

Sunday, July 28th	
12:00 PM – 4:00 PM	Registration table open Union South Main Lobby
1:00 PM – 2:30 PM	Pre-meeting workshop, MSIreader Union South Landmark Room, 3 rd Floor
2:45 PM – 3:45 PM	Pre-meeting workshop, Experimental Design Union South Northwoods Room, 3 rd Floor
4:00 PM – 5:00 PM	Registration table open Memorial Union Play Circle Lobby
4:00 PM – 5:00 PM	Greet & Socialize Memorial Union Lobby
5:00 PM – 5:05 PM	Welcome Comments, Dr. Peggi Angel Memorial Union Play Circle Theater, 2 nd Floor
5:05 PM – 6:00 PM	Keynote Speaker, Prof. Ron Heeren; <i>Pushing the boundaries of imaging MS: "Omics based Spatial biology"</i> Memorial Union Play Circle Theater, 2 nd Floor
6:00 PM – 8:00 PM	Welcome Reception Memorial Union Sunset Lounge, 1 st Floor
Monday, July 29 th	
7:00 AM – 8:00 AM	Fun Run Union South Hotel Lobby; 1308 W. Dayton St.
7:30 AM – 8:30 AM	Registration table open Rennebohm Hall Mezzanine
7:30 AM – 8:30 AM	Pastries & Coffee; Sponsor Tables Opening Rennebohm Commons, 2 nd Floor
8:30 AM – 8:35 AM	Call to Order & Welcome Activity, Dr. Peggi Angel Rennebohm Hall Room 2006, 2 nd Floor
8:35 AM – 10:05 AM	Session 1 - Drugs: Detection to Quantitation; Chairs: Bingming Chen & Joseph Holbrook
8:35 AM – 8:55 AM	Joseph Holbrook; <i>Quantitative Mass Spectrometry Imaging of Liposomal Doxorubicin Delivery and Bilayer Fate in Three-Dimensional Tumor Models</i>
8:55 AM – 9:15 AM	Emily Sekera; <i>Strategies for Utilizing MALDI Imaging in the Drug Discovery Pipeline</i>
9:15 AM – 9:35 AM	Will Hardesty; <i>Current State of Quantitative Drug Imaging Mass Spectrometry in Combination with Orthogonal Imaging Modalities at GSK</i>
9:35 AM – 9:50 AM	Seth Croslow; <i>Profiling of Cruentaren A-Treated Human-Derived Breast Cancer Organoids Using High Spatial Resolution MALDI-2 TIMS Mass Spectrometry</i>
9:50 AM – 10:05 AM	Emily Bruce; <i>Evaluating Quantification of Glutathione with Incorporation of DOE Optical Train for IR-MALDESI MSI</i>
10:05 AM – 10:20 AM	Sponsor Talk: Waters, Bindesh Shrestha <i>Enhancing Spatial Resolution Towards Cellular Imaging with Low-Flow DESI</i>
10:20 AM – 10:40 AM	Coffee Break – Rennebohm Commons, 2 nd Floor Poster Setup – Health Sciences Learning Center Atrium, 1 st Floor
10:40 AM – 12:10 PM	Session 2 - Data Visualization, Interpretation & Discovery Chairs: Ramon Sun & Cameron Shedlock

10:40 AM – 10:55 AM	Ramon Sun; <i>Blueprint to Study the Entire Cellular Metabolic Landscape in 2D and 3D</i>
10:55 AM – 11:15 AM	Sizun Jiang; <i>Spatial-omics To Interrogate Host-Disease Interactions</i>
11:15 AM – 11:35 AM	Kimberly Alonge; <i>MALDI-IMS visualization of intraregional chondroitin sulfate-glycosaminoglycan plasticity in non-human primate hippocampus</i>
11:35 AM – 11:45 AM	Davide Franchina; <i>MnM: Co-spatial tissue imaging using MALDI and MIBI</i>
11:45 AM – 11:55 AM	Cameron Shedlock; <i>MetaVision3D: Automated Framework for the Generation of Spatial Metabolome Atlas in 3D</i>
