28th Sep 2022

08:30-08:45	**Welcome and Introductory Comments** Co-chair: Da Ren, *Amgen Inc.*
08:45-09:45	**Keynote I** **In Quest of SPARQLING Lights in the Dark Human Proteome** Lydie Lane *Swiss Institute of Bioinformatics*
09:45-10:15	**Networking Break**
10:15-11:50	**Session I - Contemporary Bioinformatics Applications for Mass Spectrometry** Session Chairs: Da Ren, *Amgen Inc.* and Richard Rogers, *Umoja BioPharma, Inc.* **10:20-10:50** **Development of Automated Workflows for Analysis and Reporting of Product-Specific Peptide Mapping Data** Michael Pettit *Janssen Research & Development, LLC, Malvern, PA, USA* **10:50-11:20** **Chemometric Approaches to Evaluate and Predict the Performance of Biopharmaceutical Manufacturing Processes** Noemi Dorival-Garcia, *The National Institute for Bioprocessing Research and Training (NIBRT), Dublin, Ireland* **11:20-11:50** **Fast, Large-Scale Analysis of Mass Spectrometry Data Repositories to Find the Needle in the Haystack** Simon Letarte *Gilead Sciences, Oceanside, CA, USA.*
12:05-12:35	**Technical Seminar Sponsored by SCIEX** **12:05-12:35** **A Disruptive Approach to the Characterization of mAb Charge Variants During Process Development** Greg Adams *FUJIFILM Diosynth Biotechnologies, Morrisville, North Carolina, USA*
12:40-13:10	**Technical Seminar Sponsored by Agilent Technologies, Inc.** **Recent Advances in Oligo Purity and Sequence Determinations by LCMS: Maximizing Throughput, Confidence, and Coverage.** Peter Rye *Agilent Technologies, Lexington, MA, USA*
13:10-14:20	**Poster Session I**

14:20-15:25	**Session II - Molecular Design, Developability and Biotransformation** Session Chairs: Anders Lund, *Synlogic* and Andrew Mahan, *Janssen Research & Development, LLC* **14:25-14:55** **LC-MS-based Target Engagement Assays, Enabling Decision Making in Drug Development** Michelle Robinson *Merck & Co., Inc., West Point, PA, USA* **14:55-15:25** **Two-Dimensional Liquid Chromatography-Mass Spectrometry (2D-LC-MS) for Simultaneous Multi-Attribute Characterization of Adeno-Associated Viruses** Zhijie Wu, *Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA*
15:25-17:00	**Session III - Emerging Mass Spectrometry Technologies for HOS** Session Chairs: John Valliere-Douglass, *Seagen Inc.* and Christopher Yu, *Genentech, a Member of the Roche Group* **15:30-16:00** **Variable Temperature Native Mass Spectrometry for Studying Thermodynamics of Protein-Ligand Interactions** Thomas Walker *Texas A&M University, College Station, TX, USA* **16:00-16:30** **Study of Monoclonal Antibody Aggregation by Size Exclusion Chromatography Coupled With Native Mass Spectrometry** Jing Xu *Biogen, Cambridge, MA, USA* **16:30-17:00** **Evaluation of Monoclonal Antibody HOS Change Upon Forced Degradation by Biophysical and Mass Spectrometry-Based Technologies** Yanchun Lin *Washington University in St Louis, St Louis, MO, USA.*
17:00-18:00	**Welcome and New Member Reception**

29th Sep 2022

08:30-08:35	**Welcome and Introductory Comments** Speaker: Christopher Chumsae, *Bristol-Myers Squibb Company*
08:35-09:35	**Keynote II** **08:35-09:35** **MAM: Multi-Artifacts Monitoring – Operators, Processes and Modalities** Zhaohui (Sunny) Zhou *Northeastern University, Boston, MA, USA*
09:35-10:05	**Networking Break**
10:05-11:40	**Session IV - Mass Spectrometry in Gene and Cell Therapy** Session Chairs: Jason Rouse, *Pfizer, Inc.* and Christopher Yu, *Genentech, a Member of the Roche Group* **10:10-10:40** **Application of LC-MS for Analysis and Characterization of Pharmaceutical mRNA Products** Tao Jiang *Moderna Inc., Norwood, MA, USA* **10:40-11:10** **Unlocking Analytics for AAV Gene Therapy Programs: Leveraging Standard Biotherapeutic Strategies to Transform New Modalities** Thomas Powers *Pfizer, Chesterfield, MO, USA* **11:10-11:40** **Characterization of Host Cell Proteins for AAV Using Native Digestion and Quantitative Proteomics** Jean Lodge, Lihua Huang, Zhirui Lian, Yuwei Tian *Eli Lilly and Company, Indianapolis, IN, USA*
11:55-12:25	**Technical Seminar Sponsored by Thermo Fisher Scientific** **11:55-12:25** **Profiling Complex Biotherapeutics With Charge Reduction or Charge Detection Native Mass Spectrometry** Wendy Sandoval *Genentech Inc., South San Francisco, CA, USA.*
12:30-13:00	**Technical Seminar Sponsored by Waters Corporation** **12:30-13:00** **Advancing Mass Spectrometry Workflows: From the Revolutionary to the Routine** Scott Berger *Waters Corporation, Milford, MA, USA*

