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

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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*
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 Barranes, 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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>1:00-1:30 pm</td>
<td>Vivian Hook, UC San Diego</td>
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<td></td>
<td>Frontiers in Neuropeptidomics Profiling of Intercellular Signaling Networks in Human Health and Disease</td>
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<td>1:30-2:00 pm</td>
<td>James Checco, University of Illinois</td>
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<td>Exploring the Signaling Pathways of D-Amino Acid-Containing Neuropeptides</td>
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<td>2:00-2:30 pm</td>
<td>Lloyd Fricker, Albert Einstein School Medicine</td>
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<td>Quantitative Peptidomics of Yeast, Mouse and Human Cells</td>
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<td>2:30-3:00 pm</td>
<td>Beatrix Ueberheide, NYU</td>
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<td>Uncovering Disulfide-Rich Peptide Venoms Using Chemical Derivatization and ETD</td>
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<td>3:00-7:00 pm</td>
<td>Free Time</td>
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<td>7:00-8:00 pm</td>
<td>KEYNOTE LECTURE and Poster Presentations</td>
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<td>Session Chair: Jonathan Sweedler, University of Illinois, Urbana</td>
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<td>Salons ABCD</td>
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<td>7:00-7:45 pm</td>
<td>KEYNOTE LECTURE: Dominic Desiderio, University of Tennessee</td>
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<td>Peptidomics Research before it was Called Peptidomics</td>
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<tr>
<td>7:45-8:10 pm</td>
<td>6 Highlighted Poster Presentations (3 min each plus 1 min transition)</td>
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<td>Bruce Southey, University of Illinois, Urbana</td>
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<td>A Bioinformatics Pipeline for Genome Sequence-Based Characterization of Neuropeptidomes</td>
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<td>Qualitative and Quantitative Analysis of Crustacean Neuropeptides after Hypoxia Exposure</td>
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<td>Christopher Lietz, UCSD</td>
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<td>Lithium Modulation of Regulated Neuropeptide Secretion in Adrenal Medullary Chromaffin Cells of the Sympathetic Nervous System</td>
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<td>Qing Yu, University of Wisconsin-Madison</td>
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<td>Discovery and Identification of O-Glycosylated Signaling Peptides from Mouse Pancreatic Islets</td>
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<td>Sven Van Bael, KU Leuven</td>
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<td>Characterization of Neuropeptide-Amidating Enzymes in C. elegans by Mass Spectrometry</td>
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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

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30-10:15 am</td>
<td>Peptide Imaging Using Mass Spectrometry</td>
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<td>Session Chair: Stanislav Rubakhin, University of Illinois, Urbana</td>
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<td>8:30-9:00 am</td>
<td>Per Andrén, Uppsala University</td>
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<td>Sample Handling, Quantification and Imaging of Brain Signalling Molecules</td>
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<td>9:00-9:30 am</td>
<td>Peter Verhaert, Delft University of Technology</td>
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<td>Tissue Imaging of Neuropeptides using MALDI Orbitrap MS</td>
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<td>9:30-10:00 am</td>
<td>Ron Heeren, Maastricht University</td>
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<td>High Resolution MS Imaging</td>
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<td>10:00-10:15 am</td>
<td>Coffee Break, Outside Salons ABCD</td>
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<th>Time</th>
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<tr>
<td>10:15 -12:00 pm</td>
<td>Emerging Tools and Applications</td>
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<td>Session Chair: Andre Venter, Western Michigan University</td>
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<td>10:15-10:45 am</td>
<td>Carlito Lebrilla, UC-Davis</td>
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<td>Peptidomic and Glycopeptidomic Analysis of Bioactive Compounds in Human Milk</td>
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<td>10:45-11:15 am</td>
<td>Jay Forsythe, College of Charleston</td>
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<td>Proto-Peptidomics: The First Peptides in Darwin's Warm Little Pond</td>
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<td>11:15-11:45 am</td>
<td>David Clemmer, Indiana University</td>
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<td>Developing IMS-MS Techniques for following Structural Transitions in Peptides in Solution and in the Gas Phase</td>
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<td>11:45– 12:00 pm</td>
<td>Ryan Julian, UC-Riverside</td>
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<td>Identifying Isomerization and Epimerization in Peptides from Crystallins with Radical Directed Dissociation</td>
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<tr>
<td>12:00-1:15 pm</td>
<td>Lunch, on your own</td>
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</table>
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
01 Isometric Characterization of D-Amino Acid Containing Peptides and N-Linked Glycopeptides by Differential Ion Mobility Spectrometry; Matthew Baird1; Graham Delafield2; Zhe Wang3; Si Wu3; Alexandre Shvartsburg4; 1, Wichita, KS; 2University of Oklahoma, Norman, OK; 3Wichita State University, Wichita, KS

