![SABLE SYSTEMS INTERNATIONAL]

Respirometry Course – Novo Nordisk Park, Måløv, Denmark

High-Throughput Metabolic and Behavioral Phenotyping

April 20-23, 2020

The respirometry course – held at Novo Nordisk, Måløv, Denmark – teaches participants how to use indirect calorimetry and behavioral analysis in metabolic screening. We will apply techniques for measuring real-time O_2 consumption, CO_2 production, and water loss for laboratory rodents. Measurement systems also include food & water intake, body mass monitoring, wheel running, and voluntary activity. Data analysis is a significant focus of this course – so feel free to bring your own data.

Hands On: The course leads participants through all steps of setting up apparatus, calibrating and troubleshooting, acquiring data, and analyzing data using Promethion metabolic systems.

Inquire about the price: Included in the registration fee are all laboratory costs, course materials, lunches, one-on-one data analysis review and discussion with our in-house experts, a signed copy of Dr. Lighton's book, and many extras.

Course Materials: All coursework materials are provided including copies of all presentations.

Instructors: The course is taught by Dr. Marshall McCue and the Sable Systems scientific team. Dr. McCue – the Sable Systems Chief Scientific Officer – is a world expert on ingestive physiology and calorimetry with over 50 peer-reviewed publications in scientific literature and several book chapters.

For questions, more information, or to register, contact Sable Systems by email to support@sablesys.com or by phone at 702-269-4445 in the US or +49 30 53054 1002 in the EU.

Metabolic and Behavioral Phenotyping Course – Schedule

Day 1:
- **Welcome and Orientation:**
  Introduction to workspace and the Promethion systems.
- **Classroom Lectures:**
  Theory of respirometry, Fundamentals of gas analysis, and Instrumentation for Promethion systems.
- **Hands-on Applications:**
  System calibration and actual data collection begins.

Day 2:
- **Additional Lectures:**
  Sensor function and theory and the fundamentals of data analysis.
- **Supervised Data Analysis:**
  Analyzing data using the IM-3 , introduction to Macro Interpreter, IM-3 RT interface, and One-Click Macros.
- **Hands-on Applications:**
  Trouble-shooting and continued data collection.

Day 3:
- **Additional Lectures:**
  Integrating behavior and energy expenditure.
- **Advanced Data Analysis:**
  Analyze your own laboratory datasets.
- **New Techniques and Approaches:**
  Treadmill/Exercise, Stable isotope analysis, Group ingestive behavior, RFID/Telemetry, Thermal cabinets, and more.

Day 4:
- **Advanced Data Analysis:**
  Creating custom macros and advanced data analysis.
- **Future Considerations:**
  Group discussion on what the data tells us – and what it doesn't.
- **Wrap-Up**