



Course on High-Resolution Respirometry

IOC-26. Mitochondrial Physiology Network 8.17: 1-5 (2003)

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Oxygraph-2k Training Course on High-Resolution Respirometry 11-13 Dec. 2003, Innsbruck, Austria

Program

Thursday, 11. December

- Afternoon Participants arriving early are welcome to join us in the DSL Research Laboratory (Innrain 66/6) in the afternoon.
- 18:00 Optional meeting point at Hotel Mozart (Müllerstrasse 15) for a short walk to the medieval city center (Christkindlmarkt).
- 19:30 Optional meeting point at Hotel Mozart (Müllerstrasse 15); dinner at restaurant "Philippine" (in Müllerstrasse next to Hotel Mozart).



Friday, 12. December (D. Swarovski Research Laboratory, Innrain 66/6)



- 09:00-10:00 Introduction (Erich Gnaiger)
10:00-12:00 Cell respiration: Introductory Oxygraph-2k experiment (Kathrin Renner).
12:00 Lunch, Gasthof Innrain
14:00-17:30 High-resolution respirometry
- use of hardware and software as an integrated system.

Left: *Elena Shevtsova, Brigitte Haffner, Erich Gnaiger, Anand Manoharan* (left to right) - watching *Bob Nussbaum* at work with the DatLab software.

DSL Seminar Series - Mitochondrial Physiology Network Schöpfstr. 41, 1. Stock, Hörsaal 4

Right: MipNet seminar in the lecture hall (*Martha Glab, Susanne Haindl, Yvonne Dommels, Petr Pecina, Lazlo Wenchich, Elena Shevtsova, Bob Nussbaum*; front row, left to right).



- 18:00 **Robert Nussbaum**, Bethesda, USA
Alpha-synuclein and a mitochondrial connection.

- 18:30 **Patrick Schrauwen**, Maastricht, NL
The role of mitochondrial uncoupling protein-3 (UCP3) in human energy and substrate metabolism.
- 19:00 **Laszlo Wenchich**, Prague, Czech Republic
Comparison of polarographic and spectrophotometric methods in the diagnostics of mitochondrial disorders.
- 19:30 **Susana Cadenas**, Madrid, Spain
Regulation of hypoxia-inducible factor-1alpha by nitric oxide.
- 20:00 **Elena Shevtsova**, Chernogolovka, Russia
Mitochondria as a target for neurotoxins and neuroprotective agents.
- 20:30 Dinner: Restaurant Rififi (Schöpfstrasse 14, Innsbruck)

Saturday, 13. December (D. Swarovski Research Laboratory, Innrain 66/6)

09:00-10:00 Tutorials

10:00-12:00 Working groups:

A. Oxygraph-2k: Operation and service.

B. DatLab - Analysis.



Susana Cadenas, Martha Glab and Yvonne Dommels performing an instrumental background test, reducing the oxygen pressure in the gas phase of the chamber with a flow of nitrogen gas (above), while Cindy Wright and Steve Lancel close the stopper of another Oxygraph-2k (right).



Susana Cadenas, Martha Glab, Petr Pecina and Bob Nussbaum (left), Elena Shevtsova, Susana Cadenas, Patrick Schrauwen, Susanne Haindl, Martha Glab, Anand Manoharan, Steve Lancel, Petr Pecina and Bob Nussbaum (right) observing the oxygen trace on screen, while Yvonne Dommels operates DatLab (left and right).

12:00 Lunch, Cafe Dorado (centre of the clinic area)



On the PC (top): *Rob Boushel* and *Bob Nussbaum* in the foreground, *Yvonne Dommels* and *Susana Cadenas* in the background. On the Oxygraph-2k (right): *Matthijs Hesselink* and *Joris Hoeks* in the foreground, *Cindy Wright* and *Steve Lancel* in the background.



14:00-16:00 Working groups:
 A. Oxygraph-2k: Operation and service.
 B. DatLab - Analysis.

16:00-18:00 Tutorials

18:30 Departure from Hotel Mozart; drive to St. Sigmund (Sellrain valley; c. 20 km), private cars (*provided*). Easy walk to Gleirschalm (30 min). Mountain boots and warm clothing (gloves, hat) are recommended. Temperatures are expected to be below freezing point. At present, the entire way to Gleirschalm is covered by snow.
 Traditional dinner at Gleirschalm.
 Return walk to St. Sigmund and drive to Innsbruck

Lecturers and tutors: Erich Gnaiger, Kathrin Renner, Petr Pecina, Brigitte Haffner.

For preparatory course material, see <http://www.orooboros.at/index.php?experimental>

Several restaurants (Innrain, Rififi, Gleirschalm) do not accept credit cards. On the way between Hotel Mozart and the research laboratory (Innrain 66), you can easily find Hypobank Tirol for money exchange.

