

METABOLOMICS 2019

THE HAGUE | June 23-27

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

From biomarker discovery, through tissue imaging and targeted omics workflows, Waters innovative solutions deliver unparalleled metabolite coverage, accuracy, accessibility, and flexibility.

Come visit Waters at Booth #P8 to meet our scientists and learn about Waters solutions for metabolomics research. Pick up a stroopwafel, a delicious Dutch treat, while visiting our booth and be entered to win a Progenesis™ Q! 6-month license!



POSTER PRESENTATIONS

- **Lipidomic Quantitation of Respiratory Disease: A Rapid and Comprehensive HILIC-Based Targeted Approach**
Presenting Author: Giorgis Isaac, Waters Corporation
- **Targeted Multi-OMICS: Rapid Plasma Profiling of a Bladder and Lung Cancer Human Cohort**
Presenting Author: Billy Molloy, Waters Corporation
- **Analysis of Lipid and Fatty Acid Isomers Using a Travelling Wave Cyclic Ion Mobility Separator**
Presenting Author: David Heywood, Waters Corporation
- **Automated High-Throughput Flux Analysis of Non-Small Cell Lung Carcinoma Cells Grown *in vitro* in Two and Three Dimensions**
Presenting Author: Agnes Corbin, Nonlinear Dynamics
- **High Throughput Polar Metabolite Analyte Metabolomic Phenotyping of Large Cohort Epidemiological Studies Using Ion Mobility Enabled LC/MS**
Presenting Author: Ian Wilson, Imperial College London
- **Rapid Analytical Platforms for Biofluid Profiling in Discovery Metabolomics**
Presenting Author: Adam King, Waters Corporation

SPONSOR PRESENTATION

Parallel Session: Novel Instruments, Tools and Services

Tuesday June 25, 1:30 – 3:15 PM
Princess Ariane

From Out of the Box Methods to Structural Characterization. Solutions for Metabolomics Research

Presented by: David Heywood

To fully understand the complex relationship between biology and the compounds we measure, multiple approaches and workflows need to be considered. Discovery workflows provide indications of metabolic perturbation often needing supplemental measurements across large cohorts, measurement of metabolic flux or even clarification of compound structure. This presentation will discuss how Waters innovates with purpose to address the challenges in Metabolomics research.

Join us at our Lunch Seminar

Tuesday, June 25th

12:20 pm – 13:20 pm

Princess Ariane

Advancing Metabolomics Research with New Solutions from Waters

Presenting Author: David Heywood, Waters Corporation

The Application of Mass Spectrometry to Elucidate the Pathophysiology of Gaucher Disease and Improve on its Therapeutic Intervention

Presenting Author: Johannes M. Aerts and Maria J. Ferraz,
Department Medical Biochemistry, Leiden University

Gaucher disease is a rare inherited disorder that is characterized by accumulation of lipid-laden macrophages (Gaucher cells) in tissues, particularly spleen, liver, and bone marrow causing organomegaly, hematological symptoms and bone deterioration. The disease is caused by defects in the lysosomal β -glucosidase glucocerebrosidase (GBA) that cleaves the ubiquitous lipid glucosylceramide into glucose and ceramide, the penultimate step in lysosomal fragmentation of glycosphingolipids. Recently it has been recognized that defective GBA, even at carrier level, constitutes a major risk factor for developing Parkinson's disease.

Gaucher disease has been a true frontrunner among the inherited lysosomal storage disorders (LSDs) in many aspects. It was the first LSD for which effective therapeutic interventions were developed based on the supplementation of lacking enzyme by intravenous administration of recombinant GBA targeted to macrophages (enzyme replacement therapy; ERT) or pharmacological reduction of synthesis of glucosylceramide (substrate reduction therapy). For Gaucher disease, a number of plasma biomarkers have been identified ranging from proteins to lipids. Moreover, the pathophysiology of Gaucher disease is relatively well understood in contrast to that of most other LSDs. The important contribution to the present knowledge stemming from research employing advance mass spectrometry is topic of the lecture. Attention is also paid to the application of mass spectrometry in present diagnosis and monitoring of Gaucher disease, as well as its potential to assist in the elucidation of important outstanding questions on additional metabolites of GBA.

►► Learn more about Waters solutions at
www.waters.com/metabolomics

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