


## 2022 Preliminary Technical Oral Program

Here is the preliminary list of oral invited and contributed sessions. The Poster Sessions will be announced in September. It is not too late to submit an abstract for a **poster** presentation! The deadline is September 5th. Visit our submission site for more details and to submit: [www.EAS.org/asubmit](http://www.EAS.org/asubmit)

### MONDAY MORNING, NOVEMBER 14

Time	Title, Author(s)
<b>EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry</b> Honoring <b>Richard Crooks, University of Texas-Austin</b> Chair: <b>Frank Zamborini, University of Louisville</b> Sponsored by <b>Bristol Myers Squibb</b> 	
9:00am	<i>Oxidation and Deposition Processes with Metal Nanoparticles</i> , <b>Frank Zamborini</b> , University of Louisville
9:30am	<i>Integration of Dielectrophoretic Selective Single-Cell Capture at a Wireless Electrode Array with On-Chip Analysis of Single Circulating Tumor Cells</i> , <b>Robbyn Anand</b> , Iowa State University
10:00am	Break
10:30am	<i>Serial and Parallel Approaches to High-Throughput Electro-Chemistry</i> , <b>Lane Baker</b> , Texas A&M University
11:00am	<i>Presentation of the EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry</i>
11:05am	<i>Magnetic and Electrochemical Preconcentration: A Route to Home-Based, Picomolar Detection of a Heart Failure Biomarker</i> , <b>Richard Crooks</b> , University of Texas-Austin

<b>Advances in NMR Data Science</b> Chair: <b>David Rovnyak, Bucknell University</b>	
9:00am	<i>Getting New Correlations from Old Spectra-Covariance NMR to Rescue Challenging Biomolecular Projects</i> , <b>Dominique Frueh</b> , Kenneth Marincin, Johns Hopkins University, Aswani Kancharla, Mynvax Private Limited, Subrata Mishra, United States Pharmacopeia
9:30am	<i>Characterization of Biotherapeutics by Chemometrics and Machine Learning Analysis of NMR Spectra</i> , <b>Frank Delaglio</b> , National Institute of Standards and Technology
10:00am	Break
10:30am	<i>Shifting-Corrected Regularized Regression Model for NMR Metabolomic Identification</i> , <b>Thao Vu</b> , Colorado School of Public Health, Yuhang Xu, Bowling Green State University, Yumou Qiu, Iowa State University, Robert Powers, University of Nebraska-Lincoln
11:00am	<i>Using Deep Learning to Unleash the Potential of NMR Spectroscopy</i> , <b>D. Flemming Hansen</b> , University College London

<b>STEM Education Innovations</b> Chair: <b>Shirley Fischer-Drowos, Widener University</b>	
9:00am	<i>BCEENET: Creating a Collaborative Network to Support Course-Based Undergraduate Research Experiences (CUREs) Using Digitized Natural History Collections</i> , <b>Janice Krumm</b> , Widener University
9:30am	<i>Student Outcomes and Perceptions of Specifications Grading in a First Semester General Chemistry Course</i> , <b>Stephen Habay</b> , Salisbury University
10:00am	Break
10:30am	<i>Thinking Outside the Classroom – Coursework Using Current Environmental Case Studies</i> , <b>Gina Plantz</b> , Haley & Aldrich
11:00am	<i>Transforming the Chemistry Lab Experience</i> , <b>Shirley Fischer-Drowos</b> , Huy Dao, Widener University

<b>Innovative Approaches to Liquid Chromatography in Drug Development: From Small Molecules to New Modalities</b> Chair: <b>Yi He, John Jay College of Criminal Justice</b>	
9:00am	<i>Novel Strategies for Targeted Protein Quantification in Biomatrices</i> , <b>Bo An</b> , GlaxoSmithKline
9:30am	<i>In Silico Multifactorial Modeling for Streamlined Development and Optimization of Chromatography Methods</i> , <b>Imad Haidar Ahmad</b> , Merck & Co., Inc.
10:00am	Break
10:30am	<i>Improving Oligonucleotide Separations and Impurity Analysis Using LC Systems and Columns with Hybrid Surface Technology</i> , <b>Martin Gilar</b> , Waters Corporation
11:00am	<i>Empower mRNA-Based Medicines by HPLC</i> , <b>Penggao Duan</b> , Moderna

<b>Applied Data Science: Expanding the Chemometrics Toolbox</b> Chair: <b>Brandye Smith-Goettler, Merck &amp; Co., Inc.</b>	
9:00am	<i>Tall Versus Wide Data and the Promise of Machine Learning</i> , <b>Peter Harrington</b> , Ohio University
9:30am	<i>Tools for Final Model Selection</i> , <b>Barry M. Wise</b> , Robert T. Roginski, Lyle Lawrence, Eigenvector Research
10:00am	Break
10:30am	<i>Pharmaceutical Applications of Machine Learning</i> , <b>Brandye Smith-Goettler</b> , Merck & Co., Inc.
11:00am	<b>Adam Gilmore</b> , HORIBA Scientific

## 2022 Preliminary Technical Oral Program

Monday Morning continued

<b>Advancements of Mass Spectrometry and Applications Diversity</b> <b>Chair: Peter Bratin, ECI Technology</b>	
9:00am	<i>The Importance of High Resolution Ion Mobility Mass Spectrometry to Accurately Read Back the Complex Language of Biology</i> , <u>David Muddiman</u> , Jeffrey Enders, Taufika Williams, Kenneth Garrard, North Carolina State University
9:30am	<i>Statistical Approach for System Suitability Testing for Mass Spectrometry Imaging by Infrared Matrix-Assisted Laser Desorption Electrospray Ionization (IR-MALDESI)</i> , <u>Olivia Dioli</u> , Hellena Bai, Kenneth Garrard, David Muddiman, Emily Hector, North Carolina State University
10:00am	Break
10:30am	<i>Quantitation of Antibody Deamidation Degradation and Host Cell Proteins by Coulometric Mass Spectrometry</i> , <u>Yongling Ai</u> , Hao Chen, New Jersey Institute of Technology
11:00am	<i>A Novel Chromatographic Approach to Microplastics Analysis Using Pyrolysis-GC-MS: How Your GC/MS Can Be Adapted for Microplastics Research</i> , <u>Khadiza Mom</u> , Quantum Analytics

