

November 17 – 18, 2016 at ISAS e. V.,
Otto-Hahn-Straße 6b,
44227 Dortmund, Germany

6th Symposium on Structural Proteomics 2016

Cross-linking, HDX, Covalent modification, Limited proteolysis,
Ion mobility, Native MS, Affinity labeling, Protein structure modeling

Waters
THE SCIENCE OF WHAT'S POSSIBLE.®

MSVision Think differently!

BRUKER

ThermoFisher
SCIENTIFIC

Creative Molecules Inc.

BCProteomicsNetwork

MRM Proteomics

euriso-top
YOUR PARTNER FOR
LABELLED COMPOUNDS
(¹³C, ¹⁵N, D, ¹⁸O)



Photos: www.do-foto.de (Dortmund panorama, Signal Iduna Park), Borussia Dortmund (bus), T. Borchers (stands)

Organization committee:

Albert Sickmann (Dortmund, Germany), Christoph Borchers (Victoria, Canada), Evgeniy Petrochenko (Victoria, Canada)

Agenda

Thursday, 17th November 2016

WELCOMING

Albert Sickmann (Director of ISAS)

Christoph Borchers (Director UVic Genome BC Protein Centre)

Start: 09:00 am

SESSION 1 – CHAIR: CHRISTOPH BORCHERS

Start: 09:15 am

Speaker: Nikolay Dokholyan - University of North Carolina at Chapel Hill

Title: From etiology to therapeutics of the Lou Gehrig's disease

Start: 09:35 am

Speaker: Frank Sobott - University of Antwerp

Title: Dynamic protein structure: from protein disorder to membrane pores

Start: 09:55 am

Speaker: Kevin Pagel - Freie Universität Berlin

Title: Gas-phase Infrared Spectroscopy of Proteins and Protein Assemblies

Start: 10:15 am

Speaker: Albert Konijnenberg - University of Antwerp

Title: Probing the effect of small molecules on the ensemble structure of alpha-synuclein

Start: 10:20 am

Speaker: Knut Kölbl - University of Antwerp

Title: Effect of ligand binding on gas-phase structure and collision-induced unfolding of D-alanine:D-alanyl carrier protein ligase

Start: 10:25 am

Speaker: Jeroen van Dijck - University of Antwerp

Title: The activation and oligomerization of BAX after treatment with different activating compounds or peptides.

COFFEE BREAK

Start: 10:30 am

SESSION 2 – CHAIR: FRANK SOBOTT

Start: 11:00 am

Speaker: Michael Przybylski - University of Konstanz

Title: Epitope identification and affinity quantification of protein- ligand interactions using online SPR-biosensor- ESIMS

Start: 11:20 am

Speaker: Michael Glocker - University of Rostock

Title: What Mass Spectrometry Can Tell Us About In-Solution Protein Complex Stabilities -And Why We Want To Know Them

Start: 11:40 am

Speaker: Johannes Heidemann - Leibniz Institute for Experimental Virology, Hamburg

Title: Structural characterization of protein-lipid complexes involved in clathrin-mediated endocytosis

Start: 12:00 pm

Speaker: Lara Flacht - Leibniz Institute for Experimental Virology, Hamburg

Title: Structural organization of the Type III Secretion System sorting platform in *Salmonella typhimurium*

Start: 12:05 pm

Speaker: Boris Krichel - Leibniz Institute for Experimental Virology, Hamburg

Title: Structure dependent procession of polyprotein7-10 and formation of a replication-transcription complex of SARS Coronavirus

Start: 12:10 pm

Speaker: Ronja Pogan - Leibniz Institute for Experimental Virology, Hamburg

Title: Studying viral capsid glycan interaction with native MS

Start: 12:15 pm

Speaker: Petra Darebná - Institute of Microbiology, The Czech Academy of Sciences

Title: Protein affinity surfaces prepared by ambient ion landing compatible with MALDI mass spectrometry

LUNCH BREAK & POSTER SESSION**Start: 12:20 pm**

SESSION 3 – CHAIR: MICHAEL PRZYBYLSKI**Start: 13:45 pm**

Speaker: Gergely Lukacs - McGill University

Title: Coupled destabilization of NBD1 subdomains by cystic fibrosis mutations

Start: 14:05 pm

Speaker: Michał Dadlez - Institute of Biochemistry and Biophysics, Warsaw

Title: Novel insights into intermediate filament organization obtained by hydrogen deuterium exchange (HDex) study.

