



## Course on High-Resolution Respirometry

**IOC67.** *Mitochondrial Physiology Network* 17.07: 1-3 (2012)

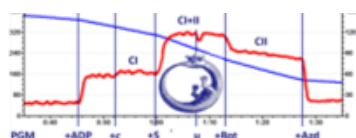
©2012 OROBOROS®  
Version 2: 2012-03-31

# O2k-Workshop Sydney

## 67<sup>th</sup> International Workshop on HRR

### 2012 April 02–04 Sydney, Australia

University of Sydney, Camperdown Campus  
Medical Foundation Building (K25)  
Level 1, Room 143  
92-94 Parramatta Rd., Camperdown



K-Regio project *MitoCom Tyrol* funded by the Tyrolian Government and the European Regional Development Fund

## Programme IOC67

<b>1 Monday, April 02</b>		<a href="#">O2k-Workshop by Erich Gnaiger</a>
		<b>Weblink</b>
09:00-09:10	Roland Stocker: <b>Welcome to the Sydney O2k-Workshop</b>	
09:10-09:30	Erich Gnaiger: <b>Get O2k-Connected with your OROBOROS-USB: a guided tour</b>	<a href="#">get O2k-Connected</a>
09:30-10:15	<b>Oxygraph-2k: Instrumental setup, OROBoPOS service</b>	<a href="#">O2k-Start</a>
10:15	<i>Coffee / Tea - Get-together - introduction of the participants and their research interests</i>	<a href="#">POS Service</a>
10:45-12:00	<b>Start high-resolution respirometry: Switch on the O2k, install DatLab, chamber volume calibration</b>	<a href="#">Gnaiger 2008 POS</a>
12:00	<i>Lunch</i>	
13:00-14:45	<b>Instrumental quality control 1: The oxygen sensor OROBoPOS - calibration, stability testing, and evaluation of sensitivity to measure oxygen flux.</b>	<a href="#">O2k-Calibration</a>
14:45	<i>Coffee / Tea</i>	
15:15-17:00	<b>O2k-Experiment 1: Respiration of intact yeast cells and on-line DatLab Analysis: Simultaneous measurement of oxygen consumption (O2k-Core) and H<sub>2</sub>O<sub>2</sub> production (add-on O2k-Fluorescence LED2-Module)</b>	

Workshop Dinner  
Alfred Hotel, Missenden Rd, Camperdown (5 min walk from the University)

## 2 Tuesday, April 03

		<i>Weblink</i>
09:00-09:45	<b>DatLab Guide through the menus: DL-Demo files and DL-Excel templates</b>	<a href="#">DatLab 4 Guide</a>
09:45-10:15	<b>Instrumental quality control 2: Instrumental background test and on-line analysis of oxygen flux. <i>Experimental run from 09:00 to 12:00</i></b>	<a href="#">O2k-Background</a>
10:15	<i>Coffee / Tea</i>	
10:45-12.00	<b>Oxygen flux analysis: Flux per volume, flux per mass, flow per cell, flux control ratio</b>	<a href="#">DatLab4 Flux Analysis</a>
12:00	<i>Lunch</i>	
13:00-14:45	<b>Experimental design 1: Coupling control and substrate control of mitochondrial respiration.</b>	<a href="#">CI-II</a>
14:45	<i>Coffee / Tea</i>	<a href="#">Glossary: Respiratory states</a>
15:15-17:00	<b>O2k-Experiment 2:Respiration of fibroblasts - a coupling control protocol</b>	<a href="#">Cells: PCP</a>

## 3 Wednesday, April 04

		<i>Weblink</i>
09:00-10:15	<b>Oxygen flux analysis: DatLab Analysis of the workshop experiments</b>	<a href="#">DatLab4 Flux Analysis</a>
10:15	<i>Coffee / Tea</i>	<a href="#">PBI-Shredder HRR-Set</a>
10:45-12.00	<b>Experimental design 2: Respiratory control in intact cells, permeabilized cells and tissues, homogenate, and permeabilized muscle fibres.</b>	<a href="#">Pesta 2012 Methods Mol Biol</a>
12:00	<i>Lunch</i>	
13:00-14:45	<b>O2k-Experiment 3: Respiration and steady-state feedback control of oxygen levels with the TIP2k</b>	<a href="#">TIP2k Manual</a>
14:45	<i>Coffee / Tea</i>	
15:15-16:45	Erich Gnaiger <b>A perspective of mitochondrial physiology: Fever mitochondria - mitochondrial fever</b>	<a href="#">Gnaiger 2009 Int J Biochem Cell Biol</a>
16:45-17:00	Roland Stocker (chair): Discussion. <b>The Sydney O2k-Workshop - feedback and conclusions</b>	<a href="#">O2k-Feedback</a>