<b>Applications and Technologies Addressing Environmental Concerns</b> <b>Chair: Neil Jespersen and Christina Robb, United States Food &amp; Drug Administration SANFL</b>	
9:00am	<i>Green Chemistry Initiatives at MilliporeSigma for a Sustainable Future</i> , <u>Ettigounder Ponnusamy</u> , Milliporesigma
9:30am	<i>Growth Rate Dependence of Secondary Organic Aerosol on Seed Particle Size, Composition, and Phase</i> , <u>Devon Higgins</u> , Michael Taylor, Justin Krasnomowitz, Murray Johnston, University of Delaware
10:00am	Break
10:30am	<i>Unraveling the Complex Composition of Produced Water by Specialized Extraction Methodologies</i> , <u>Emanuela Gionfriddo</u> , Ronald V. Emmons, Govind S. Shyam Sunder, Jon R. Kirchhoff, The University of Toledo, Tiffany Liden, Kevin A. Schug, University of Texas at Arlington
11:00am	<i>A Screening Test for Pollution of Lakes with Perfluoroalkyl Substances (PFAS): Raman Spectroscopy of Fish Blood</i> , <u>Luis Pérez-Almodóvar</u> , Igor Lednev, State University of New York

<b>Bioanalysis: New Technology Advances and Developments</b> <b>Chair: Mary Lynn Grayeski</b>	
9:00am	<i>Smart Biosensors with Machine Learning for Objective Pain Assessment</i> , <u>Omowunmi Sadik</u> , New Jersey Institute of Technology
9:30am	<i>Light-Addressable Electroanalysis with Semiconductor/Metal Nanoparticle Junctions</i> , <u>Glen O'Neil</u> , Montclair State University
10:00am	Break
10:30am	<i>AI for Model Exploration of Molecular Equilibria in VR</i> , <u>Fereshteh Emami</u> , Tara Richard, Bryanne Boudreaux, Mathew Massey, Southeastern Louisiana University, Sheldon Zhu, Joseph Perez, Liam Golly, Theodore Nguyen, Srujan Gutta, Sunwoo Kim, Jonathon Padon, Thomas DeFanti, Larry Smarr, University of San Diego
11:00am	<i>Novel LC-MS-based Platform for Extensive Investigation on Antibody-Drug Conjugates Induced Ocular Toxicity by Integrating Global Proteomics and Targeted Drug Disposition Analysis</i> , <u>Xiaoyu Zhu</u> , Ming Zhang, Sangita Patel, Jun Qu, SUNY at Buffalo, Min Ma, Roswell Park Comprehensive Cancer Institute

<b>Forensic Analysis: Innovations and Technological Advancements</b> <b>Chair: Penny Moore</b>	
9:00am	<i>Forensics and Innovative Technologies (FIT): How FIT Fits in Bristol-Myers Squibb</i> , <u>Ravi Kalyanaraman</u> , Bristol Myers Squibb
9:30am	<i>HPTLC Separation of Novel Psychoactive Substances</i> , <u>Thomas Brettell</u> , Marianne Staretz, Cedar Crest College
10:00am	Break
10:30am	<i>Identification of Fibers Using Raman Microspectroscopy: A Case Study</i> , <u>Sergey Mamedov</u> , HORIBA Scientific
11:00am	<i>Examination of Pigmented Fibers for Trace Evidence Applications</i> , <u>Christopher Palenik</u> , Kelly Beckert, Ethan Groves, Skip Palenik, Otyllia Abraham, Microtrace LLC



<b>Vibrational Spectroscopy: Propelling New Insights into Chemical Analysis</b> <b>Chair: Dave Russell</b>	
9:00am	<i>Raman Spectroscopy of TiO<sub>2</sub>, WO<sub>3</sub>, and Y<sub>2</sub>O<sub>3</sub> Nanoparticles</i> , <u>Sergey Mamedov</u> , HORIBA Scientific
9:30am	<i>Differentiation of Structurally Similar Fentanyl Analogues with Theoretical and Experimental Analysis by Surface-Enhanced Raman Spectroscopy (SERS)</i> , <u>Sevde Dogruer</u> , Emily Hernandez, Bruce McCord, Florida International University
10:00am	Break
10:30am	<i>Highly Selective Differentiation of Organic Gunshot Residues Combining their Elemental and Molecular Signatures</i> , <u>Shelby Khandasammy</u> , Igor Lednev, University at Albany – SUNY, Lenka Halámková, Texas Tech University, Matthieu Baudalet, University of Central Florida
11:00am	<i>Root Cause Spectroscopic Failure Investigation Aided by High Resolution SEM/EDS, FT-IR, XPS Instruments</i> , <u>Jeanette vaiki Vass</u> , Auto & Materials


Poster Sessions are from 11:30am – 1:30pm located on the Bridge to the Hotel

Preliminary Program as of September 22, 2022

## 2022 EAS Preliminary Technical Oral Program

### MONDAY AFTERNOON, NOVEMBER 14

Time	Title, Author(s)
<b>EAS Award for Outstanding Achievements in Magnetic Resonance</b> Honoring Philip Grandinetti, The Ohio State University Chair: Lyndon Emsley, École Polytechnique Fédérale de Lausanne Sponsored by Bruker BioSpin and New Era Enterprises	
	 
1:30pm	<i>Higher Resolution and Higher Sensitivity for Solid-State NMR Spectroscopy</i> , Lyndon Emsley, École Polytechnique Fédérale de Lausanne
2:00pm	<i>Scaling Analyses of Hyperpolarization Transfer from Paramagnetic Centers into Solid Media</i> , Brad Chmelka, Nathan Prisco, University of California-Santa Barbara, Arthur Pinon, Lyndon Emsley, École Polytechnique Fédérale de Lausanne
2:30pm	Break
3:00pm	<i>Custom-Made Magnetic Resonance: An Application-Driven Instrumentation Approach</i> , Dimitrios Sakellariou, KU Leuven
3:30pm	<i>Presentation of the EAS Award for Outstanding Achievements in Magnetic Resonance</i>
3:35pm	<i>Statistical Learning in NMR Non-Crystallography</i> , Philip Grandinetti, The Ohio State University

