

Speakers – please arrive ½ hour before your session begins to load your presentation

THURSDAY JANUARY 19, 2017

4:00 - 7:00 pm Setup Session I Posters, *Water's Edge*

6:00-7:00 pm Registration

7:00 - 8:00 pm

Opening Session

Session Chair: Lingjun Li, *University of Wisconsin-Madison*
Salons ABCD

7:00-7:05 pm Opening Remarks, **Jonathan Sweedler**, *University of Illinois, Urbana*

7:05-8:00 pm **PLENARY LECTURE: Donald Hunt**, *University of Virginia*
Immunotherapy of Cancer and the Role of Mass Spectrometry: an Overview and New Results

8:00-10:00 pm

Reception

Water's Edge

**The following students received an ASMS Student Travel Award.
Congratulations!**

Matthew Baird
Wichita State University

Harris Bell-Temin
University of Pittsburgh

Amanda Buchberger
University of Wisconsin-Madison

Robert Burleigh
University of Oxford

Kaylee Castle
Florida A&M University

Sam Choi
George Washington University

Kellen DeLaney
University of Wisconsin - Madison

Andrea Figueroa-Montiel
CICESE

Elva Fridjonsdottir
Uppsala University

Ali Hadi
University of Denver

Oleg Karaduta
University of Arkansas

Chelsea Kendall
Florida A&M University

Christine Kirkpatrick
University of North Carolina

Zdenek Kukacka
University of Konstanz

Christopher Lietz
UC, San Diego

Yang Liu
University of Wisconsin

George Sarkis
University of Florida

Denise Medeiros Selegato
São Paulo State University (UNESP)

Kelly Wormwood
Clarkson University

Qing Yu
University of Wisconsin-Madison

Yeni Yung
University of Illinois

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FRIDAY JANUARY 20, 2017

7:00 - 8:30 am Setup Session I Posters & Continental Breakfast, *Water's Edge*

8:30-11:00 am

**Unique Challenges for Measurements of Endogenous Peptides: Sequence Analysis,
Peptide Stability and Discovery**

Session Chair: Lloyd Fricker, *Albert Einstein School of Medicine*
Salons ABCD

- 8:30-9:00 am **Robert Kennedy**, *University of Michigan*
Observation of Peptide Dynamics *in vivo* Evoked by Behavior and Optogenetic
Stimulation using LC-MS
- 9:00-9:30 am **Kurt Boonene**, *K.U. Leuven*
Peptidomics in Neuroendocrine Research
- 9:30-10:00 am **Lingjun Li**, *University of Wisconsin-Madison*
Multi-Faceted Approach for Functional Discovery of Neuropeptides
- 10:00-10:15 am **Coffee Break**, *Outside Salons ABCD*

10:15-11:30 am

Informatics for Peptidome Discovery

Session Chair: Stephen Baranese, *University of Alabama*
Salons ABCD

- 10:15-10:45 am **Nuno Banderia**, *UC San Diego*
Spectral Network for *de novo* Sequencing
- 10:45-11:15 am **Andy Christie**, *University of Hawaii*
In Silico Prediction of Crustacean Peptidomes
- 11:15-11:30 am **Marshall Bern**, *Protein Metrics*
Bacterial Peptidoglycan Analysis Using a Proteomics Search Engine
- 11:30-11:45 am **Group Photo**
- 11:45- 1:00 pm **Group Lunch** (*provided by ASMS*)
Blue Heron Deck

Speakers – please arrive ½ hour before your session begins to load your presentation