02 Identification of Novel Protein-Peptide Interactions via Differential Mass Spectrometry; Harris Bell-Temin1; Steven Mullett1; Andrey Bondarenko2; Nathan A. Yates3; 1Univ of Pitt School of Health Sciences, Pittsburgh, PA; 2Infoclinika, Bellevue, WA

03 Bacterial Peptidoglycan Analysis Using a Proteomics Search Engine; Marshall W. Bern1; Kelsi Sandoz2; Richard Beniston3; Stephane Mesnage3; 1Protein Metrics, San Carlos, CA; 2NIH/NIAID Rocky Mountain Laboratories, Hamilton, MT; 3University 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; 1University 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; 2Florida 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; 1George 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 Woods1; 1Biochemistry and Proteomics Group, Department of Chemistry and Biomolecular Science, Clarkson University, Potsdam, NY; 2Center 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 Bernáldez2; Samanta Jiménez2; Leslie Otero1; Pavel Lugo2; Carolina Álvarez-Delgado2; Lourival Domingos Possani2; Fernando Zamudio2; Luis Javier González3; Alexei Fedoróvish Licea-Navarro1; 1CICESE, Ensenada, Baja California; 2Instituto de Biotecnología (UNAM), Cuernavaca, Mexico; 3Center 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-Montiel1; Samanta Jiménez2; Jesús A. Beltrán2; Carlos A. Brizuela2; Johanna Bernáldez2; Alexei Licea-Navarro2; 1Center for Genetic Engineering and Biotechnology, Havana, Cuba; 2CICESE, Carretera Ensenada-Tijuana, México

11 Deciphering Disease-associated Proteolytic Networks with 18O-Peptide Coding; Markus Hardt; Forsyth Institute, Cambridge, MA
12 Novel Conotoxin of the I2-Superfamily Isolated from Conasprella Ximenesshows Antimicrobial Activity vs M. tuberculosis; Samanta Jimenez1; Andrea Figueroa-Montiel1; Johanna Bernádez1; Luis Javier González2; Jesús A. Beltrán1; Carlos A. Brizuela1; Alexei Licea-Navarro1; 1CICESE, Carretera Ensenada-Tijuana 3918, México; 2Laboratorio 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; 1UAMS, Little Rock, AR

14 Analysis of Xylem Tissue and Sap Proteome of Grape Reveal Possible Tolerance Mechanism to Pierce Disease; Chelsea Kendall1; Ramesh Katm2; 1Florida A&M University, Tallahassee, FL; 2Florida 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; 1IMCS, 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; 1University 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; 1University 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; 1Kyushu University, Fukuoka, Japan

19 Novel Proteolytic Peptides Derived From Neurogranin as Potential Biomarkers for Traumatic Brain Injury; George Sarkis1; 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; 1University 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; 1KU Leuven, Leuven, Belgium; 2University of Antwerp, Antwerp, Belgium