<b>New York Microscopical Society Ernst Abbe Award</b> Honoring: Professor Manu Prakash, Stanford University Chairs: Brooke Kamrath, University of New Haven, John Reffner, John Jay College Sponsored by New York Microscopical Society	
	
1:30pm	Manu Prakash, Stanford University
2:00pm	<i>From Ideas to Globally Accessible Instruments</i> , Benedict Diederich, Leibniz-IPHT
2:30pm	Break
3:00pm	<i>PlanktoScope: Affordable Modular Quantitative Imaging Platform for Citizen Oceanography</i> , Thibaut Pollina, Adam Larson, Hongquan Li, Manu Prakash, Stanford University, David Le Guen, Colomban De Vargas, Plankton Planet, Fabien Lombard, Laboratoire d'Océanographie de Villefranche, Sebatien Colin, Max-Planck-Institute Tübingen
3:30pm	Panel Discussion

<b>POWERHOUSE SESSION:</b> <b>Challenges of Counterfeit Detection in Pharmaceutical Industry</b> Chairs: Pauline Leary, NOBLE, Kim Huynh-Ba, Pharmalytik, LLC	
1:30pm	<i>Analytical and Operational Challenges in Counterfeit Case Studies</i> , Ravi Kalyanaraman, Bristol Myers Squibb
2:00pm	<i>Microscopical Analysis Applied to the Detection and Sourcing of Counterfeit Products</i> , Christopher Palenik, Microtrace LLC
2:30pm	Break
3:00pm	<i>Unsafe Pharmaceuticals: Fake or Counterfeit</i> , Dale Purcell, Chemical Microscopy, LLC
3:30pm	Panel Discussion

<b>Analytical Schemes in Forensic Science, organized by the New Jersey Association of Forensic Scientists</b> Chair: David Fisher, New Jersey Institute of Technology	
1:30pm	<i>Forensic capabilities for US Trade Enforcement at the USDHS Customs and Border Protection's New York Laboratory</i> , Adam Hutter, United States Department of Homeland Security
2:00pm	<i>Pain Biosensors in Forensic Identification of Physical Trauma</i> , Omowunmi Sadik, Gaddi Eshun, Christopher Henni, New Jersey Institute of Technology, J Schaffer, Walker Land, State University of New York-Binghamton
2:30pm	Break
3:00pm	<i>Illicit Drugs: A Guide for Analysis</i> , Kristi Bartok, Union County Prosecutor's Office Forensic Laboratory
3:30pm	<i>Quantitation of Protein Deamidation Degradation by Coulometric Mass Spectrometry (CMS) and Its Potential Application for Determining Post-Mortem Interval (PMI)</i> , Hao Chen, New Jersey Institute of Technology

<b>Food Spectroscopy - It's not Just Near Infrared</b> Chair: Ellen Miseo, Miseo Consulting	
1:30pm	<i>Adapting Portable XRF Spectroscopy for Field Use in Agriculture</i> , Jill Clapperton, Rhizoterra Inc.
2:00pm	<i>Exploring the Contours of A-TEEM Spectroscopy for Food Analysis</i> , Linda Kidder, Adam Gilmore, Cary Davies, HORIBA Scientific Instruments
2:30pm	Break
3:00pm	<i>Mid-Infrared Solutions for Rapid Sensing of Food Contaminants</i> , Luis Rodriguez-Saona, The Ohio State University
3:30pm	<i>Raman Spectroscopy for Food Applications</i> , Zili Gao, Lili He, University of Massachusetts-Amherst

## 2022 Preliminary Technical Oral Program

Monday Afternoon continued

<b>Electrochemical Analysis</b> Chair: <b>Michelle Rasmussen, Lebanon Valley College</b>	
1:30pm	<i>Functional Biosensors for Infectious Disease</i> , <u>Ariel Furst</u> , Massachusetts Institute of Technology
2:00pm	<i>Using Bioelectrocatalysis for Analysis</i> , <u>Shelley Minter</u> , University of Utah
2:30pm	Break
3:00pm	<i>Revealing the Heterogeneity in Metal Dissolution Reaction via Colocalized Electrochemical and Structural Imaging</i> , <u>Hang Ren</u> , University of Texas at Austin
3:30pm	<u>David Hickey</u> , Michigan State University

<b>Mass Spectrometry Solutions to Challenges in the Pharmaceutical Industry, organized by the North Jersey Mass Spec Discussion Group</b> Chair: <b>David J. Schenk, Merck &amp; Co., Inc.</b>	
1:30pm	<i>HRMS on Small Molecule Impurity Identification in Pharmaceutical Development</i> , <u>Jiaxuan Yan</u> , Xing Yin, Wendy Zhong, Douglas Richardson, Hillary Schuessler, Merck & Co., Inc.
2:00pm	<i>2-Pyridine Carboxaldehyde for Semi-Automated Soft Spot Identification in Cyclic Peptides</i> , <u>Joe Cannon</u> , Haiying Zhang, Zhigang Lyu, Silvi Chacko, Bristol Myers Squibb
2:30pm	Break
3:00pm	<i>Host Cell Protein Characterization Methodology and Use within Downstream Process Development Pipeline</i> , <u>Stephanie Lehman</u> , Josue Baeza, GlaxoSmithKline
3:30pm	<i>Two-Dimensional Liquid Chromatography-Mass Spectrometry (2DLC-MS) for Simultaneous Multi-Attribute Characterization of Adeno-Associated Viruses</i> , <u>Zhijie Wu</u> , Hongxia Wang, Andrew Tustian, Haibo Qiu, Ning Li, Regeneron Pharmaceuticals, Inc.

