-O2k, widening our focus from medicine to environment and climate.



Contact

Erich Gnaiger, PhD
 Oroboros Instruments GmbH
 Schoepfstrasse 18
 A-6020 Innsbruck, Austria
 T +43 512 566796 F +43 512 566796 20
instruments@oroboros.at | www.oroboros.at
Mitochondria and cell research



Virtual Events are listed as [MitoGlobal Events](#)