FRIDAY JANUARY 20, 2017

1:00-3:00 pm

Peptide Processing and Post-Translational Modifications

Session Chair: Ryan Julian, *UC-Riverside*

Salons ABCD

- 1:00-1:30 pm **Vivian Hook**, *UC San Diego*
Frontiers in Neuropeptidomics Profiling of Intercellular Signaling Networks in Human Health and Disease
- 1:30-2:00 pm **James Checco**, *University of Illinois*
Exploring the Signaling Pathways of D-Amino Acid-Containing Neuropeptides
- 2:00-2:30 pm **Lloyd Fricker**, *Albert Einstein School Medicine*
Quantitative Peptidomics of Yeast, Mouse and Human Cells
- 2:30-3:00 pm **Beatrix Ueberheide**, *NYU*
Uncovering Disulfide-Rich Peptide Venoms Using Chemical Derivatization and ETD
- 3:00-7:00 pm **Free Time**

7:00-8:00 pm

KEYNOTE LECTURE and Poster Presentations

Session Chair: Jonathan Sweedler, *University of Illinois, Urbana*

Salons ABCD

- 7:00-7:45 pm **KEYNOTE LECTURE: Dominic Desiderio**, *University of Tennessee*
Peptidomics Research before it was Called Peptidomics
- 7:45-8:10 pm **6 Highlighted Poster Presentations (3 min each plus 1 min transition)**
- Bruce Southey**, *University of Illinois, Urbana*
A Bioinformatics Pipeline for Genome Sequence-Based Characterization of Neuropeptidomes
- Matt Baird**, *Wichita State University*
Isomeric Characterization of D-Amino Acid Containing Peptides and N-Linked Glycopeptides by Differential Ion Mobility Spectrometry
- Amanda Buchberger**, *University of Wisconsin-Madison*
Qualitative and Quantitative Analysis of Crustacean Neuropeptides after Hypoxia Exposure
- Christopher Lietz**, *UCSD*
Lithium Modulation of Regulated Neuropeptide Secretion in Adrenal Medullary Chromaffin Cells of the Sympathetic Nervous System
- Qing Yu**, *University of Wisconsin-Madison*
Discovery and Identification of O-Glycosylated Signaling Peptides from Mouse Pancreatic Islets
- Sven Van Bael**, *KU Leuven*
Characterization of Neuropeptide-Amidating Enzymes in *C. elegans* by Mass Spectrometry

8:10-10:10 pm

Poster Session I & Reception
Poster Titles are listed on page 7

Water's Edge

Speakers – please arrive ½ hour before your session begins to load your presentation

SATURDAY JANUARY 21, 2017

7:00 - 8:30 am Setup Session II Posters & Continental Breakfast, *Water's Edge*

8:30-10:15 am

Peptide Imaging Using Mass Spectrometry

Session Chair: Stanislav Rubakhin, *University of Illinois, Urbana*

- 8:30-9:00 am **Per Andrén**, *Uppsala University*
Sample Handling, Quantification and Imaging of Brain Signalling Molecules
- 9:00-9:30 am **Peter Verhaert**, *Delft University of Technology*
Tissue Imaging of Neuropeptides using MALDI Orbitrap MS
- 9:30-10:00 am **Ron Heeren**, *Maastricht University*
High Resolution MS Imaging

10:00-10:15 am **Coffee Break**, *Outside Salons ABCD*

10:15 -12:00 pm

Emerging Tools and Applications

Session Chair: Andre Venter, *Western Michigan University*

- 10:15-10:45 am **Carlito Lebrilla**, *UC-Davis*
Peptidomic and Glycopeptidomic Analysis of Bioactive Compounds in Human Milk
- 10:45-11:15 am **Jay Forsythe**, *College of Charleston*
Proto-Peptidomics: The First Peptides in Darwin's Warm Little Pond
- 11:15-11:45 am **David Clemmer**, *Indiana University*
Developing IMS-MS Techniques for following Structural Transitions in Peptides in Solution and in the Gas Phase
- 11:45– 12:00 pm **Ryan Julian**, *UC-Riverside*
Identifying Isomerization and Epimerization in Peptides from Crystallins with Radical Directed Dissociation
- 12:00-1:15 pm **Lunch**, *on your own*

Speakers – please arrive ½ hour before your session begins to load your presentation