<b>Sustainable Separations, sponsored by the Chromatography Forum of the Delaware Valley</b> Chair: <b>Mary Ellen McNally, FMC Corporation</b>	
1:30pm	<i>The Role of Instrument Detection Level in the Development of Sustainable Trace Level Methods</i> , <u>James Stry</u> , FMC Corporation
2:00pm	<i>Greening Separation Science</i> , Christopher J. Welch, ICASE
2:30pm	Break
3:00pm	<i>A Rapid Automated Extraction Platform to Assess Drug Product Potency by Online Liquid Chromatography</i> , <u>Stephen Groskreutz</u> , Grodon Lambertus, Eli Lilly and Company
3:30pm	<i>Transferring Analytical-Scale LC Separations to Compact Capillary LC Instrumentation</i> , <u>James Grinias</u> , Rowan University

<b>Innovations in Vibrational Spectroscopy as an Essential Tool in Chemical Analyses</b> Chair: <b>Kate Jackson, Colgate Palmolive</b>	
1:30pm	<i>Determining the Time Since Deposition of Menstrual Blood Stains Utilizing Raman Spectroscopy</i> , <u>Alexis Weber</u> , Igor Lednev, University at Albany-SUNY
2:00pm	<i>The Role of Micro Spectroscopic Analysis Tools in Industrial Problem Solving</i> , <u>Jeanette vajki Vass</u> , Auto & Materials
2:30pm	Break
3:00pm	<i>Phenotype Profiling Based on Raman Spectroscopy of a Blood Deposit: The Effect of Hormone Replacement Therapy on Sex Determination</i> , <u>Emily Miller</u> , Brooke Kammrath, University of New Haven, Alexis Weber, Igor Lednev, University at Albany-SUNY
3:30pm	<i>Biophysical Characterization of Advanced Therapeutic Modalities: Antibodies, Nucleic Acids and AAVs</i> , <u>Yelena Pyatski</u> , Kimberly Quinn, Rina Dukor, BioTools, Maksim Mezhericher, Princeton University

### KEYNOTE LECTURE

Monday, November 14, 4:15pm

### *Making Progress with Social Justice and Sensing*

**Dr. Raychelle Burks - @DrRubidium**  
**Analytical Chemist, Forensic Scientist &**  
**Science Communicator, American University**

*All registered Conferees, Attendees and Exhibitors are invited to attend.*  
*A reception will be held immediately following the lecture.*

## 2022 Preliminary Technical Oral Program

**TUESDAY MORNING, NOVEMBER 15**

### BREAKFAST LECTURE

Tuesday, November 15, 8:00am

### *The Dark Side of Science: Misconduct in Research*

**Dr. Elisabeth Bik - @MicrobiomeDigest**  
**Science Consultant - Microbiome, Science Integrity & Image Forensics**  
**Harbers Bik LLC**

All registered Full Conferees and Full-Time Student Conferees are invited to attend the Breakfast Lecture. A light breakfast will be provided.

Time	Title, Author(s)
<b>EAS Award for Outstanding Achievements in Vibrational Spectroscopy</b> <b>Honoring Richard Crocombe, Crocombe Spectroscopic Consulting</b> <b>Chair: Ellen Miseo, Miseo Consulting</b>	
9:00am	Presentation of the EAS Award for Outstanding Achievements in Vibrational Spectroscopy
9:05am	<i>Spectrometers in Wonderland: Shrinking, Shrinking, Shrinking</i> , Richard Crocombe, Crocombe Spectroscopic Consulting
9:30am	<i>Safety and Security Dependence on Vibrational Spectroscopy</i> , Pauline Leary, NOBLE
10:00am	Break
10:30am	<i>Advancing the On-Scene Detection and Identification of Illicit Drugs With Portable Technologies</i> , Brooke Kammrath, Henry C. Lee College of Criminal Justice and Forensic Sciences
11:00am	<i>Process Analytical Technology for Oral Solid Dose Manufacturing</i> , Larry McDermott, Vertex Pharmaceuticals

<b>EAS Young Investigator Award; New Perspectives in the Analysis of the Modified Proteome Using Mass Spectrometry</b> <b>Honoring Simone Sidoli, Albert Einstein College of Medicine</b> <b>Chair: Benjamin Garcia, Washington University in St. Louis</b>	
9:00am	<i>Quantitative Mass Spectrometry for Understanding Chromatin Mutations in Human Disease</i> , Benjamin Garcia, Washington University in St. Louis
9:30am	<i>Proteomics Analysis Combined with Pulsed-Metabolic Labeling Reveals New Targets and Mechanisms of Host Protein Degradation Mediated by Herpes Simplex Virus Type 1</i> , Katarzyna Kulej, Matthew Charman, Joseph M. Dybas, Namrata Kumar, Edwin Halko, Matthew D. Weitzman. Children's Hospital of Philadelphia, Simone Sidoli, Albert Einstein College of Medicine, Benjamin A. Garcia, Washington University - St. Louis
10:00am	Break
10:30am	<i>PTM Discovery may Lead to Enzyme, Pathway and Drug Target Discovery</i> , Megan Matthews, University of Pennsylvania
11:00am	Presentation of the EAS Young Investigator Award
11:05am	<i>A New Perspective for Aging Research: The Proteome that Decorates Reactivated Heterochromatin</i> , Simone Sidoli, Albert Einstein College of Medicine

<b>POWERHOUSE SESSION</b> <b>Challenges in Cannabis Testing for a Growing Industry</b> <b>Chair: Anthony Provas, University of Connecticut</b>	
9:00am	<i>D8-THC Distillates Analysis Using High Resolution and Ion Mobility Mass Spectrometry</i> , Douglas Stevens, Marian Twohig, Andrew Baker, Waters Corporation, Andrew Aubin, Christopher Hudalla, ProVerde Laboratories, Inc.
9:30am	<i>Case Studies Where Regulations Drive Laboratory Failure</i> , Susan Audino, S.Audino & Assoc. LLC
10:00am	Break
10:30am	<i>Compliance Testing of Cannabis Sativa L. for Delta-9 THC and CBD Using Gas Chromatography with Flame Ionization Detection Compared to Liquid Chromatography with UV Detection</i> , Anuja Bharadwaj, Terri Arsenault, The Connecticut Agricultural Experiment Station
11:00am	<i>Cannabis &amp; CBD Testing Primer: Understanding the Details of Testing Cannabis &amp; CBD in 2022</i> , Toby Astill, Perkin Elmer

