Measuring Metabolic Engines and Fuels

with the Agilent Seahorse XF Analyzer

July 5th, 2018

Universität Konstanz
Rooms: M628 (13:00 – 14:45),
P1138 (15:15 – 17:15)

EUTOXRISK

Presenter:

Johannes Delp
Universität Konstanz

Paola Ripani
Universität Konstanz

Dr. Daniel Gebhard
Agilent Technologies, Inc.

Agenda

13:00 – 13:15 **Welcome**
Johannes Delp & Daniel Gebhard

13:15 – 13:45 **Introduction Seahorse Technology**
Learning: Basic Understanding of the Technology, Standard Practices and Procedures
Daniel Gebhard

13:45 – 14:15 **Measuring Immune Cell Activation in Real-time**
Learning :In-situ Activation of T-cells, Macrophages, and Neutrophils in the Seahorse
Daniel Gebhard

14:15 – 14:45 **A Novel XF Assay to Assess Cellular ATP Kinetics**
Learning: Basic Procedures for the Assay, Calculation of Glycolytic and Mitochondrial ATP Production Rates
Daniel Gebhard

14:45 – 15:30 Coffee Breack & Room Change

15:30 – 16:00 **Seahorse Measurements with Permeabilized Cells**
Learning: Biochemical Assessment of Single Mitochondrial Complexes
Johannes Delp

16:00 – 16:30 **Troubleshooting and Data Interpretation 1**
Learning: Thiazolides as Test Compounds in Seahorse Assays
Paola Ripani & Johannes Delp

16:30 – 17:00 **Troubleshooting and Data Interpretation 2**
Learning: Bacteria as Model Organisms in Seahorse Assays
Johannes Delp

17:00 – 17:15 Wrap up & Closing
Johannes Delp & Daniel Gebhard

FREE WORKSHOP

Metabolism is the key to understanding cell function

In living cells, most of the energy produced is derived from three fuel sources: glucose, glutamine, and fatty acids. Mitochondrial access to these fuels impacts a wide variety of biological processes.

Use the Agilent Seahorse XF Analyzer to:

- Identify fuel dependencies to uncover cancer cell vulnerabilities.
- Explore how fuel preferences lead to cell fate decisions for differentiation and immune cell activation.
- Determine whether/how cells can adjust fuel oxidation to match nutrient availability while meeting energy demand.
- Distinguish metabolic adaptations due to genetic changes vs. those that take place due to nutrient deprivation.

For registration
Please contact contact daniel.gebhard@agilent.com until June 28th for registration.

Agilent Technologies