

## Top 10 reasons for Oroboros Instruments

Oroboros-team

### Oroboros Instruments

O2k High-Resolution FluoRespirometry  
Schöpfstr. 18, A-6020 Innsbruck, Austria  
Email: [instruments@orooboros.at](mailto:instruments@orooboros.at); [www.orooboros.at](http://www.orooboros.at)




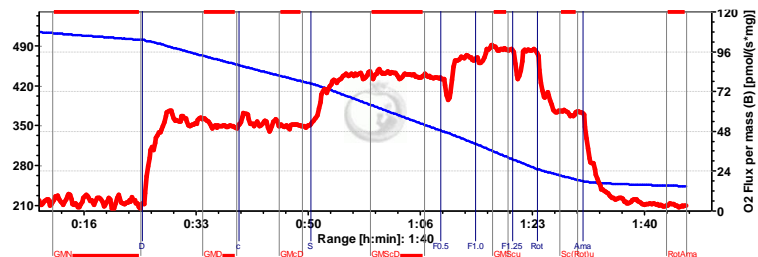
We summarize 10 compelling reasons for the Oroboros O2k, for collaborating with Oroboros Instruments, and for spreading our reproducibility commitment.

'Top 10' reflects our corporate goals



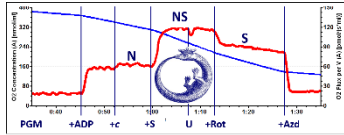
1. **High-resolution** - only the best is good for science. 

2. **Long-term experience:** The Oroboros O2k was the first commercially available mitochondrial respirometer using a computer for data acquisition. The O2k, therefore, benefits from our long-term experience with application-specific software development, reflected by the unique standard of DatLab. We are the first to replace the circulating water thermostat by electronic Peltier temperature control. With many more 'firsts', the O2k is unique for High-Resolution FluoRespirometry (HRFR) and is the world-leading instrument as a result of our continuing innovations. The technical O2k-specifications make it a '**sole source**' instrument. 



3. **O2k-Workshops on HRFR** continue our tradition in teaching, training and practicing instrumental and technical performance, with **>130 O2k-Workshops** since 1991.

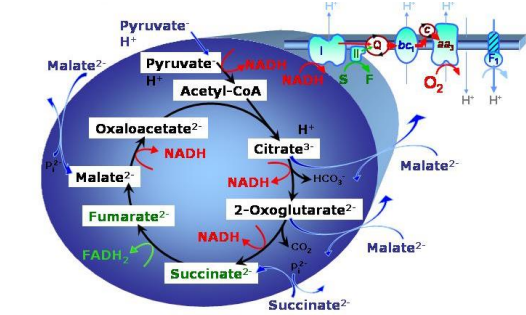




**O2k-Workshops** are special scientific events, for open exchange of practical and theoretical information, international networking, and providing an introduction into mitochondrial

physiology. [📁](#)

**4. O2k-QC procedures.** The O2k is delivered with a user-friendly O2k-Manual. In addition, scientifically based research protocols and theoretical perspectives provide Open Access to quality control standards, with QC detail that is frequently lacking in the literature. Our open information strategy is appreciated equally by beginners and experienced users, promoting a **new quality in science.** [📁](#)



experienced users, promoting a

**5. World-Wide Oroboros O2k-Network.** Based on its outstanding quality, the O2k has spread world-wide and is applied in internationally leading laboratories in **49 countries.** The O2k-Network lists **600 experienced labs,** open for direct contact between scientists in the expanding field of cell respiration, for immediate exchange of experience, transfer of user-innovation, and continuous optimization of Quality Control. [📁](#)




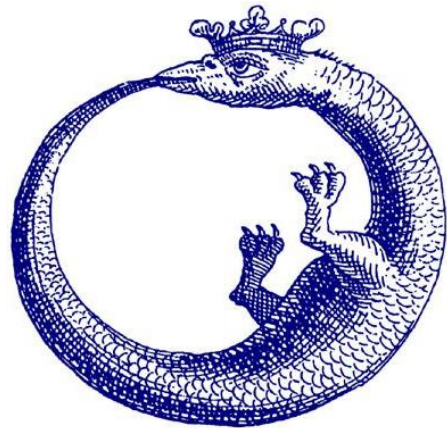
The expanding literature list contains **>3,000 O2k-Publications** and is a valuable source of references in mitochondrial respiratory physiology. [📁](#)


**Service in the service of science.** Our world-wide service is not limited to technical details, but includes scientific advice directly by the Oroboros-Team of scientists in research and development. By design, the O2k is most economical, with **minimum running costs.** [📁](#)

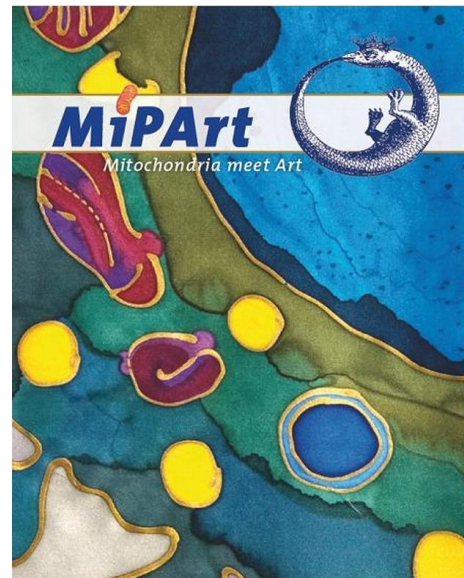


**6. Innovation, continuous development and optimization.** Instrumental development is a continuous process advanced by Oroboros Instruments. Long-term cooperation with our partner WGT-Elektronik (from the **O2k-FluoRespirometer** to the NextGen-O2k) and scientific networks (COST Action MitoEAGLE; Marie Skłodowska-Curie ITN Actions) makes us a driving force in mitochondrial physiology. [📁](#)

**7. No investors involved.** Oroboros Instruments Corp. is entirely independent of investors. From the start, therefore, our policy has not been dictated by profit orientation, but aims at a best cost/benefit ratio. The positive feedback from our customers makes possible a sustained development and steady innovation: **Cooperation and feedback in science** – symbolized by the **Oroboros**. 



