Structured Curriculum for MD and PhD students
University Medicine Rostock
Participants´ Camp SS 2014

and the

DGMS- Fachgruppe
Affinitäts- Massenspektrometrie
(Affinity-MS - Special Interest Group Workshop)

4th - 6th of May, 2014
Agenda

of the Participants´ Camp SS 2014 and the Affinity-MS Special Interest Group Workshop

Affinity – MS

meets

Regenerative Medicine

Sunday, 4th of May 2014

I. Welcome and Key-note lecture
   Chair: M.O. Glocker

18:00 – 18:15 M.O. Glocker, Rostock
   Welcome and meeting overview

18:15 – 19:00 F. Sobott, Antwerpen
   Sizing and shaping up proteins: The use of ion mobility and native MS for conformational studies

19:30 – 21:30 Speakers´ Dinner
# Agenda

of the **Participants´ Camp SS 2014** and the **Affinity-MS** Special Interest Group Workshop

**Monday, 5th of May 2014**

## II. Protein Structure and Protein-Protein Interactions I

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9:00 – 9:20</td>
<td>K.F.M. Opuni, Rostock</td>
<td>Characterization of Epitope Peptides by Ion-Mobility Mass Spectrometry</td>
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<tr>
<td>9:20 – 9:40</td>
<td>Y, Yefremova, Rostock</td>
<td>Bioanalytic and mass spectrometric characterization of “protein G’+”</td>
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<td>9:40 – 10:00</td>
<td>M. Al-Majdoub, Rostock</td>
<td>Characterization of protein G conformations and the influence of indole propionic acid (IPA) by hydrogen / deuterium exchange analysis</td>
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<td>10:00 – 11:00</td>
<td>Break</td>
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## III. Affinity-MS and Antibody Design

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tr>
<td>11:00 – 11:45</td>
<td>M. Przybylski, Konstanz</td>
<td>Uncovering molecular details of protein &quot;misfolding - aggregation&quot; using affinity- and ion mobility- mass spectrometry - Physiological and “Parkinson”- Synucleins</td>
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<tr>
<td>11:45 – 12:30</td>
<td>A. Frenzel, Braunschweig</td>
<td>Designing high specific antibodies</td>
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<td>12:30 – 14:00</td>
<td>Lunch</td>
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IV. Stem cell biology
Chair: M.O. Glocker

14:00 – 14:20 A. Schade, Rostock
Non-Viral Gene Carriers for Efficient Modifications of Human Mesenchymal Stem Cells for Cardiac Regeneration

14:20 – 14:40 P. Müller, Rostock
Non-viral Re-programming of hMSCs into Cardiomyocytes

14:40 – 15:00 N. Voronina, Rostock
Genetic Modification for Stimulation of Angiogenesis in Ischemic Conditions using Magnetic Nanoparticle-based Delivery of Micro-RNA

15:00 – 15:30 F. Hausburg, Rostock
Reprogramming of somatic cells into cardiomyocytes

15:30 – 16:30 Break

V. Protein Structure and Protein-Protein Interactions II
Chair: M. Przybylski

16:30 – 16:50 J. Yang, Rostock
ESI Mass Spectrometric analysis of Human Plasma / Serum Proteins upon Bead-based Affinity Extraction

16:50 – 17:35 M. Schulze / S. Giegold, Berlin
Perfinity iDP, a new platform for protein analysis and fast on-line trypsin digestion followed by detection of the digested peptides by LC-MS

19:00 – 21:00 Dinner
Agenda

of the Participants´ Camp SS 2014 and the Affinity-MS Special Interest Group Workshop

Tuesday, 6th of May 2014

VI. **Protein Structure and Protein-Protein Interactions III**
Chair: M. Przybylski

9:00 – 9:40  F. Zehender, München
Some like it hot – Biomolecule analytics using microscale thermophoresis

9:40 – 10:00  A. Moise, Konstanz
Affinity-MS approaches for identification of galactose and chaperone binding sites in human alpha-galactosidase A

10:00 – 10:20  M. Iurascu, Konstanz
Investigations of a mixed disulfide epitope of spondyloarthritides related HLA-B2 by proteolytic excision mass spectrometry

10:20 – 11:00  Break

VII. **Clinical Research**
Chair: M.O. Glocke, Rostock

11:00 – 11:20  M. Hoffmann, Rostock
Disease-Mediated Phagocyte Recruitment

11:20 – 11:40  G. Mukherjee, Rostock
Quantitative protein expression analysis of urinary bladder cancer samples using nanoUPLC-ESI-IMS-MS^E

11:40 – 12:20  S. Maeser, Konstanz – conclusion lecture
The diagnosis of lysosomal storage disorders - From invasive methods to mass spectrometry

12:20 – 14:00  Lunch
Agenda

of the Participants’ Camp SS 2014 and the Affinity-MS Special Interest Group Workshop

Tuesday, 6th of May 2014

- continued -

VIII. Practical Demonstration and Farewell
Chair: M.O. Glocker

14:00 – 17:00  F. Zehender and M. Molnar, München
Monolith NT.LABELFREE (NanoTemper)

17:00 – 17:10  M.O. Glocker, Proteome Center Rostock
Meeting closure and farewell

Location on Campus: