

The logo for the University of Illinois at Chicago (UIC), consisting of the letters "UIC" in white, bold, sans-serif font inside a red circle. The background of the entire poster is a dark grey with a faint, stylized molecular structure of black circles connected by lines.

UIC

CHICAGO MASS SPEC DAY 2019

July 19th

**University of Illinois
at Chicago**

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Agenda

Friday, July 19th 2019

8:00 - 8:30 AM Registration and Poster Setup, COP Lobby

Morning Session

Session for students, postdocs, trainees, and early career scientists only

Discussion Leaders: Thomas Speltz, Ph.D. & Chandimal Pathmasiri
Room 134-1

8:30 AM Welcome/Introduction to Chicago Mass Spec Day by
Thomas Speltz, Ph.D.

Oded Yogev (UIC)

"Using MALDI-TOF-MS to identify and quantify free amino acids in human tears"

Elettra Piacentino, Ph.D. (NIU)

"Role of ligand in the selective production of hydrogen from formic acid catalysed by mononuclear cationic complexes of 4th period transition metal [(L)M(H)]⁺ (L = tpy, phen, bpy, 12-crown-4; M= Mn-Zn)"

Gongyu Li, Ph.D. (UWM)

"Ion mobility MS (IM-MS) investigation of naturally-occurring chirality-driven oligomerization and recognition of amyloid beta peptide"

9:45 AM Coffee Break

10:00 AM

Ashley Ives (NW)

"Trends from >15,000 assigned fragment ions in top-down mass spectrometry"

Jun Huang (UC)

"High throughput discovery of functional protein modifications by hotspot thermal profiling"

Liang Lin, Ph.D. (NW)

"Engineering N-glycosyltransferases for whole substrate library with high-throughput mass spectrometry"

Agenda

Friday, July 19 2019

Afternoon Session

Open for all attendees

10:30 - 11:00 AM Registration for Faculty and Senior Scientists, COP Lobby

11:00 - 11:30 AM **Lunch**, COP Lobby

11:30 - 1:00 PM **Lunch and Learn Sessions**

Room 111: Basic MS Primer with Laura Sanchez, Ph.D.

Room 231: Experimental Design MS Primer with Stephanie Cologna, Ph.D.

Room 134-3: Career Panel with Matthew Champion, Ph.D., Christopher Jones, Ph.D., Marshall Brennan, Ph.D.
Moderated by Jeff Montgomery

RRC Facility Tour, Meet in COP Lobby at 11:45 AM

1:00 PM

Keynote Lecture:
Yue Chen, Ph.D., University of Minnesota

“Quantitative and Stoichiometric Analysis of Protein Posttranslational Modifications”

Introduction by Thomas Speltz, Ph.D. & Chandimal Pathmasiri

2:00 - 3:00 PM

Poster Session: Even Numbers, COP Lobby

3:00 - 4:00 PM

Poster Session: Odd Numbers, COP Lobby

4:00 - 5:00 PM

Networking Reception, Atkins Medicinal Garden

Keynote Speaker

Quantitative and Stoichiometric Analysis of Protein Posttranslational Modifications



Yue Chen, Ph.D.

Assistant Professor, Department of Biochemistry, Molecular Biology and Biophysics, University of Minnesota, at Twin Cities

The Chen lab uses quantitative chemical proteomics to study lysine modification pathways and environmental impacts on cell signaling and epigenetics.

Education

- 2009 University of Texas at Arlington: Ph.D. in Chemistry
- 2002 University of Texas at Dallas: M.Sc. in Computer Science
- 1999 Peking University: B.Sc. in Chemistry

Academic Experience

- 2013- present Assistant Professor, University of Minnesota
- 2009-2013 Sr. Research Associate, University of Chicago

Recent Publications

- Chen, Y. and Li, Y. *Site-specific Determination of Lysine Acetylation Stoichiometries on the Proteome-Scale*. **Methods Enzymology**. Accepted.
- Seiler, C.L., Song, J.M., Fernandez, J., Abrahante, J.E., Kono, T., Chen, Y., Ren, Y., Kassie, F. and Tretyakova, N.Y. *Epigenetic Changes in Alveolar Type II Lung Cells of A/J Mice Following Intranasal Treatment with Lipopolysaccharide*. **Chem. Res. Toxicol.** 32(5): 831-839 (2019).
- Li, Y., Evers, J., Luo, A., Erber, L., Postler, Z. and Chen, Y. *A Quantitative Chemical Proteomics Approach for Site-specific Stoichiometry Analysis Of Ubiquitination*. **Angew. Chem. Int. Ed. Engl.** 58(2):537-541 (2019).
- Hauck, A.K., Zhou, T., Hahn, W., Petegrosso, R., Kaung, R., Chen, Y., And Bernlohr, D.A. *Obesity-Induced Protein Carbonylation In Murine Adipose Tissue Regulates The DNA Binding Domain of Nuclear Zinc-Finger Proteins*. **J. Biol. Chem.** 293 (35):13464-13476 (2018).