11:55 AM – 12:10 PM	Kylie Bemis; <i>Scalable, reproducible MSI analysis with Cardinal v3</i>
12:10 PM – 12:25 PM	Sponsor Talk: Procter & Gamble, Ron Swift <i>Application of Analytical and Mass Spectrometry in Consumer Product Development</i>
12:25 PM – 1:30 PM	Lunch & Networking – Rennebohm Hall Atrium Poster Setup – Health Sciences Learning Center Atrium, 1 st Floor
1:30 PM – 3:30 PM	Poster Session – Health Sciences Learning Center Atrium, 1 st Floor Even poster #s: 1:30 PM – 2:30 PM; Odd poster #s: 2:30 PM – 3:30 PM Remove posters at end of session
3:45 PM – 5:00 PM	Concurrent Sessions
3:45 PM – 5:00 PM	Artificial Intelligence in Mass Spectrometry Imaging Co-Chairs: Peggi Angel & Ramon Sun Rennebohm Hall Room 2006, 2 nd Floor Speakers: <ul style="list-style-type: none"> • Ramon Sun (University of Florida) <i>AI in imaging, current opportunities and future directions</i> • Gerard Baquer, (Department of Neurosurgery, Brigham and Women's Hospital, Harvard Medical School) <i>Understanding Spatial Relationships Among Cells and Molecules in Glioblastoma through Multimodal Imaging</i> • Jim Mansfield, (Visiopharm) <i>Applying AI-based pathology image analysis to MALDI and merged multiplex immunofluorescence images</i> • Sizun Jiang, (Harvard Medical School) <i>AI-driven Approaches in Spatial-omics</i>
3:45 PM – 5:00 PM	Industry Panel; Co-Chairs Jillian Johnson & Bingming Chen Rennebohm Hall Room 2002, 2 nd Floor Host: <ul style="list-style-type: none"> • Jade Macdonald (The Medical University of South Carolina) Panelists: <ul style="list-style-type: none"> • Erin Gemperline (Eli Lilly) • Junhai Yang (Abbvie) • Andrew Bowman (Abbvie)
5:00 PM – 5:30 PM	Break
5:30 PM – 6:00 PM	Bus to offsite group activity (<i>No return service</i>) <u>Bus Stops:</u> 5:30 UW-Madison @ Rennebohm Hall north entrance at University Bay Dr; 5:40 Best Western Inntowner Hotel; 5:50 Union South @ Randall Ave on west side of Union

6:00 PM – 10:00 PM	Group Activity and Dinner Great Dane Brewery (Downtown Location) 123 E. Doty St., Madison, WI 53703
Tuesday, July 30th	
7:30 AM – 8:30 AM	Registration table open Rennebohm Hall Mezzanine
7:30 AM – 8:30 AM	Pastries & Coffee; Sponsor Tables Rennebohm Commons, 2 nd Floor
8:30 AM – 9:50 AM	Session 3 - Diseases: Markers to Treatment Chairs: Erin Seeley & Melanie Campbell Rennebohm Hall Room 2006, 2 nd Floor
8:30 AM – 8:50 AM	Sammy Ferri-Borgogno; <i>Using Multiplexed Multi-Omics to Study Spatial Heterogeneity in Ovarian Cancer</i>
8:50 AM – 9:10 AM	Alison Scott; <i>Neutrophil-driven impacts on lung lipid homeostasis in a Cystic Fibrosis-like mouse model of sodium hyperabsorption</i>
9:10 AM – 9:20 AM	Melanie Campbell; <i>Spatial Mapping of Ether Lipids in Tissue via MALDI TIMS Imaging Mass Spectrometry: Characterization of Biomarkers of Peroxisomal Disorders</i>
9:20 AM – 9:30 AM	Kameisha Rashford; <i>Glycomic Analysis of Immune Cell Clusters in Prostatic and Pancreatic Adenocarcinoma Tissues</i>
