



## Mitochondrial Physiology Network

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**Invitation** to join the  
**Mitochondrial Physiology Network - MiPNet**  
as a reference laboratory for  
high-resolution respirometry

**- development - production - distribution -  
- application - cooperation - feedback -**

Dear colleague:

As a result of international cooperation's, expansion of the development, and WorldWide direct distribution of the OROBOROS Oxygraph-2k, I would like to invite you and your colleagues using our high-resolution respirometry system, the **Mitochondrial Physiology Network – MiPNet**.

What **MiPNet** offers to you:

- Direct information on the methodological details of Oxygraph-2k applications by other MiPNet laboratories.
  - With MiPNet we are entering an exciting phase for combining the expertise of leading research laboratories to a joint development for expansion of the Oxygraph-2k into the multi-sensor O2k MiPNetAnalyzer, from prototypes to series of O2k MiPNet instruments.
  - Special access to software updates of DatLab - [www.orooboros.at](http://www.orooboros.at).
- As **MiPNet** reference laboratory for high-resolution respirometry,
- ✓ you are listed on our website, with a link to your homepage, e-mail addresses of you and contact persons in your lab;
  - ✓ colleagues visiting your lab may see the performance of the OROBOROS Oxygraph, possibly a pilot experiment;
  - ✓ your publications with reference to the OROBOROS Oxygraph are listed in the MiPNet;
  - ✓ you receive advance information on MiP conferences, and workshops on high-resolution respirometry.

**Aim** – A growing number of research teams has joined the MiPNet as a Reference Laboratory for High-Resolution Respirometry. The scientific community can benefit from our developments in high-resolution respirometry. For many groups, the OROBOROS Oxygraph-2k would be too expensive if local distributors are involved. 40 % profit margins for the distributor (from the customer price) are usual in this business. Direct world-wide distribution – from development to your application – provides an alternative, returning distributor costs with direct feedback into science. Customer support from our office and research laboratory in Innsbruck is complemented by local scientific support through the Mitochondrial Physiology Network. With your cooperation, this WorldWide MiPNet is becoming an increasing success. Importantly, in Japan and China we are supported by a partner companies.

**Background** – In 1992, the first series of the OROBOROS® Oxygraph was completed (initially "Cyclobios Oxygraph" with Paar; Graz). About 60 instruments were produced until 1998 and distributed in 17 countries. Since 1994, OROBOROS® took over the world-wide distribution and completed development of DatLab 2 for high-resolution respirometry in cooperation with Michael Reck.

Finally in 2001, Philipp Gradl (WGT Elektronik; Kolsass) started as the competent partner for development and production of the Oxygraph-2k, and Lukas Gradl (ssn.at - software security networks; Innsbruck) for DatLab 3 – all within 20 km of Innsbruck. This successful cooperation resulted in the refined Windows™ version DatLab 4, integration of the Titration-Injection microPump (TIP2k), improved design of the polarographic oxygen sensor (POS; originally in cooperation with WPI; USA), and the new Oxygraph-2k as the basis for modular expansion to the O2k-MultiSensor System

In 2002/2003, 33 instruments of the Oxygraph-2k (Series A) were produced and delivered into 13 countries. In August 2003, the first of 100 instruments of Series B were completed, and offered with the extension to the O2k-MultiSensor System. In 2009, O2k Series D was completed, sales increased to >50 O2k instruments per year, with O2k-users in 33 countries.

Continuous developments of the O2k-MultiSensor System benefit from user innovation. Based on the expertise and cooperation within MiPNet, various electrochemical sensors (NO, ion selective electrodes such as pH, TPP, Ca<sup>2+</sup>, K<sup>+</sup>) and optical sensors (spectrophotometry, light scattering, fluorescence probes), are integrated into the Oxygraph-2k and supported by the multichannel-software DatLab 4 (Windows™).

OROBOROS supports the Mitochondrial Physiology Conference, and will support MiP Society to maintain the tradition for this conference - [www.mitophysiology.org](http://www.mitophysiology.org) .

The logo OROBOROS is a symbol of  
- **feedback** -

I will highly appreciate your feedback, particularly your willingness to join and support the Mitochondrial Physiology Network, and am looking forward to hearing from you,

Erich - **OROBOROS INSTRUMENTS**

Mitochondrial Physiology Network