Start: 14:25 pm

Speaker: Lenka Hernychová - Masaryk Memorial Cancer Institute

Title: Analysis of conformational and binding properties of human Hsp70 molecular chaperone by hydrogen deuterium exchange mass spectrometry

Start: 14:30 pm

Speaker: Lucie Hernychová - Institute of Microbiology, The Czech Academy of Sciences

Title: The C-type Lectin-like Receptor Nkrp1b: Aspects of Its Structure

COFFEE BREAK**Start: 14:35 pm**

SESSION 4 – CHAIR: KARL MECHTLER**Start: 15:30 pm**

Speaker: Petr Novak - Institute of Microbiology, The Czech Academy of Sciences

Title: MALDI-Compatible Protein Chips Prepared By Ambient Ion Soft Landing

Start: 15:50 pm

Speaker: Gary Kruppa - Bruker

Title: DeutEx, A Software Package for the Fully Automated Analysis of HDX Data

Start: 16:10 pm

Speaker: Petr Man (Petr Novak) - Institute of Microbiology, The Czech Academy of Sciences

Title: Improving spatial resolution and data processing in H/D exchange.

Start: 16:15 pm

Speaker: Michal Rosulek - Institute of Microbiology, The Czech Academy of Sciences

Title: MALDI compatible biochips for proteomic studies

Start: 16:20 pm

Speaker: Jiri Hausner - Institute of Microbiology, The Czech Academy of Sciences

Title: Structural changes of CIC-ec1 induced by differential anion binding studied by hydrogen/deuterium exchange.

ROUND TABLE DISCUSSION**Start: 16:25 pm**

CONGRESS PARTY & DINNER**Start: 18:00 pm****Restaurant Strobels (Strobelallee 50, 44139 Dortmund, Germany)**

WESTFALENSTADIUM TOUR**Start: 18:30 pm****Westfalenstadium (Strobelallee 50, 44139 Dortmund, Germany)**

SESSION 5 – CHAIR: PETR NOVAK

Start: 09:00 am

Speaker: Andrea Sinz - Martin-Luther University Halle-Wittenberg

Title: Divide and Conquer - Cleavable Cross-linkers to Study Protein Conformation and Protein-Protein Interactions

Start: 09:20 am

Speaker: Carla Schmidt - Martin Luther University Halle-Wittenberg

Title: Biophysical characterization of yeast PROPPIN Atg18 reveals oligomerisation upon membrane binding

Start: 09:40 am

Speaker: Gianluca Degliesposti - MRC Laboratory of Molecular Biology Cambridge

Title: Atomic structure of Mitochondrial Complex I: Resolution improvements driven by chemical cross-linking and mass spectrometry

Start: 10:00 am

Speaker: Oleg Klykov - Utrecht University

Title: The Architecture and Spacer Acquisition in Type I-F Cas1:Cas2-3 CRISPR Complex by Structural Mass Spectrometry.

Start: 10:20 am

Speaker: Anargyros Politis - King's College London

Title: Determining the structure and dynamics of macromolecular assemblies using an MS-based hybrid strategy

COFFEE BREAK

Start: 10:40 am

SESSION 6 – CHAIR: ANDREA SINZ

Start: 11:00 am

Speaker: Henning Urlaub - MPI for Biophysical Chemistry Goettingen

Title: Analysis of UV-induced DNA–protein cross-links in a chromatin model

Start: 11:20 am

Speaker: Alexander Leitner - Institute of Molecular Systems Biology ETH Zurich

Title: High-resolution mapping of protein-RNA interactions by crosslinking of segmentally isotope-labelled RNA and LC-MS/MS

Start: 11:40 am

Speaker: Christian Tüting - Martin Luther University Halle Wittenberg

Title: Structural Analysis of Protein-Protein Interactions in the Polyadenylation Complex by Chemical Crosslinking and Mass Spectrometry

Start: 11:45 am

Speaker: Christine Piotrowski - Martin-Luther University Halle-Wittenberg

Title: Structural Investigation of the Calmodulin/ bMunc13-2 Interaction by Cross-Linking and Mass Spectrometry

Start: 12:50 pm

Speaker: Christian Ihling - Martin-Luther University Halle-Wittenberg

Title: Structural insights into retinal guanylyl cyclase-GCAP-2 interaction determined by cross-linking and mass spectrometry