**O2k-Catalogue:** <http://www.bioblast.at/index.php/O2k-Catalogue> OROBOROS

## Participants IOCG7

Lab / MiPNet Lab	Name	Institution	Email
<a href="#">AU_Melbourne_Stepto N</a>	Betteridge Scott	Victoria University	<a href="mailto:scott.betteridge@live.vu.edu.au">scott.betteridge@live.vu.edu.au</a>
<a href="#">AU_Sydney_Stocker R</a>	Collinson Emma	University of Sydney	<a href="mailto:emma.collinson@sydney.edu.au">emma.collinson@sydney.edu.au</a>
AU_Queensland_Peart J	Dong Lan-Feng	Griffith University	<a href="mailto:l.dong@griffith.edu.au">l.dong@griffith.edu.au</a>
AU_Sydney	Fong Angelina	Macquarie University	<a href="mailto:angelina.fong@mq.edu.au">angelina.fong@mq.edu.au</a>
<a href="#">BR_Florianapolis_Latini A</a>	Ghisoni Karina	Univ Florianopolis	<a href="mailto:kahghisoni@gmail.com">kahghisoni@gmail.com</a>
<a href="#">AT_Innsbruck_Gnaiger E</a>	Gnaiger Erich	Medical Univ Innsbruck	<a href="mailto:erich.gnaiger@oroboros.at">erich.gnaiger@oroboros.at</a>
AU_Sydney	Hawkins Clare	University of Sydney	<a href="mailto:hawkinsc@hri.org.au">hawkinsc@hri.org.au</a>
<a href="#">AU_Sydney_Ballard B</a>	Horan Martin	Univ New South Wales	<a href="mailto:m.horan@unsw.edu.au">m.horan@unsw.edu.au</a>
AU_Perth_Millar HA	Huang Shaobai	Univ Western Australia	<a href="mailto:shaobai.huang@uwa.edu.au">shaobai.huang@uwa.edu.au</a>
<a href="#">AU_Melbourne_Stepto N</a>	Kaur Gunveen	Victoria University	<a href="mailto:Gunveen.Kaur@vu.edu.au">Gunveen.Kaur@vu.edu.au</a>
<a href="#">AU_Sydney_Stocker R</a>	Lam Magda	University of Sydney	<a href="mailto:magda.lam@sydney.edu.au">magda.lam@sydney.edu.au</a>
AU_Sydney	Love Dominic	University of Sydney	<a href="mailto:loved@hri.org.au">loved@hri.org.au</a>
<a href="#">AU_Sydney_Stocker R</a>	Maghzal Ghassan	University of Sydney	<a href="mailto:ghassan.maghzal@sydney.edu.au">ghassan.maghzal@sydney.edu.au</a>
<a href="#">AU_Melbourne_Stepto N</a>	Parker Lewan	Victoria University	<a href="mailto:lewan.parker@live.vu.edu.au">lewan.parker@live.vu.edu.au</a>
AU_Queensland_Peart J	Peart Jason	Griffith University	<a href="mailto:j.peart@griffith.edu.au">j.peart@griffith.edu.au</a>
<a href="#">AU_Sydney_Ballard B</a>	Pichaud Nicolas	Univ New South Wales	<a href="mailto:n.pichaud@unsw.edu.au">n.pichaud@unsw.edu.au</a>
AU_Queensland_Peart J	See Hoe Louise	Griffith University	<a href="mailto:l.seehoe@griffith.edu.au">l.seehoe@griffith.edu.au</a>
AU_Perth_Millar HA	Song Yong	Univ Western Australia	<a href="mailto:ysong@meddent.uwa.edu.au">ysong@meddent.uwa.edu.au</a>
<a href="#">AU_Sydney_Stocker R</a>	Stocker Roland	University of Sydney	<a href="mailto:roland.stocker@sydney.edu.au">roland.stocker@sydney.edu.au</a>
<a href="#">AU_Sydney_Ballard B</a>	Wolff Jonci	Univ New South Wales	<a href="mailto:jonci@unsw.edu.au">jonci@unsw.edu.au</a>

## Contact

Erich Gnaiger, PhD  
 Medical University of Innsbruck  
 Department of Transplant Surgery  
 D. Swarovski Research Laboratory  
 Anichstrasse 35  
 A-6020 Innsbruck, Austria  
 Email [erich.gnaiger@i-med.ac.at](mailto:erich.gnaiger@i-med.ac.at)

<http://wiki.oroboros.at>  
[www.mipart.at](http://www.mipart.at)



Schöpfstrasse 18  
 A-6020 INNSBRUCK, Austria  
 T +43 512 566796  
 F +43 512 566796 20  
 Email [instruments@oroboros.at](mailto:instruments@oroboros.at)  
 Homepage: [www.oroboros.at](http://www.oroboros.at)  
 Cooperation and Feedback in Science