9:30 AM – 9:40 AM	Hanna Miles; <i>Integrating MALDI-MSI and LC-MS/MS for Spatial Localization of Disease Markers in a Model of Benign Prostatic Hyperplasia</i>
9:40 AM – 9:50 AM	Jaclyn Dunne; <i>Multimodal, Multiplexed Approaches to Assess the Spatial Regulation of the Collagen Proteome in the Normal Breast at Risk of Cancer and Triple-Negative Breast Cancer</i>
9:50 AM – 10:05 AM	Sponsor Talk: N-zyme Scientifics, Rick Drake <i>Expansion of the N-glycome human atlas of normal and tumor tissues defined by MALDI mass spectrometry imaging: Now with more brains and kidneys!</i>
10:05 AM – 10:25 AM	Coffee Break – Rennebohm Commons, 2 nd Floor
10:25 AM – 11:55 AM	Session 4 - Emerging Instrumentation & Novel Methods Chairs: Robert Winkler & Abigail Moreno Pedraza
10:25 AM – 10:45 AM	Robert Winkler; <i>Prototyping ambient ionization mass spectrometry imaging (AIMSI) systems</i>
10:45 AM – 11:05 AM	Gargey Yagnik; <i>Spatial Multiomics with MALDI-IHC and MALDI-ISH: Expanding MALDI Imaging with Mass-Tagged Affinity Probes for Targeted Proteomics and Transcriptomics</i>
11:05 AM – 11:15 AM	Josiah Rensner; <i>In-Source Ozonolysis for Efficient MALDI-MS Imaging of Lipid Double-Bond Isomers</i>
11:15 AM – 11:25 AM	Wenyun Lu; <i>Acidic Methanol Treatment Facilitates MALDI-Mass Spectrometry Imaging of Energy Metabolism</i>
11:25 AM – 11:35 AM	Abigail Moreno Pedraza; <i>Plasma-based ionization sources for coupled techniques in ambient imaging</i>
11:35 AM – 11:55 AM	Kevin Zemaitis; <i>Combination of microfluidic models, passive imprinting, chemical derivatization, and in-silico predictive strategies for comprehensive spatial metabolomics in the rhizosphere</i>
11:55 PM – 12:10 PM	Sponsor Talk: Bruker, Kate Stumpo

<i>A spatial multiomics workflow on the neoflex benchtop MALDI-TOF instrument</i>	
12:10 PM – 1:15 PM	Lunch & Networking – Rennebohm Hall Atrium
1:15 PM – 2:30 PM	Session 5 - Single Cells to Microenvironment; Chairs Angela Kruse & Pei Su
1:15 PM – 1:30 PM	Chris Anderton; <i>Development of Methods for Untargeted Spatial Metabolomics and Untargeted Spatial Proteomics on the Same Tissue Section</i>
1:30 PM – 1:45 PM	Furkan Bayram; <i>Single Cell Recognition and Semi-automated Sample Segmentation</i>
1:45 PM – 2:00 PM	Yat Ho (Horace) Chan; <i>Gel-assisted mass spectrometry imaging enables sub-micrometer spatial lipidomics</i>
2:00 PM – 2:15 PM	Lyndsay Young; <i>Multi-Omic Application of MALDI-MSI and MALDI-IHC for Biomolecular Profiling of Immune Cells in Tissues and Single Cells</i>
2:15 PM – 2:30 PM	Angela Kruse; <i>Unveiling the Diverse Molecular Landscape of the Diabetic Pancreas through Multimodal Spatial Analysis</i>
2:30 PM – 2:45 PM	Sponsor Talk: Agilent, Peter Verhaert <i>MSI on Agilent QTOF and QQQ Systems Enabling Targeted High Sensitivity MSHC Utilizing Innovative Multi-Omics Spatial Analysis with Single Cell Resolution. Unlocking Biomolecular information from FFPE Samples Archived in Tissue Biobanks</i>
2:45 PM – 3:00 PM	Award Presentations and Closing Remarks