13:00-14:00	**Poster Session II**
14:00-15:05	**Session V - Next Generation Investigators** Session Chairs: Jonathan (JJ) Josephs, *Genentech, a Member of the Roche Group* and Douglas Richardson, *Merck & Co., Inc.* **14:05-14:25** **Localization of O-Glycosylation in a CD24 Fc-Fusion Protein by Site-Directed Mutagenesis and Native Mass Spectrometry** Zac VanAernum *Merck & Co., Inc., Rahway, NJ, USA* **14:25-14:45** **Guiding the Cell Line Development of Bispecific Molecules Using a Newly Developed Native SECMS and Quantitative Chain Ratio Assay** Elsa Gorre *Janssen Pharmaceutical R&D, LLC, Spring House, PA, USA* **14:45-15:05** **Application of Free Cysteine Footprinting by Differential Alkylation in BioProcess Development** Roger Liu *Bristol-Myers Squibb Company, Devens, MA, USA.* [2]*Bristol-Myers Squibb Company, New Brunswick, NJ, USA*
15:05-15:30	**Networking Break**
15:30-16:30	Roundtable Discussions
16:30-17:30	**Exhibitor and Poster Reception**

30th Sep 2022

08:30-08:35	**Welcome and Introductory Comments** Speaker: Da Ren, *Amgen Inc.*
08:35-09:35	**Keynote III** **Charge Detection Mass Spectrometry for the Analysis of Gene Therapy Vectors** Martin Jarrold *Indiana University*
09:35-10:00	**Networking Break**
10:00-12:05	**Session VI - Product and Process Characterization** Session Chairs: Christopher Chumsae, *Bristol-Myers Squibb Company* and Ingo Lindner, *Roche Diagnostics GmBH* **10:05-10:35** **Identification of N-Linked Glycans From Bovine Alpha-Thrombin Using a Combination of Lc-Ms Techniques** Dennis Gessmann *Pfizer, Inc., Andover, MA, USA.* **10:35-11:05** **Probing Residual Host Cell Proteins in Monoclonal Antibody and Its High Molecular Weight Species: A Different Way to Study Difficult-to-Remove HCPs** Yunli Hu *Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA* **11:05-11:35** **Identification of Hetero-Aggregates in Antibody Co-Formulations by Multi-Dimensional Liquid Chromatography Coupled to Mass Spectrometry** Felix Kuhne *Roche Diagnostics GmbH, Penzberg, Germany* **11:35-12:05** **Performance Characteristics of Mass Spectrometry- Based Methods for Quantitation of Nitrosamines: Insight From an Inter-Laboratory Study** Jingyue Yang *CDER, FDA, Saint Louis, MO, USA*
12:20-12:50	**Technical Seminar Sponsored by MOBILion Systems, Inc.** **12:20-12:50** **Tackling the Glycan Isomer Challenge for Your Biotherapeutics With MOBIE®** Heidi Vitrac *MOBILion Systems, Chadds Ford, PA, USA*
12:55-13:25	**Technical Seminar Sponsored by Genovis Inc.** **12:55-13:25** **Enzymatic Strategies for Characterization of Biopharmaceuticals**

	Laurent Rieux *Genovis Inc., Cambridge, MA, USA*
13:30-15:05	**Session VII - New Technologies, Approaches and Methods** Session Chairs: Richard Rogers, *Umoja BioPharma, Inc*. and John Valliere-Douglass, *Seagen Inc.* **13:35-14:05** **Lab of the Future: Fully Integrated Automation for Protein Characterization and Biologics Development** Hirsh Nanda *Janssen Pharmaceutical Companies of Johnson & Johnson, Springhouse, PA, USA.* **14:05-14:35** **The Application of Mass Spectrometry for Potency Readout of mRNA Vaccines From in Vitro Translation** Alyssa Stiving *Merck & Co., Inc., West Point, PA, USA.* **14:35-15:05** **Peptide Mapping: Two Lc Methods Are More Informative (And Faster!) Than One** James Arndt *Teva Pharmaceuticals, West Chester, PA, USA*
15:05-15:15	**Poster Award Announcement**
15:15-15:30	**Closing Remarks** Co-chair: Christopher Chumsae, *Bristol-Myers Squibb Company*