SATURDAY JANUARY 21, 2017

1:15-3:15 pm

Peptide Therapeutics

Session Chair: Fanyu Meng, *Merck Co.*

- 1:15-1:45 pm **Wendy Zhong, Merck Co.**
Challenges in Structure Determination of Low Level Impurity and Degradation Products of Therapeutic Peptides in Pharmaceutical Industry
- 1:45-2:15 pm **Albert Lebedev, Moscow State University**
Discovery of New Antibiotics from Frogs -- *de novo* Sequencing of Long Natural Non-Tryptic Peptides
- 2:15 -2:45 pm **Michal Bassani-Sternberg, Ludwig Cancer Research Center**
Direct Identification of Neoantigens using In-Depth Immunopeptidomics of Melanoma Tissues for the Development of Anti-Tumor Immunotherapy
- 2:45-3:00 pm **Leslie Hicks, UNC**
The PepSAVI-MS Pipeline for Natural Product Bioactive Peptide Discovery
- 3:00 -3:15 pm **Asoka Ranasinghe, BMS**
Automated Structural Characterization of Therapeutic Cyclic Peptides and Their Metabolites in Drug Discovery
- 3:15-7:00 pm **Free Time**

7:00-8:00 pm

KEYNOTE LECTURE and Poster Presentations

Session Chair: Ron Heeren, *Maastricht University*

- 7:00-7:45 pm KEYNOTE LECTURE: Richard Caprioli, Vanderbilt University**
Protein and Peptide Imaging MS
- 7:45-8:10 pm 6 Highlighted Poster Presentations (3 min each plus 1 min transition)**
- Kellen DeLaney, University of Wisconsin-Madison**
Mass Spectrometric Quantitation and Imaging of Neuropeptide Expression Levels in Crustacean Tissue and Circulating Fluid Resulting from Food Intake
- Elena Romanova, University of Illinois, Urbana**
Strategies for Peptidome Characterization in Non-Model Species
- Elva Fridjonsdottir, Uppsala University**
Structure-Specific Peptide Transmission and Processing in a Model of Parkinson's Disease and L-DOPA-Induced Dyskinesia
- Andre Venter, Western Michigan University**
Improving DESI-MS Analysis of Proteins and Peptides
- Barbara Larsen, DuPont Co.**
Study of Protein Oxidation in Freeze-Dried Cells during Long-Term Storage
- Fengfei Ma, University of Wisconsin-Madison**
Alteration of Brain Region-Resolved Peptidome in Response to Cocaine Intoxication and Withdrawal

8:10-10:10 pm

Poster Session II & Reception
Poster Titles are listed on page 10

Water's Edge

Speakers – please arrive ½ hour before your session begins to load your presentation

SUNDAY JANUARY 22, 2017

7:00 - 8:30 am Remove Poster by 10:15 am
Continental Breakfast, *Water's Edge*

8:30-9:30 am

**Peptidomic Approaches to Biomarker Discovery and New MS
Strategies for Peptide Analysis**

Session Chair: Carlito Lebrilla, *UC Davis*

8:30-9:00 am **Johan Gobom**, *Göteborg University*
Peptide Biomarkers in Neurodegenerative Diseases.

9:00-9:15 am **Richard Drake**, *Medical University of South Carolina*
Prostate Cancer-Associated Peptide and Glycan Co-Localizations in FFPE Tissues by
MALDI-FTICR Imaging Mass Spectrometry

9:15-9:30 am **Francisco Fernandez-Lima**, *Florida International University*
Strategies for Discovery and Targeted Analysis Using nESI-TIMS-TOF MS and nESI-
TIMS-FT-ICR MS

9:30-11:30 am

Single-cell Neuropeptidomics

Session Chair: Peter Verhaert, *Delft University*

9:30-10:00 am **Susanne Neupert**, *University of Cologne*
Single Cell Peptidomics of Insects

10:00-10:15 am **Coffee Break**, *Outside Salons ABCD*

10:15-10:45 am **Antony Stretton**, *University of Wisconsin-Madison*
Mass Spectral Mapping of Neuropeptides in Worms