<b>Managing the Analytical Laboratory: The New "Normal"</b> <b>Chair: Dennis Swijter, Association of Laboratory Managers (ALMA)</b>	
9:00am	<i>Laboratory Automatization is no Silver Bullet</i> , Pascal Wambua, Pwani Oil Limited
9:30am	<i>Empowering Staff through a Constructive Performance Review</i> , Scott Hanton, Lab Manager Magazine
10:00am	Break
10:30am	<i>A Diverse and Collaborative Workforce: Starting it and Keeping it</i> , Maria Dennis, Weill Cornell Medicine
11:00am	<i>Motivating and Retaining Staff</i> , May Adaeze Chinda, University of Ghana Medical Centre

## 2022 Preliminary Technical Oral Program

Tuesday Morning continued

<b>The Research from our Emerging Forensic Scientists, sponsored by New Jersey Association of Forensic Scientists</b> <b>Chair: Monica Joshi, West Chester University of PA</b>	
9:00am	<i>Expanding the PROVEDIt Set with Next Generation Sequencing Data: Supporting Foundational Forensic Research Initiatives</i> , Ami Reader, Jessica Dominguez Lopez, Catherine Grgicak Rutgers University-Camden
9:30am	<i>Optimization of Feltatio Sample Analysis</i> , Brianna Gregory, Janine Kishbaugh, Cedar Crest College
10:00am	Break
10:30am	<i>Development and Validation of a GC-QQQ Method for Smokeless Powder Additives</i> , <u>Blake Kerstetter</u> , Monica Joshi, West Chester University of Pennsylvania
11:00am	<i>Method Development and Validation for the Determination of Fentanyl and Fentanyl-Related Compounds on United States Paper Currency by LC-QQQ-MS</i> , <u>Matthew Hewes</u> , Barry Logan, Thomas Jefferson University, Donna Papsun, NMS Labs, Alex Krotulski, Center for Forensic Science Research and Education

<b>Accelerating Innovation with Machine learning, Predictive Technologies and Lab Automation</b> <b>Chairs: Yongchao Su, Merck &amp; Co., Kim Huynh-Ba, Pharmalytik, LLC</b>	
9:00am	<i>Predicting Pharmaceutical Product Performance through Modeling, Machine Learning and Statistics</i> , <u>Timothy Rhodes</u> , Merck & Co., Inc.
9:30am	<i>Automated High-Throughput Biophysical Methods for Higher Order Structure Analysis of Protein Biopharmaceuticals</i> , <u>Anne Kim</u> , Pfizer
10:00am	Break
10:30am	<i>Computational Tools for Modeling Critical Quality Attributes in Biologics</i> , <u>Naresh Chennamsetty</u> , Bristol Myers Squibb
11:00am	<i>NMR as Integral Part of Innovative, Smart Solutions to Increase Automation from R&amp;D to Manufacturing - New Compact, Mobile, Affordable Approach to API Manufacturing</i> , <u>Anna Codina</u> , Bruker, Luis Carrillo, De Dietrich Process Systems, Julien Marin, NovAliX, Philippe Robin, Alysophil SAS


<b>Recent Developments in Separation Science, sponsored by the Chromatography Forum of the Delaware Valley</b> <b>Chair: Joe Foley, Drexel University</b>	
9:00am	<i>Recent Developments in Tandem-Column Liquid Chromatography and Chiral Capillary Electrophoresis</i> , <u>Joe Foley</u> , Zhiyang Liu, Eric Buchhalter, Drexel University
9:30am	<i>Capillary Electrophoresis Coupled to Mass Spectrometry through Vibrational Sharp-Edge Spray Ionization</i> , <u>Lisa Holland</u> , West Virginia University
10:00am	Break
10:30am	<i>Liquid Chromatography Column Considerations in Pharmaceutical &amp; Biopharmaceutical Analysis</i> , <u>James Grinias</u> , Rowan University
11:00am	<i>Improving the Performance of Second Dimension Separations in 2D-LC - Vignettes about Recent Progress</i> , <u>Dwight Stoll</u> , Gustavus Adolphus College

<b>Frontiers in Pharmaceutical Analysis: Technology and Applications</b> <b>Chair: Michelle Case, Bristol Myers Squibb</b>	
9:00am	<i>Sustainable Analytical Methodology for Residual Dextran Sulfate in Biopharmaceutical In-process Samples by UV-Vis Spectrophotometry</i> , <u>Lee Oliver</u> , GlaxoSmithKline
9:30am	<i>Modernized Impurity Analysis of the Kinase Inhibitor Imatinib by High-Resolution LC with MS-Compatible Mobile Phases</i> , Peng Chen, Bonnie Alden, Matthew Lauber, Waters Corporation
10:00am	Break
10:30am	<i>Root Cause Identification of Unexpected Toluene Ingress Enables Commercial Process Validation for the Synthesis of a GMP Pharmaceutical Intermediate</i> , <u>Jackson Hall</u> , Robert Franklin, Pratiq Patel, Holst Halsey, Zhu Liu, Linda Zheng, James Corry, Lisa Jellet, Hanlin Luo, Morgan Crawford, Cheol Chung, Nadine Kuhl, Rebecca Arvary, Feng Tan, Sachin Lohani, Merck & Co.
11:00am	<i>Determination of Promethazine and Codeine and Differentiation from Dextromethorphan by HPTLC</i> , <u>Sateedrah Beckwith</u> , Marianne Staretz, Thomas Brettell, Cedar Crest College, Samantha Berrios, OCME