Posters

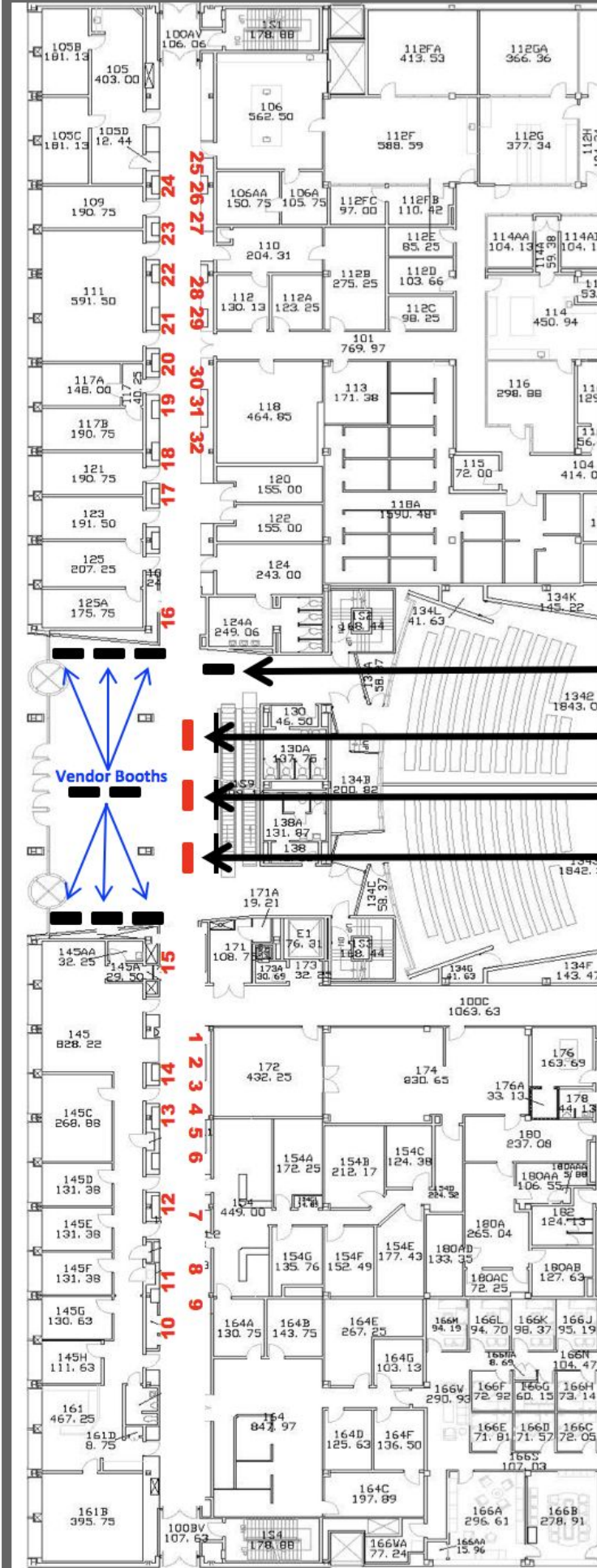
Poster #	Presenter (Affiliation)	Poster Title
1	Koralege Praneeth Pathmasiri (UIC)	Mass spectrometry analysis reveals alteration of phosphoinositides in Niemann-Pick Disease, type C1
2	Christine Muli (PU)	Development of a Simplified LC/MS Single Quadrupole Method for Peptoid/Peptide Probe Binding Site Identification
3	Hui Chen, Ph. D. (UIC)	Mass Spectrometry Core at UIC
4	Lydia Davis (UIC)	Sulfur-containing alkaloids from cultured freshwater <i>Desmonostoc</i> sp. (cyanobacteria)
5	Hongwu Jing, Ph.D. (UIC)	Proteomics Network Analysis of Various Biological Compartments in Pregnancies Complicated by Intra-Amniotic Infection and Preterm Birth
6	Dylan Nicholas Tabang (UWM)	Simultaneous Glyco- and Phosphopeptide Enrichment by Phytic Acid-Modified Titanium(IV) Immobilized Metal Affinity Chromatography (PA-Ti-IMAC)
7	Veronica Carvalho Sexton (IUPUI)	Covalent Modification via Ion/Ion Reactions with Ion Mobility/Mass Spectrometry Structural Analyses
8	Cynthia Grim & Gordon Luu (UIC)	Investigation of the metabolites in ovarian cancer using imaging mass spectrometry
9	Kevin Parker (NIU)	Transition Metal Catalyzed Fatty Acid Deoxygenation and Cracking in the Gas Phase for the Production of Hydrocarbons
10	Dhavamani Sugasini, Ph.D. (UIC)	Phospholipidomics and Neuroprotectin analysis in microglial cells by LC/MS/MS
11	Raveendra Wickramasinghe (UIC)	Femtosecond Laser Desorption Postionization Mass Spectrometric Imaging of Organic Biomarkers Buried in Geological Samples
12	Sheher Mohsin (Agilent)	Using Lipid Annotator to Enable Product-Ion Spectral Matching Against an In-Silico Generated Database to Annotate LC/QTOF Auto MS/MS Spectra
13	Jose Victorino (IU)	Crosslinking mass spectrometry reveals molecular architecture of the cleavage and polyadenylation factor complex