10:45-11:15 am **Peter Nemes**, *George Washington University*
Trace-level Metabolite-Peptide-Protein Detection in Single Cells using High-
Resolution Mass Spectrometry

11:15-12:15 pm

KEYNOTE LECTURE and Closing Remarks

Session Chair: Per Andren, *Uppsala University*

11:15-12:00 **KEYNOTE LECTURE: Jonathan V. Sweedler**, *University of Illinois, Urbana*
Measuring Signaling Peptides One Cell at a Time

12:00-12:15 **Closing Remarks, Lingjun Li**, *University of Wisconsin-Madison*

FRIDAY, JANUARY 20

8:10 - 10:10 pm

POSTER SESSION I

Water's Edge

Poster Session I: Setup up by 7:00 pm on Thursday

Remove at 10:00 pm on Friday

- 01 **Isomeric Characterization of D-Amino Acid Containing Peptides and N-Linked Glycopeptides by Differential Ion Mobility Spectrometry;** Matthew Baird¹; Graham Delafield²; Zhe Wang²; Si Wu²; Alexandre Shvartsburg³; ¹, *Wichita, KS*; ²*Univeristy of Oklahoma, Norman, OK*; ³*Wichita State Univeristy, Wichita, KS*
- 02 **Identification of Novel Protein-Peptide Interactions via Differential Mass Spectrometry;** Harris Bell-Temin¹; Steven Mullett¹; Andrey Bondarenko²; Nathan A. Yates¹; ¹*Univ of Pitt School of Health Sciences, Pittsburgh, PA*; ²*Infoclinika, Bellevue, WA*
- 03 **Bacterial Peptidoglycan Analysis Using a Proteomics Search Engine;** Marshall W. Bern¹; Kelsi Sandoz²; Richard Beniston³; Stephane Mesnage³; ¹*Protein Metrics, San Carlos, CA*; ²*NIH/NIAID Rocky Mountain Laboratories, Hamilton, MT*; ³*University of Sheffield, Sheffield, UK*
- 04 **Qualitative and Quantitative Analysis of Crustacean Neuropeptides after Hypoxia Exposure;** Amanda Buchberger¹; Kellen DeLaney¹; Yang Liu¹; Kylie Helfenbein¹; Lingjun Li¹; ¹*University of Wisconsin-Madison, Madison, Wisconsin*
- 05 **Metabolomics Approach to Identify Novel Compounds in Response to Water Stress in Grape;** Kaylee Castle¹; Ramesh Katam²; ¹, *Tallahassee, FL*; ²*Florida Agricultural and Mechanical University, Tallahassee, FL*
- 06 **Ultrasensitive CE-nanoESI-MS for Small Populations of Neurons in the Mouse Cortex;** Sam Choi¹; Eric Corcoran¹; Marta Zamarbide¹; Chiara M Manzini¹; Peter Nemes¹; ¹*George Washington University, Washington, DC*
- 07 **Exploring Possible Biomarkers for Smith-Lemli-Opitz Syndrome (SLOS) using a Mass Spectrometry-based Proteomic Investigation;** Emmalyn Dupree¹; Kelly Wormwood¹; Megan Borland¹; Jeanne Ryan²; Laci Charette²; Alisa Woods^{1, 2}; Costel Darie¹; ¹*Biochemistry and Proteomics Group, Department of Chemistry and Biomolecular Science, Clarkson University, Potsdam, NY*; ²*Center for Neurobehavioral Health, SUNY Plattsburgh, NY*
- 08 **Strategies for Discovery and Targeted Analysis Using nESI-TIMS-TOF MS and nESI-TIMS-FT-ICR MS;** Francisco Fernandez-Lima, *Florida International University*
- 09 **De novo Sequencing of a Conotoxin from *Conus brunneus* with Insulin Release Activity;** Andrea Figueroa-Montiel¹; Johanna Bernáldez¹; Samanta Jimenez¹; Leslie Otero¹; Pavel Lugo¹; Carolina Álvarez-Delgado¹; Lourival Domingos Possani²; Fernando Zamudio²; Luis Javier González³; Alexei Fedoróvish Licea-Navarro¹; ¹*CICESE, Ensenada, Baja California*; ²*Instituto de Biotecnología (UNAM), Cuernavca, Mexico*; ³*Center for Genetic Engineering and Biotechnology, La Habana, Cuba*
- 10 **Novel Conopeptide rs15a from *Conus Regularis* with Eight Cys, 3? and Two Hydroxyprolines was Identified in the Venom Gland Transcriptome;** Luis Javier González¹; Andrea Figueroa-Montiel²; Samanta Jiménez²; Jesús A. Beltrán²; Carlos A. Brizuela²; Johanna Bernáldez²; Alexei Licea-Navarro²; ¹*Center for Genetic Engineering and Biotechnology, Havana, Cuba*; ²*CICESE, Carretera Ensenada-Tijuana, México*
- 11 **Deciphering Disease-associated Proteolytic Networks with 18O-Peptide Coding;** Markus Hardt; *Forsyth Institute, Cambridge, MA*