Poster Sessions are from 11:30am – 1:30pm located on the Bridge to the Hotel

## 2022 Preliminary Technical Oral Program

### TUESDAY AFTERNOON, NOVEMBER 15

Time	Title, Author(s)
<b>EAS Award for Outstanding Achievements in Separation Sciences</b> <b>Honoring Fabrice Griitti, Waters Corporation</b> <b>Chair: Mark Schure, Kroungold Analytical, Inc.</b> <b>Sponsored by Restek Corporation</b>	
	
1:30pm	<i>Innovative Chromatographic Approaches to Improve the Characterization of Complex Biopharmaceutical Products</i> , Davy Guillaume, Amaranthe Murisier, University of Geneva, Szabolcs Fekete, Waters Corporation
2:00pm	<i>Three More Chromatographic Questions Needing to be Answered</i> , Mark Schure, Kroungold Analytical, Inc.
2:30pm	Break
3:00pm	<i>Fabrice Griitti: Chromatographic MythBuster</i> , Martin Gilar, Waters Corporation
3:30pm	Presentation of the EAS Award for Outstanding Achievements in Separation Sciences
3:35pm	<i>Retention Mechanism in Reversed-Phase Liquid Chromatography: Past, Recent, and Future Research Investigations</i> , Fabrice Griitti, Waters Corporation

<b>Novel Applications of Electron-Based Dissociation for Proteomics</b> <b>Chair: Jeremy L. Balsbaugh, University of Connecticut</b>	
1:30pm	<i>Application of Electron Transfer Dissociation in Phosphoproteomics to Identify Rewiring of Kinase Substrate Specificity</i> , Danielle Cafer, University of Connecticut
2:00pm	<i>ETD and Glycoproteomics</i> , Stacy Malaker, Yale University
2:30pm	Break
3:00pm	<i>Analysis of Intact Proteins with Electron Transfer Dissociation, Proton Transfer Charge Reduction, and Parallel Ion Parking</i> , Seamus Kelley, Jeffrey Shabanowitz, Donald Hunt, University of Virginia
3:30pm	<i>Addressing Biological Questions with Electron-Transfer Dissociation and High Field Fourier Transform Ion Cyclotron Resonance Mass Spectrometry</i> , Lissa Anderson, Chad Weisbrod, National High Magnetic Field Laboratory

<b>Probing the Microbiome Using Mass Spectrometry</b> <b>Chair: Roy Martin, Waters Corporation</b>	
1:30pm	<i>MicrobeMASST - Detection of MS/MS Spectra in a Bacterial and Fungal Reference Database</i> , Simone Zuffa, Robin Schmid, Anelize Bauermeister, Andres Mauricio Caraballo Rodriguez, Emily Gentry, Paulo Wender Portal Gomes, Michael Meehan, Mingxun Wang, Pieter Dorrestein, University of California-San Diego
2:00pm	<i>Toward High-Throughput Metabolic Phenotyping in Synthetic Biology with Desorption Electrospray Ionization-Mass Spectrometry Imaging</i> , Hawkins Shepard, Jody May, John McLean, Vanderbilt University
2:30pm	Break
3:00pm	<i>D-Amino Acids in the Microbiome-Gut-Brain Axis</i> , Huang Chen, Tian Qiu, Cindy Lee, Stanislav Rubakhin, Jonathan Sweedler, University of Illinois, Dongkyu Lee, Chung-Ang University
3:30pm	<i>Metabolomics - A Discovery-Based Approach in the Infection Relevant Environment</i> , Neha Garg, Andrew Mcavoy, Georgia Institute of Technology

<b>Forensics on the Go: Portable Instruments in the Field, sponsored by SAS New England</b> <b>Chair: Suzanne Schreyer, Rigaku Analytical Devices</b>	
1:30pm	<i>Portable Raman Spectroscopy for Screening of Phthalate Plasticizers in Food Contact Materials via Chemometrics and Library Spectral Matching</i> , Joshua Moskowitz, University of Maryland, Katherine Carlos, Luke Lindahl-Ackerman, Kristen Reese, Betsy Yakes, United States Food & Drug Administration
2:00pm	<i>Rapid Field Screening of New Psychoactive Substances in Suspect Counterfeit Tablets Using SERS, FT-IR and DART-TD-MS</i> , Kimani Martin, United States Food & Drug Administration
2:30pm	Break
3:00pm	<i>Portable Instrumentation for the Screening of Explosives</i> , Gina Guerrero, Federal Bureau of Investigation
3:30pm	<i>Street Chemistry: How are Portable Handheld Raman and Infrared Spectroscopy are being used by Law Enforcements to Solve Crimes</i> , Pakorn Patimetha, New Jersey State Police

<b>Green Chemistry from Fundamentals to Applications</b> <b>Chairs: Shirley Fischer-Drowos, Widener University, Christina Robb, United States Food &amp; Drug Administration</b>	
1:30pm	<i>Creating more Efficient, Less Hazardous Syntheses of Pharmaceutical Using the 12 Principles of Green Chemistry</i> , Loyd Bastin, Widener University
2:00pm	<i>Green Chemistry: From Fundamentals to Applications</i> , John Wasyluk, Robert Wethman, Ming Huang, Bristol Myers Squibb
2:30pm	Break
3:00pm	To be announced
3:30pm	Panel Discussion

## 2022 Preliminary Technical Oral Program

Tuesday Afternoon continued

<b>Cannabis - CBD Product Testing</b> <b>Chair: Gregory Sotzing, University of Connecticut</b>	
1:30pm	<i>Raising Awareness: The Successful Implementation of Natural Plant Based Medicines Used as Adjunct Therapies with Standard Treatments for Metastatic Breast Cancer</i> , <u>Jaime Brambilla</u> , Grace Health and Wellness
2:00pm	<u>Robert Rankin</u> , Nice Cannabis
2:30pm	Break
3:00pm	<i>Leveraging Advanced Mass Spectrometry Tools to Explore Complex Cannabinoid Distributions</i> , <u>Alexander Aksenov</u> , <u>Alexey Melnik</u> , University of Connecticut
3:30pm	<i>Cannabinoid Composition Analysis by Nuclear Magnetic Resonance Spectroscopy and Mass Spectrometry</i> , <u>Gregory Sotzing</u> , University of Connecticut