We hope you will have a productive and enjoyable time in Innsbruck,

Erich

For the next International Oxygraph Course, see www.orooboros.at.

MiP - Mitochondrial Physiology Society: www.mitophysiology.org

List of Participants

- Boushel Robert, Dept. of Exercise Science, Concordia University, 7141 Sherbrooke Street West, Montreal Qc, H4B 1R6 Canada; boushel@alcor.concordia.ca
- Cadenas Susana, Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC), Ronda de Poniente, 5, Tres Cantos, 28760 Madrid, Spain; scadenas@cnic.es
- Dommels Yvonne, RIKILT Institute of Food safety, Food Bioactives, PO Box 230, 6700 AE, Wageningen, NL; yvonne.dommels@wur.nl
- Frajo-Apor Irma, OROBOROS INSTRUMENTS, Schöpfstr. 18, A-6020 Innsbruck, Austria; irma.frajo-apor@oroboros.at (organization)
- Glab Martha, Department of Cellular Biochemistry, Nencki Institute of Experimental Biology, 3 Pasteur St., 02093 Warsaw, Poland; m.glab@nencki.gov.pl
- Gnaiger Erich, D. Swarovski Research Laboratory, Department of Transplant Surgery, Innrain 66/6, University Hospital Innsbruck, A-6020 Innsbruck, Austria; erich.gnaiger@oroboros.at (lecturer)
- Gradl Lukas, software security networks, Innsbruck, AT; l.gradl@ssn.at (DatLab software)
- Gradl Philipp, WGT Elektronik, Rettenbergstr. 30 a , A-6114 Kolsass, Austria; philipp.gradl@wgt.at (Oxygraph-2k hardware, development)
- Haffner Brigitte, OROBOROS INSTRUMENTS, Schöpfstr. 18, A-6020 Innsbruck, Austria; brigitte.haffner@oroboros.at (organization, tutor)
- Haindl Susanne, L. Boltzmann Institut für experimentelle und klinische Traumatologie, Donaueschingen-Str. 13, A-1200 Wien, Austria; susannehaindl@yahoo.de
- Hesselink Matthijs, Department of Movement Sciences, Nutrition and Toxicology Research Institute Maastricht (NUTRIM), Maastricht University, PO Box 616, NL-6200 MD, Maastricht, NL; Matthijs.Hesselink@BW.unimaas.nl
- Hoeks Joris, Department of Human Biology, Maastricht University, POBox 616, 6200 MD Maastricht, The Netherlands; j.hoeks@hb.unimaas.nl
- Lancel Steve, Faculté de Médecine, Pôle Recherche, Département de Physiologie ; 1, place de Verdun, F-59045 Lille, FR; slancel@univ-lille2.fr
- Manoharan Anand, MSc Department of Biochemistry & Molecular Biology, University of Madras, Guindy Campus, Chennai - 25, Tamil Nadu, India; manoanand@hotmail.com (student)
- Nussbaum Robert, Genetic Diseases Research Branch, National Human Genome Research Institute, 49/4A72 NIH, 49 Convent Drive MSC4472, Bethesda, MD 20892-4472; rlnuss@nhgri.nih.gov
- Pecina Petr, Dept. of Bioenergetics, Institute of Physiology, Academy of Sciences of the Czech Rep., Videnska 1083, 142 20 PRAGUE 4, CZ; frehelian@yahoo.com (tutor)
- Renner Kathrin, Dept. Pathophysiology, University of Innsbruck, Fritz-Pregl-Str. 3, A-6020 Innsbruck, Austria; kathrin.renner@uibk.ac.at (tutor)
- Sailer David, D. Swarovski Research Laboratory, Department of Transplant Surgery, Innrain 66/6, University Hospital Innsbruck, A-6020 Innsbruck, Austria; elch_Q@hotmail.com (student)
- Schrauwen Patrick, Department of Human Biology, Maastricht University, Universiteitssingel 50, NL-6229 Maastricht, The Netherlands; p.schrauwen@hb.unimaas.nl
- Shevtsova Elena, Lab. Neurochemistry, Institute of Physiologically Active Compounds RAS, Chernogolovka, Moscow Region, 142432, Russia; shevt@ipac.ac.ru
- Wenchich Laszlo, Laboratory for study of mitochondrial disorders, Department of Pediatrics, Charles University, Ke Karlovu 2, 120 00 Prague 2, Czech Republic; [wlaca@centrum.cz](mailto:wluca@centrum.cz)
- Wright-Paradis Cindy, Dept. of Exercise Science, Concordia University, 7141 Sherbrooke Street West, Montreal Qc, H4B 1R6, Canada; cwright@alcor.concordia.ca

City map of Innsbruck