FRIDAY, JANUARY 20

8:10 - 10:10 pm

POSTER SESSION I

Water's Edge

Poster Session I: Setup up by 7:00 pm on Thursday

Remove at 10:00 pm on Friday

- 12 **Novel Conotoxin of the I2-Superfamily Isolated from Conasprella Ximenes Shows Antimicrobial Activity vs *M. tuberculosis***; Samanta Jimenez¹; Andrea Figueroa-Montiel¹; Johanna Bernáldez¹; Luis Javier González²; Jesús A. Beltrán¹; Carlos A. Brizuela¹; Alexei Licea-Navarro¹; ¹*CICESE, Carretera Ensenada-Tijuana 3918, México*; ²*Laboratorio de Espectrometría de Masas, Departamento de Proteómica, La Habana, Cuba., La Habana, Cuba*
- 13 **Metapeptidomics Data Processing Pipe-Line: Application to the Study of Function of Gut Microbiome in Chronic Kidney Disease**; Oleg Karaduta¹; Boris Zybaylov¹; ¹*UAMS, Little Rock, AR*
- 14 **Analysis of Xylem Tissue and Sap Proteome of Grape Reveal Possible Tolerance Mechanism to Pierce Disease**; Chelsea Kendall¹; Ramesh Katm²; ¹*Florida A&M University, Tallahassee, FL*; ²*Florida AM University, Tallahassee, FL*
- 15 **Rapid Solid Phase Extraction of Peptides from Biofluids Utilizing Automated Liquid Handler with Dispersive Pipette Extraction**; Lim Lee¹; Todd Mullis¹; ¹*IMCS, Columbia, South Carolina*
- 16 **Lithium Modulation of Regulated Neuropeptide Secretion in Adrenal Medullary Chromaffin Cells of the Sympathetic Nervous System**; Christopher B. Lietz¹; Thomas Toneff¹; David J. Gonzalez¹; Vivian Hook¹; ¹*University of California, San Diego, La Jolla, CA*
- 17 **Multifaceted Mass Spectrometric Investigation of Neuropeptide Changes in Blue Crab, *Callinectes sapidus*, in Response to Ocean Acidification**; Yang Liu¹; Amanda Buchberger¹; Lingjun Li¹; ¹*University of Wisconsin-Madison, Madison, Wisconsin*
- 18 **Development of an Integrated Proteomic and Metabolomic Imaging Technique using MALDI-MS**; Ayaka Maeda-Murayama¹; Ayumi Yamaguchi¹; Yoshinori Fujimura¹; Hiroyuki Wariishi¹; Daisuke Miura¹; ¹*Kyushu University, Fukuoka, Japan*
- 19 **Novel Proteolytic Peptides Derived From Neurogranin as Potential Biomarkers for Traumatic Brain Injury**; George Sarkis; , *Gainesville, FL*
- 20 **A Bioinformatics Pipeline for Genome Sequence-based Characterization of Neuropeptidomes**; Bruce R. Southey¹; Elena V. Romanova¹; Jonathan V. Sweedler¹; Sandra L. Rodriguez-Zas¹; ¹*University of Illinois, Urbana, IL*
- 21 **Characterization of Neuropeptide-amidating Enzymes in *Caenorhabditis elegans* by Mass Spectrometry**; Sven Van Bael¹; Jan Watteyne¹; Kurt Boonen¹; Wouter De Haes¹; Liliane Schoofs¹; Steven J. Husson²; Liesbet Temmerman¹; ¹*KU Leuven, Leuven, Belgium*; ²*University of Antwerp, Antwerp, Belgium*
- 22 **Mass Spectrometry Based Structural Characterization of Spider Peptide Ph¹**; Kelly Wormwood¹; Armand Ngounou Wetie¹; Marcus Vinicius Gomez²; Costel Darie¹; ¹*Clarkson University, Potsdam, NY*; ²*Institute of Education and Research Santa Casa Belo Horizonte-Laboratory of Toxins, Belo Horizonte, Brazil*