**8. No empty advertisements.** Oroboros Instruments provides and spreads high-quality information. We deliberately refrain from expensive advertising campaigns, which add no value to a product yet have to be paid by the end user. Our investment into HRFR is expertise and the dedicated high-quality work of the Oroboros O2k-team and our distribution partners. Our enthusiastic customers provide the most valuable, economic and informative advertisement for our products. 

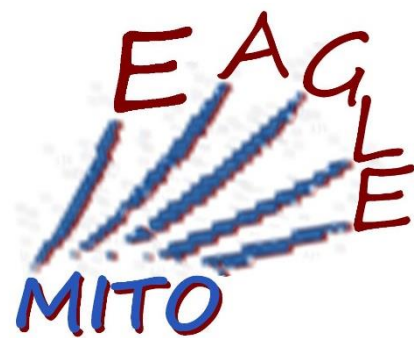


**Odra Noel** (London)

**9. Cooperation and Corporate Social Responsibility.** Cooperation and CSR are integral to our corporate aims and HRFR, reflected in the quality and sustainability of our products.

• **Bioblast Wiki** 

Integrating the spirit of Gentle Science and Scientific Social Responsibility



- Regional and international cooperations with academic institutions: [MitoFit](#); [MitoEAGLE](#); [Houska Award 2012](#); [AltitudeOmics Bolivia \(2012\)](#); [Xtreme Everest \(2013\)](#); [Racing dogs at Iditarod, Alaska \(2014\)](#).
- The [MiP Art Gallery](#) for jointly translating mitochondrial research into messages for the general community: *Mitochondria are bioblasts – the organisms in our cells – Science and Tempo giusto.*



# Bioblast wiki



Integrating the spirit of  
Gentle Science and  
Scientific Social  
Responsibility

[www.bioblast.at](http://www.bioblast.at)

Oroboros-team<sup>1</sup>



**Bioblast** was launched as a glossary and index for High-Resolution FluoRespirometry (Oroboros Instruments: **OroboPedia**) and Mitochondrial Physiology (**MitoPedia**), to find topics quickly, as a dynamic tool for summarizing definitions of terms, symbols and abbreviations - an innovative, collaborative Wiki database<sup>2,3</sup>.

**What is the aim?** Bioblast provides a platform for **Gentle Science**<sup>4</sup> in the spirit of Scientific Social Responsibility. Catalytically working as an *Information synthase* (see logo<sup>3</sup>), **MitoPedia** supports the decentralized evolution of a glossary of scientific terms, for developing a consistent nomenclature in the growing field of mitochondrial physiology. The corresponding category **Publications** provides a portal for sharing, disseminating and commenting relevant literature in mitochondrial physiology, with context-related filters for references. Bioblast allows the *evolution* of a scientific publication - providing space for open discussions and extensions of an otherwise static *paper*. This applies specifically to the sections of *Methods and Materials*, *Discussion*, and *References*. Detailed information added and edited should be helpful in practice. For example, **O2k-Procedures** are found now more quickly and users are encouraged to contribute and share their expertise.

**How to register?** Write to us, and we will register you with your real name, as in a scientific publication. Anonymous or pseudonymous contributions to Bioblast do not follow the scientific attitude of publication. Mail to [instruments@orooboros.at](mailto:instruments@orooboros.at) for registration or if you need help in editing.

**How does it work?** We invite scientists, students, and technicians in mitochondrial physiology and pathology to join as 'active users' in the spirit of Gentle Science, to ensure that the Bioblast Wiki will develop into a database of top-quality scientific information. This can be achieved only by an expert-moderated Wiki - with input and feedback of a large benevolent user community of experts in mitochondrial physiology.

All of us can shape the Bioblast Wiki by bringing together scientists working in divergent disciplines, to discuss, to resolve differences, to spread new knowledge and techniques; thus meeting the demand to integrate current developments in the methodologically and conceptually complex field of mitochondrial physiology.

1. The Oroboros O2k-Team: [http://wiki.orooboros.at/index.php/Orooboros\\_contact](http://wiki.orooboros.at/index.php/Orooboros_contact)
2. A *wiki* (Hawaiian, meaning 'fast') is a dynamic and collaborative website. Cunningham Ward: *What is a Wiki*; WikiWikiWeb: <http://www.wiki.org/wiki.cgi?WhatIsWiki>
3. The **Bioblast logo** combines mitochondrial art, from 'ATP synthase congregation' by Odra Noel, with the Oroboros, "the tail-eater" - a dragon forming a circle, where 'creation and the created become one in an inseparable process' [http://wiki.orooboros.at/index.php/Orooboros\\_logo](http://wiki.orooboros.at/index.php/Orooboros_logo)
4. Gentle Science Shapes the World - [http://www.bioblast.at/index.php/Gentle\\_Science](http://www.bioblast.at/index.php/Gentle_Science)