22 Mass Spectrometry Based Structural Characterization of Spider PeptidePh?1?; Kelly Wormwood1; Armand Ngounou Wetic1; Marcus Vinicius Gomez2; Costel Darie1; 1Clarkson University, Potsdam, NY; 2Institute of Education and Research Santa Casa Belo Horizonte-Laboratory of Toxins, Belo Horizonte, Brazil
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; 1Merck 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; 1University of Wisconsin-Madison, Madison, Wisconsin
A Novel Triple Quadrupole Mass Spectrometry Method for the Quantitative Measurement of Free 4-HNE and 4-HHNE In Cells and Tissues; Hadi Ali; Kristofer Fritz; University of Colorado Denver, Aurora, CO

The Missing Link – Bioactive Micropeptides as By-products of Cellular Processes – Discovery by a Bioinformatics Approach; Stephen Barnes; J Edwin Blalock; Chiquito Crasto; University of Alabama at Birmingham, Birmingham, AL; Center for Biotechnology and Genomics, Texas Tech University, Lubbock, TX

Microscope Ion Imaging of Complex Surfaces and Biological Samples Using the Pixel Imaging Mass Spectrometry Camera; Robert Burleigh; Mark Brouard; Michael Burt; Ang Guo; Steve Thompson; Physical & Theoretical Chemistry department, University of Oxford, Oxford, UK; SAI Manchester, Manchester, UK

Mass Spectrometric Quantitation and Imaging of Neuropeptide Expression Levels in Crustacean Tissue and Circulating Fluid Resulting from Food Intake; Kellen DeLaney; Lingjun Li; University of Wisconsin-Madison, Madison, WI

Prostate Cancer-associated Peptide and Glycan Co-localizations in FFPE Tissues by MALDI-FTICR Imaging Mass Spectrometry; Richard Drake; Alyson Black; Kim Norris-Canada; Peggi M Angel; Medical University of South Carolina, Charleston, SC

Structure-specific Peptide Transmission and Processing in a Model of Parkinson's Disease and L-DOPA-induced dyskinesia; Elva Fridjonsdottir; Anna Nilsson; Henrik Wadensten; Alan Crossman; Per Svenningsson; Erwan Bezard; Per Andrén; Uppsala University, Uppsala, Sweden; Motac Neuroscience, Manchester, UK; Karolinska Institutet, Stockholm, Sweden; Université de Bordeaux, Bordeaux, France

The PepSAVI-MS pipeline for Natural Product Bioactive Peptide Discovery; Leslie M. Hicks; Christine L. Kirkpatrick; David Pritchard; Nicole C. Parsley; Yufeng Liu; David W. Hoskin; Lindsey N. Shaw; UNC - Chapel Hill, Chapel Hill, NC; Dalhousie University, Halifax, Canada; University of South Florida, Tampa, FL

Automated Differential Analysis for Peptide Components in Biological Matrixes; Serhiy Hnatyshyn; Asoka Ranasinghe; Andrew Worth; Adrienne Tymiak; BMS Co., Princeton, NJ; BMS Co., Wallingford, CT

Zebrafish Peptidomics: Comparison of Peptide Extraction Methods; Kristien A. Van Camp; Geert Baggerman; Ronny Blust; Steven J. Husson; Systemic Physiological & Ecotoxicological Research (SPHERE), University of Antwerp, Antwerp, Belgium; Flemish Institute for Technological Research (VITO), Mol, Belgium

Identifying Isomerization and Epimerization in Peptides from Crystallins with Radical Directed Dissociation; Ryan R. Julian; Yana Lyon; University of California, Riverside, Riverside, CA

Screening and Synthesis of MALDI Matrix towards Phosphopetidomics; Chihiro Kawano; Takanori Ishii; Yoshinori Fujimura; Mitsuru Shindo; Hiroyuki Wariishi; Daisuke Miura; Kyushu University, Fukuoka, Japan
Optimization of LC-MS and MALDI-MSI Techniques for the Identification and Characterization of Peptides in Medicago truncatula; Caitlin Keller¹; Erin Gemperline²; Alyssa Eissold¹; Junko Maeda¹; Dhileepkumar Jayaraman¹; Michael R. Sussman¹; Jean-Michel Ané¹; Lingjun Li¹; ¹University of Wisconsin-Madison, Madison, WI; ²Dow AgroSciences, Indianapolis, IN