FRIDAY, JANUARY 20

8:10 - 10:10 pm

POSTER SESSION I

Water's Edge

Poster Session I: Setup up by 7:00 pm on Thursday

Remove at 10:00 pm on Friday

- 23 **Development of a Fast Enzymatic Digestion Protocol for Characterization of Modified Human Insulin;** Rong-Sheng Yang¹; Fanyu Meng¹; Weijuan Tang¹; Huaming Sheng¹; Li-Kang Zhang¹; Bing Mao¹; ¹*Merck Research Laboratories, Rahway, NJ*
- 24 **Discovery and Identification of O-Glycosylated Signaling Peptides from Mouse Pancreatic Islets;** Qing Yu¹; Alejandra Canales¹; Matthew S Glover¹; Rahul Das¹; Yang Liu¹; Mark P Keller¹; Alan D Attie¹; Lingjun Li¹; ¹*University of Wisconsin-Madison, Madison, Wisconsin*

SATURDAY, JANUARY 21

8:10 - 10:10 pm

POSTER SESSION II

Water's Edge

Poster Session II: Setup by 8:30 am on Saturday

Remove by 10:15 am on Sunday

- 01 **A Novel Triple Quadrupole Mass Spectrometry Method for the Quantitative Measurement of Free 4-HNE and 4-HHE In Cells and Tissues;** Hadi Ali¹; Kristofer Fritz¹; ¹University of Colorado Denver, Aurora, CO
- 02 **The Missing Link – Bioactive Micropeptides as By-products of Cellular Processes – Discovery by a Bioinformatics Approach;** Stephen Barnes¹; J Edwin Blalock¹; Chiquito Crasto²; ¹University of Alabama at Birmingham, Birmingham, AL; ²Center for Biotechnology and Genomics, Texas Tech University, Lubbock, TX
- 03 **Microscope Ion Imaging of Complex Surfaces and Biological Samples Using the Pixel Imaging Mass Spectrometry Camera;** Robert Burleigh¹; Mark Brouard¹; Michael Burt¹; Ang Guo¹; Steve Thompson²; ¹Physical & Theoretical Chemistry department, University of Oxford, Oxford, UK; ²SAI Manchester, Manchester, UK
- 04 **Mass Spectrometric Quantitation and Imaging of Neuropeptide Expression Levels in Crustacean Tissue and Circulating Fluid Resulting from Food Intake;** Kellen DeLaney¹; Lingjun Li¹; ¹University of Wisconsin-Madison, Madison, WI
- 05 **Prostate Cancer-associated Peptide and Glycan Co-localizations in FFPE Tissues by MALDI-FTICR Imaging Mass Spectrometry;** Richard R Drake¹; Alyson Black¹; Kim Norris-Caneda¹; Peggi M Angel¹; ¹Medical University of South Carolina, Charleston, SC
- 06 **Structure-specific Peptide Transmission and Processing in a Model of Parkinson's Disease and L-DOPA-induced dyskinesia;** Elva Fridjonsdottir¹; Anna Nilsson¹; Henrik Wadensten¹; Alan Crossman²; Per Svenningsson³; Erwan Bezard⁴; Per André¹; ¹Uppsala University, Uppsala, Sweden; ²Motac Neuroscience, Manchester, UK; ³Karolinska Institutet, Stockholm, Sweden; ⁴Université de Bordeaux, Bordeaux, France
- 07 **The PepSAVI-MS pipeline for Natural Product Bioactive Peptide Discovery;** Leslie M. Hicks¹; Christine L. Kirkpatrick¹; David Pritchard¹; Nicole C. Parsley¹; Yufeng Liu¹; David W. Hoskin²; Lindsey N. Shaw³; ¹UNC - Chapel Hill, Chapel Hill, NC; ²Dalhousie University, Halifax, Canada; ³University of South Florida, Tampa, FL
- 08 **Empty**
- 09 **Automated Differential Analysis for Peptide Components in Biological Matrixes;** Serhiy Hnatyshyn¹; Asoka Ranasinghe¹; Andrew Worth²; Adrienne Tymiak¹; ¹BMS Co., Princeton, NJ; ²BMS Co., Wallingford, CT
- 10 **Zebrafish Peptidomics: Comparison of Peptide Extraction Methods;** Kristien A. Van Camp¹; Geert Baggerman^{1, 2}; Ronny Blust¹; Steven J. Husson¹; ¹Systemic Physiological & Ecotoxicological Research (SPHERE), University of Antwerp, Antwerp, Belgium; ²Flemish Institute for Technological Research (VITO), Mol, Belgium
- 11 **Identifying Isomerization and Epimerization in Peptides from Crystallins with Radical Directed Dissociation;** Ryan R. Julian¹; Yana Lyon¹; ¹University of California, Riverside, Riverside, CA
- 12 **Screening and Synthesis of MALDI Matrix towards Phosphopeptidomics ;** Chihiro Kawano¹; Takanori Ishii¹; Yoshinori Fujimura¹; Mitsuru Shindo¹; Hiroyuki Wariishi¹; Daisuke Miura¹; ¹Kyushu University, Fukuoka, Japan