<b>HPLC/UHPLC Separations in Pharmaceutical Applications</b> <b>Chair: Oscar Liu, Silver Spring Scientific LLC</b>	
1:30pm	<i>Systematic RPLC Method Development for an Important Class of Pharmaceutical Compounds Possessing Ketoamide Group</i> , <u>Nilusha Padivitage</u> , <u>Charlie Wolstenholme</u> , <u>Steve Castro</u> , <u>Brittany Kassim</u> , <u>Yong Liu</u> , <u>Jinjian Zheng</u> , <u>Paul Bulger</u> , Merck & Co., Inc.
2:00pm	<i>Exploring the Improvements Enabled by 1.5 mm ID UHPLC SPP Columns</i> , <u>Stephanie Schuster</u> , <u>Peter Pellegrielli</u> , <u>Conner McHale</u> , <u>Benjamin Libert</u> , Advanced Materials Technology, Inc.
2:30pm	Break
3:00pm	<i>Trace Corrosion of Stainless Steel HPLC Components from Common Mobile Phase Additive and the Deleterious Impact on Separations</i> , <u>Jesse Bischof</u> , SilcoTek Corporation
3:30pm	<i>Characterization of Zwitterionic HILIC Columns Based on Ethylene-Bridged Hybrid Particles</i> , <u>Thomas Walter</u> , <u>Bonnie Alden</u> , <u>Kenneth Berthelette</u> , Waters Corporation

<b>HPTLC: A Powerful Technique Addressing Analytical Challenges</b> <b>Chair: Leonel Santos</b>	
1:30pm	<i>High-Performance Thin-Layer Chromatography and Morpho-Anatomy and of Monteverdia Illicifolia "Espinheira-Santa" and its Adulterants</i> , <u>Wilmer Perera</u> , <u>Christopher Howard</u> , <u>Eike Reich</u> , CAMAG Scientific, Inc., <u>Kevin Antunes</u> , <u>Valter Paes de Almeida</u> , <u>Luciane Mendes Monteiro</u> , <u>Vera Lúcia Pereira dos Santos</u> , <u>Jane Manfron</u> , State University of Ponta Grossa, <u>Gustavo Heiden</u> , <u>Ernestino de Souza Gomes Guarino</u> , <u>Embrapa</u> , <u>Vijayasankar Raman</u> , University of Mississippi
2:00pm	<i>Hair, Hair Follicle, and Sebum Lipids Evaluation Using HPTLC</i> , <u>Ernesta Malinauskyte</u> , <u>Katerin Mateo</u> , TRI Princeton
2:30pm	Break
3:00pm	<i>Psilocybe: Potency of Active Compounds, Psilocybin and Psilocin. A Single Lab Validation Using HPTLC, LC/MS/MS</i> , <u>Sidney Sudberg</u> , Alkemist Labs
3:30pm	<i>HPTLC 4.0 - The Future of Planar Chromatography?</i> , <u>Wilmer Perera</u> , CAMAG Scientific, Inc., <u>Eike Reich</u> , HPTLC Association

<b>NMR Spectroscopy as a Versatile Analytical Tool in Chemical Characterizations</b> <b>Chair: Cecil Dybowski, University of Delaware</b>	
1:30pm	<i>2D NMR Peak Profiling to Compare Chemical Differences between Batches of Pentosan Polysulfate Sodium</i> , <u>Kang Chen</u> , United States Food & Drug Administration
2:00pm	<i>Investigating Pharmaceutical Frozen Solution Using <sup>31</sup>P and <sup>1</sup>H Solid-State NMR</i> , <u>Yong Du</u> , <u>Yongchao Su</u> , Merck & Co., Inc., <u>Jinghan Li</u> , <u>Raj Suryanarayanan</u> , University of Minnesota
2:30pm	Break

<b>How to Crack the Glass Ceiling: Diversity and Inclusion in Chemistry</b> <b>Chairs: Gene Hall, Rutgers University, Dana Garcia</b>	
1:30pm	<i>2 How to Crack the Glass Ceiling: Diversity and Inclusion in Chemistry</i> , <u>Kevin Middleton</u> , Cannabiz Labs
2:00pm	<i>My Journey to Discovery Chemistry and Drug Regulatory Affairs</i> , <u>Sherrie Pietranico-Cole</u> , Novartis Pharmaceuticals Corporation
2:30pm	Break



## 2022 Preliminary Technical Oral Program

### WEDNESDAY MORNING, NOVEMBER 16

<b>New York/New Jersey Sections of the Society for Applied Spectroscopy Gold Medal Award</b> <b>Honoring: Rohit Bhargava, University of Illinois-Urbana-Champaign</b> <b>Chairs: Dana Garcia, Deborah Peru, DP Spectroscopy and Training</b>	
9:00am	<i>Nanoscale IR Spectroscopy: From Recent Technical Advances to Nanoscale Mapping and Identification of Metal Soaps in Oil Paints</i> , <u>Andrea Centrone</u> , National Institute of Standards & Technology
9:30am	<i>Stimulated Raman Scattering Microscopy: From Label Free to Metabolic and to Super-Multiplex Imaging</i> , <u>Wei Min</u> , Columbia University
10:00am	Break
10:30am	<u>Rina Dukor</u> , BioTools, Inc.
11:00am	<i>Infrared Chemical Imaging: Uniting Theory, Modeling and Instrumentation for New Capabilities</i> , <u>Rohit Bhargava</u> , University of Illinois-Urbana-Champaign