Natural Product Bioactive Peptide Discovery using the PepSAVI-MS Pipeline; Christine L. Kirkpatrick¹; David Pritchard¹; Nicole C. Parsley¹; Leslie M. Hicks¹; ¹University of North Carolina at Chapel Hill, Chapel Hill, NC

Peptide Epitope Characterization of Human β-Galactosidase by online SPR - Affinity Mass Spectrometry; Zdenek Kukacka¹, ²; Marius Iurascu¹, ²; Mary Murphy³; Jeff Bornheim³; Lorenzo Altamore³; Anna Maria Papini⁴, ⁵; Michael Przybylski³, ²; ²Steinbeis Centre Biopolymer Analysis and Biomedical Mass Spectrometry, Russelsheim am Main, Germany; ³University of Konstanz, Konstanz, Germany; ⁴Reichert-Ametek Technologies, Buffalo; ⁵University of Florence, Florence, Italy; ⁵University of Cergy-Pontoise, Cergy-Pontoise, France

Study of Protein Oxidation in Freeze-Dried Cells During Long-Term Storage; Barbara S. Larsen¹; Ron Agee²; Michael Dauner²; Kurt Fenster²; Chris Hollard²; Cathy Kalbach²; Sunny Li³; Buffy Stahl²; ¹The DuPont Company, Wilmington, DE; ²DuPont, Madison, WI; ³DuPont, Wilmington, DE

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; ¹Univ of Wisconsin-Madison, Madison, WI

Hydroxyl Radical Footprinting with PLIMB (Plasma-Induced Modification of Biomolecules): A Novel Tool for Structural Mass Spectrometry; Benjamin B. Minkoff¹; Joshua Blatz²; Daniel Benjamin¹; Faraz Choudhury¹; J. Leon Shohet¹; Michael R. Sussman¹; ¹University of Wisconsin-Madison, Madison, WI

Automated Structural Characterization of Therapeutic Cyclic Peptides and Their Metabolites in Drug Discovery; Asoka Ranasinghe¹; Serhiy Hnatyshyn¹; Eugene Cicimaro¹; Silvi Chacko¹; Celia D’Arienzo Celia D’Arienzo¹; Timothy Olah¹; Adrienne Tymiak¹; Marshall M. Siegel²; Gary Walker²; ¹Bristol-Myers Squibb Company, Princeton, NJ; ²MS Mass Spec Consultants, Fair Lawn, NJ

Strategies for Peptidome Characterization in Non-model Species; Elena V. Romanova¹; Bruce R. Southey¹; Stanislav S. Rubakhin¹; Caroline K. Hu¹, ³; Karen P. Maruska²; Russell D. Fernald²; Justin S. Rhodes³; Neil L. Kelleher³; Jonathan V. Sweedler¹; ¹University of Illinois at Urbana-Champaign, Urbana-Champaign, IL; ²Stanford University, Stanford, CA, USA; ³Harvard University, Cambridge, MA, USA; ⁴Northwestern University, Evanston, IL, USA

Investigation of Cellular Chemical Heterogeneity of the Brain Using Mass Spectrometry; Stanislav Rubakhin¹; Elizabeth K. Neumann¹; Troy J. Comi²; Thanh D. Do²; Jonathan V. Sweedler¹; ¹Beckman Institute, UIUC, Urbana, IL; ²Department of Chemistry, University of Illinois, Urbana-Champaign, IL, USA
23 Improving DESI-MS Analysis of Proteins and Peptides; Andre Venter1; Elahe Honarvar1; Wisam Alisawi1; Vageesha Gunawardana1; 1Western 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; 1University of Illinois at Chicago, Chicago, IL; 2Montana State University, Bozeman, MT