SATURDAY, JANUARY 21

8:10 - 10:10 pm

POSTER SESSION II

Water's Edge

Poster Session II: Setup by 8:30 am on Saturday

Remove by 10:15 am on Sunday

- 13 **Optimization of LC-MS and MALDI-MSI Techniques for the Identification and Characterization of Peptides in *Medicago truncatula*.**; Caitlin Keller¹; Erin Gemperline²; Alyssa Eisold¹; Junko Maeda¹; Dhileepkumar Jayaraman¹; Michael R. Sussman¹; Jean-Michel Ané¹; Lingjun Li¹; ¹*University of Wisconsin-Madison, Madison, WI*; ²*Dow AgroSciences, Indianapolis, IN*
- 14 **Natural Product Bioactive Peptide Discovery using the PepSAVI-MS Pipeline;** Christine L. Kirkpatrick¹; David Pritchard¹; Nicole C. Parsley¹; Leslie M. Hicks¹; ¹*University of North Carolina at Chapel Hill, Chapel Hill, NC*
- 15 **Peptide Epitope Characterization of Human β -Galactosidase by online SPR - Affinity Mass Spectrometry;** Zdenek Kukacka^{1,2}; Marius Iurascu^{1,2}; Mary Murphy³; Jeff Bornheim³; Lorenzo Altamore⁴; Anna Maria Papini^{4,5}; Michael Przybylski^{1,2}; ¹*Steinbeis Centre Biopolymer Analysis and Biomedical Mass Spectrometry, Ruesselsheim am Main, Germany*; ²*University of Konstanz, Konstanz, Germany*; ³*Reichert-Ametek Technologies, Buffalo*; ⁴*University of Florence, Florence, Italy*; ⁵*University of Cergy-Pontoise, Cergy-Pontoise, France*
- 16 **Study of Protein Oxidation in Freeze-Dried Cells During Long-Term Storage;** Barbara S. Larsen¹; Ron Agee²; Michael Dauner³; Kurt Fenster²; Chris Hollard²; Cathy Kalbach³; Sunny Li³; Buffy Stahl²; ¹*The DuPont Company, Wilmington, DE*; ²*DuPont, Madison, WI*; ³*DuPont, Wilmington, DE*
- 17 **Alteration of Brain Region-resolved Peptidome in Response to Cocaine Intoxication and Withdrawal;** Fengfei Ma¹; Pingli wei¹; Jingxin Wang¹; Vaishali Bakshi¹; Brian Baldo¹; Lingjun Li¹; ¹*Univ of Wisconsin-Madison, Madison, WI*
- 18 **Hydroxyl Radical Footprinting with PLIMB (Plasma-Induced Modification of Biomolecules): A Novel Tool for Structural Mass Spectrometry;** Benjamin B. Minkoff¹; Joshua Blatz¹; Daniel Benjamin¹; Faraz Choudhury¹; J. Leon Shohet¹; Michael R. Sussman¹; ¹*University of Wisconsin-Madison, Madison, WI*