Posters

Poster #	Presenter (Affiliation)	Poster Title
14	Aruni Chathurya Pulukkody (UIC)	Comparing Aerobic and Anaerobic Regions of Bacterial Biofilms by Laser Ablation Sample Transfer for Bottom-Up Proteomics
15	Jason Gross (UIC)	Flat-top fs Laser Ablation of Silicon
16	Diana Abbasi (RU-UIC)	Investigating Molecular Mechanisms that Influence Functional Status in Fragile X Syndrome Using Mass Spectrometry-Based Proteomics
17	Katherine Zink (UIC)	Imaging Mass Spectrometry Reveals Colonization Factors Driving an Animal-Microbe Symbiosis
18	Alanna Condren (UIC)	MALDI-TOF analysis of the specialized metabolism of <i>Vibrio cholerae</i> in axenic and in vivo systems
19	Jessica Cleary (UIC)	Metabolomics for identification of compounds involved in bacterial-fungal interactions
20	William LaFon (UIC)	Decomposition of 5-(1-Hydroxyalkyl)tetrazoles within Microdroplets via ESI-MS
21	Chase Clark (UIC)	Using IDBAC to Uncover the Microbial and Natural Product Potential of Freshwater Sponges
22	Fernando Tobias, Ph.D. (OSU)	Developing a Drug Screening Platform: MALDI-Mass Spectrometry Imaging of Paper-Based Cultures
23	Melissa Pergande (UIC)	Proteomic and lipidomic analysis reveals altered fatty acid metabolism in the liver of the symptomatic Niemann-Pick, type C1 mouse model
24	Hongwu Jing, Ph.D. (UIC)	Proteomics of Urine Misfoldome Reveals Preeclampsia Molecular Subphenotypes
25	Emily Vice (UIC)	Long-Lived and Neuroprotected: Using Unbiased Proteomic Analysis to Reveal What Underlies the African Naked Mole-Rat's Unique Brain Biology.

Poster Map

1st Floor Poster Locations: Posters 1-32



- Coffee/Water Station**
- CMS Discussion Table**
- Literature Table**
- Registration Desk**



Event Information

Chicago Mass Spec Day is an educational and networking event for mass spectrometry enthusiasts in the greater Chicagoland area.

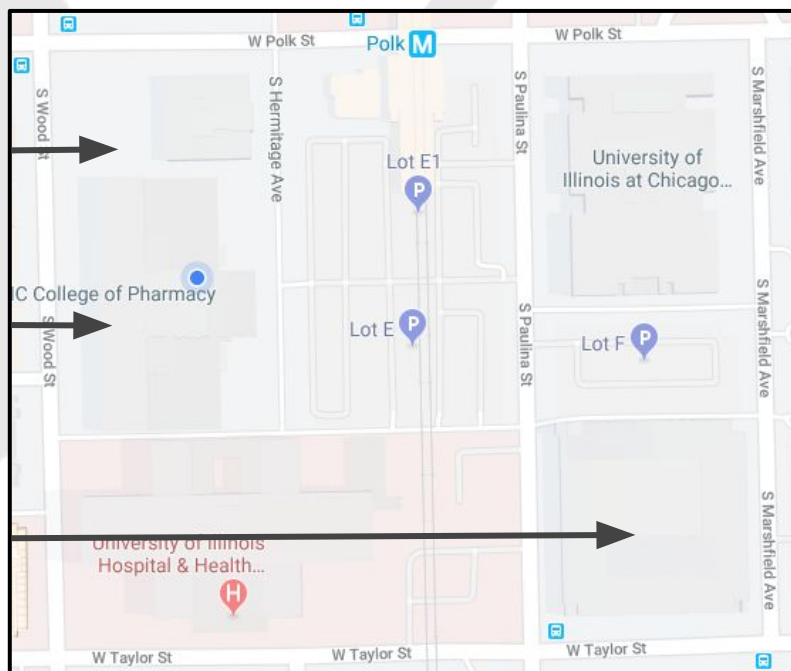
July 19th, 2019

University of Illinois at Chicago
College of Pharmacy
833 S. Wood St

Networking Reception

Building accessible
from S. Wood St

Paulina Parking
Garage



Chair

Thomas Speltz, Ph.D.

Faculty Advisors

Laura Sanchez, Ph.D. and Stephanie Cologna, Ph.D.

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