



OROBOROS

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High-Resolution Respirometry

Workshop on High-Resolution Respirometry

Programme

28. February 2002
Centro Polifunzionale Didattico
Aula Biochimica - I Piano
Department of Medical Biochemistry and Biology, BARI

Organizers

Sergio Papa (Bari)
Erich Gnaiger (Innsbruck)

09:30-10:00

Introduction: Renaissance of respirometric analyses for new trends in mitochondrial bioenergetics (Sergio Papa)

10:00-10:45

Lecture: Mitochondrial respiration at low levels of oxygen and cytochrome c (Erich Gnaiger)

10:45

Coffee

11:15-12:00

High-resolution respirometry – what makes the difference? (Erich Gnaiger)

- Low oxygen and measurement of cellular oxygen consumption – pushing the limits of detection.
- Optimum system design - the OROBOROS *Oxygraph*.
- On-line recording of oxygen concentration and flux; linear slope versus oxygen flux as a function of time.
- The concept of high-resolution calibrations – overview on instrument demonstration.

12:30

Lunch

14:00-16:00

OROBOROS *Oxygraph*: On-line instrumental performance

- Instrumental background: measurement and correction as a function of P_{O_2} .
- High time resolution: Determination of the time constant, dynamic corrections.

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