- 19 **Automated Structural Characterization of Therapeutic Cyclic Peptides and Their Metabolites in Drug Discovery;** Asoka Ranasinghe¹; Serhiy Hnatyshyn¹; Eugene Ciccimaro¹; Silvi Chacko¹; Celia D'Arienzo Celia D'Arienzo¹; Timothy Olah¹; Adrienne Tymiak¹; Marshall M. Siegel²; Gary Walker²; ¹*Bristol-Myers Squibb Company, Princeton, NJ*; ²*MS Mass Spec Consultants, Fair Lawn, NJ*
- 20 **Empty**
- 21 **Strategies for Peptidome Characterization in Non-model Species;** Elena V. Romanova¹; Bruce R. Southey¹; Stanislav S. Rubakhin¹; Caroline K. Hu^{2,3}; Karen P. Maruska²; Russell D. Fernald²; Justin S. Rhodes¹; Neil L. Kelleher⁴; Jonathan V. Sweedler¹; ¹*University of Illinois at Urbana-Champaign, Urbana-Champaign, IL*; ²*Stanford University, Stanford, CA, USA*; ³*Harvard University, Cambridge, MA, USA*; ⁴*Northwestern University, Evanston, IL, USA*
- 22 **Investigation of Cellular Chemical Heterogeneity of the Brain Using Mass Spectrometry;** Stanislav Rubakhin¹; Elizabeth K. Neumann²; Troy J. Comi²; Thanh D. Do²; Jonathan V. Sweedler²; ¹*Beckman Institute, UIUC, Urbana, IL*; ²*Department of Chemistry, University of Illinois, Urbana-Champaign, IL, USA*

SATURDAY, JANUARY 21

8:10 - 10:10 pm

POSTER SESSION II

Water's Edge

Poster Session II: Setup by 8:30 am on Saturday

Remove by 10:15 am on Sunday

- 23 **Improving DESI-MS Analysis of Proteins and Peptides;** Andre Venter¹; Elahe Honarvar¹; Wisam Alisawi¹; Vageesha Gunawardana¹; ¹*Western Michigan University, Kalamazoo, MI*
- 24 **Pseudomonas aeruginosa Proteomics for Modeling Multispecies Biofilms;** Yeni P Yung¹; S Lee McGill²; Stephanie M Cologna¹; Hui Chen¹; Ross P Carlson²; Luke Hanley¹; ¹*University of Illinois at Chicago, Chicago, IL;* ²*Montana State University, Bozeman, MT*

Directory of Participants

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Kurt Boonen

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