

**DGMS Fachgruppe Affinity – Mass Spectrometry
AffyMSLifeChem: Int. Workshop**

**Affinity-Mass Spectrometry in Life Sciences
Diagnostics & Therapy Development of Lysosomal Diseases**

**24-25th November 2014
Rüsselsheim, Opel- Forum ("Opel-Altwerk")**

Topics

**Lysosomal Storage Diseases: Diagnostics and Therapy Development
Mass Spectrometry in Protein Interaction Analysis
Bioaffinity - Mass Spectrometry**

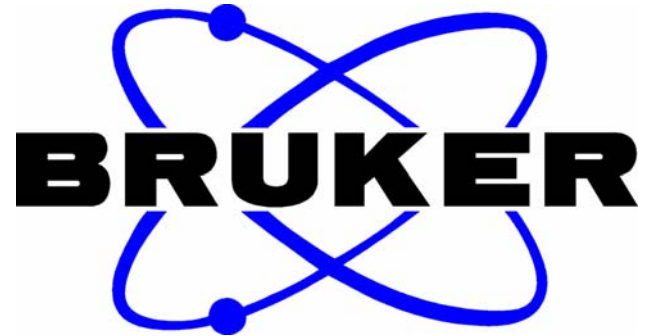
Organizers & Speakers (partial):

Xavier Barril, Barcelona
Christoph Borchers, Victoria /CA
Michael O. Glocker, Rostock
Thomas Braulke, Hamburg
Frank Sobott, Antwerp
Stefan Maeser, Rüsselsheim
Michael Przybylski, Rüsselsheim



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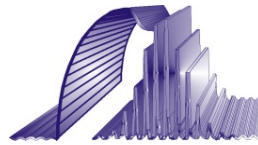
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The Neuronal Ceroid Lipofuscinoses - Metabolic Storage Disorders leading to Dementia Affinity- Mass Spectrometry in Life Sciences: Diagnostics & Therapy Development of Lysosomal Diseases

24th - 25th November 2014

Auditorium Opel-Forum

Programme

Monday, 24th November 2014

Opel-Forum

09:00 - **Registration & Welcome Coffee**

10:45 **Welcome & Opening Addresses**

M. Przybylski, Steinbeiszentrum Biopolymeranalysis & Biomedical Mass Spectrometry, Rüsselsheim

M. Auer, Vorstand Steinbeis GmbH für Technologietransfer, Stuttgart

P. Burghardt, Oberbürgermeister Rüsselsheim

M. Linscheid, Vorsitzender der Deutschen Gesellschaft für Massenspektrometrie, Humboldt-Universität Berlin

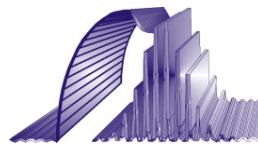
M. Glocker, Proteome Center, Medizin. Universität Rostock

Session 1: Diagnostics & Therapy Development of Lysosomal Diseases
(Chair: M. Przybylski; M. Glocker)

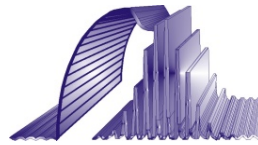
11:30 **Stefan Maeser**, Steinbeiszentrum Biopolymeranalytik Rüsselsheim:
Opening Lecture/Eröffnungsvortrag: Lysosomale Speicherkrankheiten - Diagnostik als Basis neuer Therapieentwicklung

12:00 **Eugen Mengel**, Villa Metabolica, Universitätsklinikum Mainz:
Clinical Aspects of the Diagnosis of Lysosomal Storage Diseases

12:30 Lunch



- 13:30 **Thomas Braulke**, UKE University Children Hospital Hamburg:
Synthesis and Transport of Lysosomal Enzymes
- 14:00 **Emanuela Izzo**, Biomarin Europe SA, Milan, Italy
Laboratory Diagnosis of Morquio Type A and MPS-VI Disease
- 14:30 **Asunan Ozkara**, Hacettepe University of Ankara. Turkey:
Towards Understanding the Molecular Mechanisms of Sphingolipidoses:
The Value of Sphingolipidomics
- 15:00 **A. Kohlschütter**, Universitätsklinikum Eppendorf, Hamburg:
The Neuronal Ceroid Lipofuscinoses - Metabolic Storage Disorders
leading to Dementia
- 15:30 **Michael Przybylski**, Steinbeiszentrum Biopolymeranalytik, Rüsselsheim:
Diagnostics of Lysosomal Disorders by fluorimetry and mass
spectrometry
- 15:50 *Coffee Break*
- 16:20 **Richard Welford**, Actelion Europe, Basel, Switzerland:
How mass spectrometry can shape the diagnosis of Niemann-Pick
Disease type C: Oxysterols, sphingolipids and beyond
- 16:50 **S. Hecimovic**, Rudjer Boskovic Institute, Zagreb, Croatia
Similarities between NPC and Alzheimer's disease - focus on lysosomes
- 17:20 **Xavier Barril**, Minoryx SA, Barcelona, Spain:
Strategies to identify and exploit novel allosteric sites for the development
of pharmacological chaperones - Application to β -galactosidase
- 17:50 **A. Moise**, Steinbeiszentrum Biopolymeranalytik, Rüsselsheim
"CREDEX-MS": Elucidation of Protein- Carbohydrate Interaction sites
- 18:10 Welcome & Get-together/ Poster viewing /Opel- Auditorium
- 19:00 **Departure of bus to the workshop dinner**
- 19.30 **Workshop Dinner, Hauzelhof, Wallau**



Tuesday, 25th November 2014

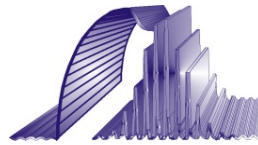
Opel- Auditorium

Session 2: New Developments of High Performance Mass Spectrometry
(Chair: M. Przybylski)

- 09:00 **Y. Tsybin**, EPFL, Lausanne, Switzerland
Mass Spectrometry Strategies for Rapid and Artifact-Free Antibody and Hemoglobin Structure Analysis
- 09:30 **M. Kipping**, Waters GmbH/Waters Inc., Eschborn & Manchester, UK
New Horizons in Mass Spectrometry opened up by Travelling Wave Ion Mobility Separations (TWIMS)
- 10:00 **Sneha Chatterjee**, Dept. of Chemistry, University of Antwerp, Belgium
Ion mobility methods for the characterization of dynamic protein structure
- 10:30 **M. Macht**, AB Sciex GmbH, Darmstadt
Understanding regulatory processes by comprehensive quantitation of complex samples
- 11:00 *Coffee break*

Session 3 : Bioaffinity/Biosensor- Mass Spectrometry Combination: Instrumental Development and Biomedical Applications
(Chair: M. Glocker)

- 11:30 **C. Borchers**, University of Victoria Proteome Center, Victoria, CA
Immuno-MALDI for clinical research and diagnostics
- 12:00 **D. Suckau**, Bruker Daltonics, Bremen
Immuno-MALDI assays: Precise, accurate and specific
- 12:30 **Stefan Slamnoiu**, Steinbeiszentrum Biopolymeranalytik, Rüsselsheim
Online-Biosensor Mass Spectrometry: Analytical Development & Biomedical Applications
- 13:00 **Mireia Diaz-Lobo**, Institute for Research in Biomedicine, Barcelona
Evaluation of proteolytic excision online SAW-biosensor-mass spectrometry to map contact surfaces Application to VEGF-Avastin system
- 13:30 *Lunch*



Session 4: Affinity- Mass Spectrometry and Analysis of Biomolecular Interactions

(Chair: C. Borchers)

- 14:30 **M. Glocker**, Proteome Center Rostock, Rostock, Germany
Affinity-MS: Isolation and Mass Spectrometric Characterization of Intact Immune Complexes
- 15:00 **A. Petre**, Biochemistry Laboratory, A.I. Cuza University Iasi, RO
Elucidation of Protein oxidative modifications using affinity- mass spectrometry
- 15:30 **T. Lavold**, Biomotif AB, Danderyd, Sweden
A Novel High Throughput Site Specific Binding Screening Platform
- 16:00 *Coffee Break*
- 16:30 **Y. Yefremova**, Proteome Center Rostock
How ESI- MS "spray parameters" affect ion yields and charge structures of proteins
- 17:00 **J. Dengjel**, Center for Biological Systems Analysis, University of Freiburg
Quantitative MS for the analysis of deregulated protein complexes in human disease
- 17:30 **M. Przybylski**, Steinbeiszentrum Biopolymeranalytik, Rüsselsheim
Bioaffinity and Mass Spectrometry Marriage: Two areas combine – to last in determining recognition structures, interactions, affinities?
- 18:00 **C. Borchers, M. Glocker, M. Przybylski**
Summary & Concluding Discussion
- 19:00 *Dinner (Restaurant "Schaab Louis") Rüsselsheim*