Start: 12:55 pm

Speaker: Christian Arlt - Martin-Luther University Halle-Wittenberg

Title: Structure of Full-Length Wild-Type Tetrameric p53 Tumor Suppressor Probed by an Integrated Mass Spectrometry-Based Approach

LUNCH BREAK & POSTER SESSION**Start: 13:00 pm**

SESSION 7 – CHAIR: EVGENIY PETROTCHENKO**Start: 14:30 pm**

Speaker: Fan Liu - Utrecht University

Title: Developing structural interactomics and its application in cell biology

Start: 14:50 pm

Speaker: Luitzen de Jong - University of Amsterdam

Title: Cross-linking of bacterial cells in culture reveals dynamic protein-protein interactions on a proteomic scale

Start: 15:10 pm

Speaker: Roza I Viner - Thermo Fisher Scientific USA

Title: Novel data acquisition and analysis strategies for high confident cross-link identification using Orbitrap mass spectrometers.

Start: 15:30 pm

Speaker: Elena Rudashevskaya - ISAS

Title: Proteome-wide identification of protein-protein interactions by in vivo chemical crosslinking and mass spectrometry.

Start: 15:35 pm

Speaker: Claudio Iacobucci - Université de Brest

Title: Copper-catalysed click reaction performed in the gas phase: a mass spectrometric mechanistic study.

Start: 15:40 pm

Speaker: Christoph Hage - Martin-Luther University Halle-Wittenberg

Title: Dissociation behavior of a bifunctional TEMPO-benzyl active ester for peptide structure analysis by free-radical-initiated-peptide-sequencing (FRIPS) mass spectrometry in negative ESI-MS

Start: 15:45 pm

Speaker: Michael Götze - Martin-Luther University Halle-Wittenberg

Title: Efficient Identification of Cross-Linked Peptides with StavroX and MeroX in Structural Proteomics

COFFEE BREAK**Start: 15:50 pm**

SESSION 8 – CHAIR: ALBERT SICKMANN

Start: 16:00 pm

Speaker: Peter Højrup - University of Southern Denmark Odense

Title: Exploring the structure of calreticulin by multiple XLMS strategies and new software.

Start: 16:20 pm

Speaker: Zsuzsanna Orbán-Németh - Institute of Molecular Pathology Vienna, Austria

Title: Structural prediction of protein models using comprehensive XL-MS data

Start: 16:40 pm

Speaker: Stefan Kalkhof - Hochschule für angewandte Wissenschaften Coburg

Title: Structural evaluation of Follicle-stimulating hormone receptor with spatial restraints by chemical crosslinking.

Start: 17:00 pm

Speaker: Stéphane Chaignepain - Université de Bordeaux

Title: Structural characterization of the yeast CF IA complex through a combination of mass spectrometry approaches.

Start: 17:05 pm

Speaker: Nir Kalisman - The Hebrew University of Jerusalem

Title: Good practices for successful cross-linking and mass-spectrometry

Start: 17:10 pm

Speaker: Oleg Klychnikov - KU Leuven

Title: Maleimide diazirine XL-MS and cysteine walking for mapping intermediate filaments

CLOSING REMARKS

Start: 17:15 pm

Karl Mechtler (IMP - Research Institute of Molecular Pathology)

Evgeniy Petrotchenko (UVic Genome BC Protein Centre)

Albert Sickmann (Leibniz-Institut für Analytische Wissenschaften -ISAS- e. V.)

Sponsors



BC Proteomics Network

BC Proteomics Network, 2125 East Mall, Vancouver, BC, CN



Bruker Daltonics, 40 Manning Road, Billerica, MA 01821, US

Creative Molecules Inc.

Creative Molecules Inc., cmi@creativemolecules.com



Parc des Algorithmes, Bâtiment Homère Route de l'orme, 91194 Saint Aubin Cedex, FR



MRM Proteomics Inc., 4464 Markham Street, Victoria, British Columbia, V8Z 7X8, CN



MS Vision, Televisieweg 40, 1322 AM Almere, NL

ThermoFisher SCIENTIFIC

Thermo Fisher Scientific GmbH, Im Steingrund 4-6, 63303 Dreieich, DE

Waters

THE SCIENCE OF WHAT'S POSSIBLE.®

Waters GmbH, Helfmann-Park 10, 65760 Eschborn, DE



Leibniz-Institut für Analytische Wissenschaften -ISAS- e.V.,
Bunsen-Kirchhoff-Str.11, 44139 Dortmund DE



4464 Markham St #3101, Victoria, BC V8Z 5N3, CN