

## **Top-Down Analysis of Antibodies**

Antibodies are a class of proteins that are key to immunological defense systems. One of the most popular drug candidates in recent years, there are approximately 30 monoclonal antibodies (MAbs) currently used in human therapeutics, and their characterization has drawn increasing attention. Top-down protein analysis using mass spectrometry measures proteins in their intact form, as well as any "proteoforms."

Please join the University of Maryland School of Pharmacy on Friday, June 20, 2014 from 8:50 a.m. to 6:00 p.m. for Top-Down Analysis of Antibodies, a conference celebrating the inauguration of the School's Mass Spectrometry Center, a new center providing state-of-the-art mass spectrometry expertise, methodology, and instrumentation to the School of Pharmacy and surrounding research community. The conference will deliver clear outcomes that benefit the scientific community with up-to-date, state-of-the-art mass spectrometry-based applications to interrogate antibodies, including therapeutic MAbs

Following the conference will be a joint EU-US MSLife meeting that focuses on the integration of mass spectrometry tools with applications in life sciences.

For more information, please visit www.pharmacy.umaryland.edu/topdown.



Registering by mail? Please detach this form and submit it to the address below. All participants can also register online at www.pharmacy.umaryland.edu/topdown.



#### **Top-Down Analysis of Antibodies**

University of Maryland School of Pharmacy Attn: Sharese Essien 20 Penn Street HSF II, Room 503B Baltimore, MD 21201

Make all checks payable to the University of Maryland, Baltimore Foundation.

Please provide the following information:

Name Address Phone

Email

Title and Company/School/Agency

Please indicate highest degree obtained:

High School 🛛 Master's Degree

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- Bachelor's Degree
  - Doctorate

Please indicate which category best describes you:

- Faculty, Staff, Student from the University of Maryland, Baltimore or College Park Campus (FREE)
- □ M-CERSI Industrial Consortia Member (FREE)
- Federal Government Employee (FREE)
- Collaborators, Speakers, and Meeting Sponsors (FREE)
- Other Participant (\$50.00)



# **CONFERENCE AGENDA**

### June 20, 2014

#### **Morning Session**

Moderators: Young Ah Goo, PhD, and Maureen Kane, PhD

8:50-9:00 a.m.	Welcome and Introduction David Goodlett, PhD Isaac E. Emerson Chair of Pharmaceutical Sciences Director, Mass Spectrometry Center University of Maryland School of Pharmacy
9:00-9:25 a.m.	<b>The NIST mAb: A Reference Material for Biopharmaceutical Method Evaluation</b> John Schiel, PhD Research Chemist, Biomolecular Measurement Division National Institute of Standards and Technology
9:25-9:50 a.m.	Mass Accurate Analysis of Protein Therapeutics: Assessment of Top Down Approaches Michael Boyne, PhD Research Chemist, Division of Pharmaceutical Analysis Food and Drug Administration
9:50-10:15 a.m.	Analysis of Antibody-Auristatin Conjugates for Cancer Therapy Shawna Hengel, PhD Scientist Seattle Genetics
10:15-10:40 a.m.	Coffee Break
10:40-11:05 a.m.	Mass Spectrometry Strategies for Rapid and Artifact-Free Antibody Structure Analysis Yury Tsybin, PhD Assistant Professor of Physical and Bioanalytical Chemistry Head, Biomolecular Mass Spectrometry Laboratory Director, Mass Spectrometry Service Facility École Polytechnique Fédérale de Lausanne (EPFL)
11:05-11:30 a.m.	<b>Protein Footprinting for Problem Solving in Biophysics</b> Michael Gross, PhD Professor, Department of Chemistry Professor, Immunology and Internal Medicine Washington University School of Medicine
11:30-11:55 a.m.	Structural Characterization of Biosimilars by HDX and Top Down Analysis Using EDC/EDT-FTMS Christoph Borchers, PhD Chief Scientific Officer, MRM Proteomics, Inc. Professor and Director, Genome British Columbia Proteomics Centre University of Victoria, Canada Top-Down Analysis of Antibodies



## CONFERENCE AGENDA

### June 20, 2014

#### Afternoon Session

Moderators: Michael Przybylski, PhD, and Michael Glocker, PhD

11:55-12:40 p.m.	Lunch
12:40-1:00 p.m.	Tour of Mass Spectrometry Center
1:00-1:25 p.m.	<b>UV Photodissociation for Characterization of Intact Proteins</b> Jenny Brodbelt, PhD William H. Wade Endowed Professor in Chemistry Chair, Department of Chemistry University of Texas at Austin
1:25-1:50 p.m.	Surface-induced Dissociation/Ion Mobility Characterization of Non-covalent Complexes Vicki Wysocki, PhD Professor and Ohio Eminent Scholar Department of Chemistry and Biochemistry Director, Campus Chemical Instrument Center Ohio State University
1:50-2:15 p.m.	Online Biosensor-/Affinity- Mass Spectrometry for Structure Determination and Quantification of Protein Interactions from Biological Material Michael Przybylski, PhD Professor & Director Steinbeis Center for Biopolymer Analysis & Biomedical Mass Spectrometry University of Konstanz & Rüsselsheim, Germany
2:15-2:40 p.m.	<b>Defining the Stoichiometry and Cargo Load of Viral and Bacterial Nanoparticles by Orbitrap Mass</b> <b>Spectrometry</b> Joost Snijder, MSc Graduate Student (Albert Heck's Lab) Utrecht University, Netherlands
2:40-3:05 p.m.	A Novel Strategy for Rapid Preparation and Isolation of Intact Immune Complexes Michael Glocker, PhD Director, Proteome Center Rostock University of Rostock, Germany
3:05-3:30 p.m.	Coffee Break



## CONFERENCE AGENDA

### June 20, 2014

#### Afternoon Session (Continued)

Moderators: Michael Przybylski, PhD, and Michael Glocker, PhD

3:30-3:55 p.m.	HDX-MS: Effects of Small Molecule Ligands on the Conformational Dynamics of the Farnesoid X Receptor Ligand Binding Domain
	Claudia Maier, PhD
	Associate Professor of Chemistry
	Oregon State University
3:55-4:20 p.m.	
	Title TBA
	David Clemmer, PhD
	Associate Dean for the Sciences, College of Arts and Sciences
	Professor and Robert & Marjorie Mann Chair
	Department of Chemistry
	Indiana University, Bloomington
4:20-4:45 p.m.	A Mass Spectrometry-based Functional Assay for Monitoring Intrinsic Proteolytic Activity in
	Human Serum Samples
	Jing-Zhi Yang, MSc
	Proteome Center Rostock
	University of Rostock, Germany
4:45-5:10 p.m.	Title TBA
	Brian Chait, DPhil
	Camille and Henry Dreyfus Professor
	Laboratory of Mass Spectrometry and Gaseous Ion Chemistry
	The Rockefeller University
5:10 p.m.	Concluding Remarks
	Michael Glocker, PhD
	Director. Proteome Center Rostock
	University of Rostock