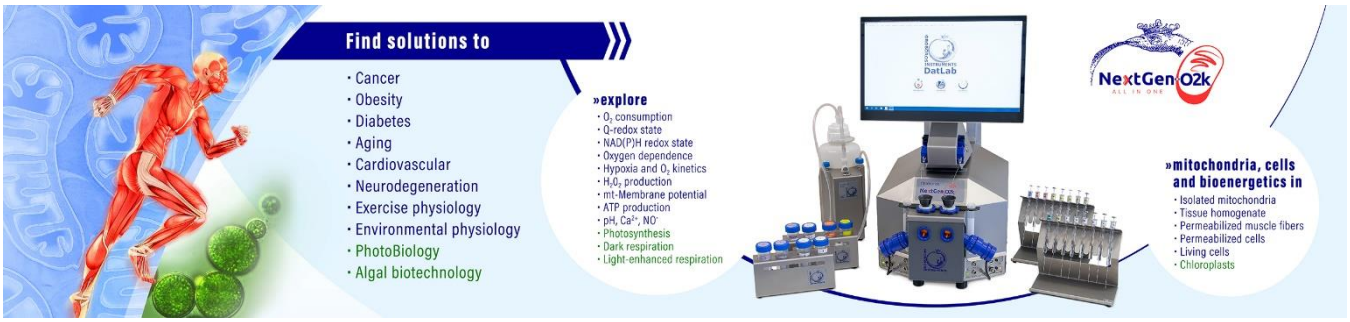

Oroboros Instruments

Erich Gnaiger, PhD

Mitochondrial expert and founder of Oroboros Instruments will be delivering a workshop and the SuperMito seminar on

Tuesday, February 14th CHS 27-200c

Oroboros Instruments (Innsbruck, Austria) - 157th O2k-Workshop, UCLA: Cutting-edge innovations of **high-resolution respirometry (HRR)** are presented, introducing the **Oroboros NextGen-O2k** in parallel to hands-on training by *Sabine Schmitt*. HRR targets reproducibility and flexibility of substrate-uncoupler-inhibitor titration protocols for investigating mitochondrial pathway and coupling control [1]. With the O2k-FluoRespirometer, assays for mt-membrane potential, ROS production, ATP production, and calcium uptake are measured simultaneously with HRR. Modules for monitoring **Q- and NADH-redox states** and **PhotoBiology** with the NextGen-O2k open new windows for bioenergetic investigations.

[1] Gnaiger E (2020) Mitochondrial pathways and respiratory control. An introduction to OXPHOS analysis. 5th ed. Bioenerg Commun 2020.2. https://doi.org/10.26124/bec:2020-0002

Interactive workshop lectures include:

10:00-10:50am	Principles of high-resolution respirometry HRR
11:00-11:50am	The NextGen-O2k for Q- and NADH- redox biology
Noon	Lunch Hosted by the Metabolism Theme
1:00-1:50pm	Application of fluorescence probes with HRR for mt-phenotyping
4:00-5:00pm	**SuperMito Seminar**

mitObesity - body mass excess and decline of mitochondrial fitness: from muscle to brain

Obesity is defined as accumulation of excess fat tissue mass. Compromised mitochondrial fitness across metabolically active organs provides a mechanistic connection between obesity and comorbidities: diabetes, cardiovascular and neurodegenerative diseases, and various types of cancer bound to redox imbalance, inflammation, oxidative stress, and insulin resistance.

Wine and cheese social hour after the seminar