<b>Handheld Instrumentation and Chemometrics as Diverse Analytical Tools</b> <b>Chair: Caelin Celani, University of Delaware</b>	
9:00am	<i>Challenges in Applying Chemometrics to Data from Handheld Instrumentation</i> , <u>Barry Lavine</u> , Collin White, Oklahoma State University, William Gilbert, Wesley Carson, Karl Booksh, University of Delaware, James Jordon, United States National Geodetic Survey
9:30am	<i>Handheld Laser Induced Breakdown Spectroscopy, Chemometrics, and the Supply Chain</i> , <u>Nancy McMillen</u> , New Mexico State University
10:00am	Break
10:30am	<i>Self-Optimizing Support Vector Machines</i> , <u>Peter Harrington</u> , Ohio University
11:00am	<i>Chemometrics &amp; Portable Instrumentation: From Environmental Forensics to Art Conservation</i> , <u>Caelin Celani</u> , Rachel McCormick, Jocelyn Alcantara-Garcia, Karl Booksh, University of Delaware, James Jordan2, Ty Coplen, United States Geological Survey, Carolyn Chen, Eurofins PCC Insourcing Solutions, Olivia Jaeger, Noramco Inc., Amelia Speed, Army Public Health Center

<b>Addressing PFAS Total Analytical Challenges</b> <b>Chair: James D. Stuart, University of Connecticut</b>	
9:00am	<i>Leveraging Advances in Mass Spectrometry Instrumentation and Techniques to Address PFAS Contamination</i> , <u>Craig Butt</u> , Karl Oetjen, Simon Roberts, Megumi Shimizu, SCIEX, Amy Rand, Carleton University
9:30am	<i>Remediation of PFAS from a Variety of Environmental Matrices</i> , <u>Jay Meegoda</u> , New Jersey Institute of Technology
10:00am	Break
10:30am	<i>Collaborative PFAS Research Using High Resolution Mass Spectrometry: Challenges and Progress</i> , <u>Sara Nason</u> , Connecticut Agricultural Experiment Station
11:00am	<i>Challenges in Method Development of PFAS in Food</i> , <u>Susan Genualdi</u> , Cynthia Srigley, Wendy Young, Christine M. Fisher, Lowri deJager, United States Food and Drug Administration

<b>You Are What You Eat as Viewed Through the Eyes of High-Resolution Mass Spectrometry Analyses of Foods</b> <b>Chair: Gene Hall, Rutgers University</b>	
9:00am	<i>Fast Food to a Slow Cooked Home Meal: Non-Targeted Analyses as Seen Through the Eyes of a High-Resolution Mass Spectrometer</i> , <u>Gene Hall</u> , Hyunji Yu, Alexi Ermakov, Rutgers the State University of NJ
9:30am	<i>Non-Targeted Analysis of Foods Using Liquid Chromatography High-Resolution Mass Spectrometry</i> , <u>Christine Fisher</u> , Ann Knolhoff, United States Food and Drug Administration
10:00am	Break
10:30am	<i>Authentication and Standardization of Botanicals by MALDI-TOF Mass Spectrometry</i> , <u>Christian Krueger</u> , Complete Phytochemical Solutions, LLC
11:00am	<i>Ensuring Food Ingredient Quality with Mass Spectrometry</i> , <u>Uwe Nienaber</u> , David Bolliet, James Redwine, Kalsec Inc.

<b>Recent Applications of Separations for Chemical Analysis and Physical Characterization</b> <b>Sponsored by ACS Division of Analytical Chemistry</b> <b>Chairs: James Grinias, Rowan University &amp; Jonathan Edelman, Restek</b>	
9:00am	<i>Microelectrophoretic Separations for Studies of Microbial Stress Response</i> , <u>Michelle Kovarik</u> , Trinity College
9:30am	<i>Development of Gas and Liquid Chromatographic Methods for the Determination of Cannabinoids in Cannabis Samples</i> , <u>Walter Wilson</u> , Jerome Mulloor, Andrea Yarberry, National Institute of Standards and Technology
10:00am	Break
10:30am	<i>Rapid Screening and Confirmation of Target Analytes in Biological Fluids with CBS-MS Using a Modified Automated Liquid Handling Robot</i> , <u>Thomas Kane</u> , Ryan Micklitsch, Shane Stevens, Tracey Peters, Matt Lininger, Restek Corporation
11:00am	<i>Building Robustness into a Drug Substance Stability-Indicating Method with QbD – A Case Study</i> , <u>Elizabeth Yuill</u> , Yande Huang, Jonathan Shackman, Hua-Chia Tai, Peter Tattersall, Jia Zang, Bristol Myers Squibb

## 2022 Preliminary Technical Oral Program

Wednesday Morning continued

<b>Liquid Chromatography Applications for Better Separations</b> Chair: Pankaj Aggarwal, Merck & Co., Inc.	
9:00am	<i>HPLC- and UHPLC-MS Analysis of Pharmaceutically Relevant Bio-Macromolecules on the Analytical and Capillary Scale</i> , Hayley Herderschee, Robert Kennedy, University of Michigan, Tian Lu, James Deng, Ping Zhuang, Merck & Co., Inc.
9:30am	<i>LPH-C18: A C18 Column Alternative</i> , Conner McHale, Advanced Materials Technology
10:00am	Break
10:30am	<i>Clear As a Diamond: Fundamentals and Strategies for Using Porous Graphitic Carbon Columns in Liquid Chromatography</i> , Cory Muraco, Michael Ye, Clinton Corman, MilliporeSigma
11:00am	<i>Development of Robust 2D RPLC-NPLC Methods to Support Simultaneous Achiral-Chiral Analysis in High-Throughput Experimentation</i> , Steven Chin, Karissa Cruz, Kenji Kurita, Genentech

<b>The Utility of Supercritical Fluid Chromatography in Challenging Separations</b> Chair: Enju Wang, St. John's University	
9:00am	<i>Screening for Generality in Asymmetric Catalysis</i> , Spencer McMinn, Merck & Co., Inc.
9:30am	<i>Chiral Method Development and Optimization on Daicel Polysaccharide Chiral Stationary Phases</i> , Weston Umstead, Chiral Technologies
10:00am	Break
10:30am	<i>Accelerating Chiral Supercritical Fluid Chromatography with 3- and sub-2-um Fully Porous Particles and 2.7-um Superficially Porous Particles</i> , Edward Franklin, Melissa Wilcox, Regis Technologies, Inc.
11:00am	<i>Application of Functionalized Cyclofructan for Enantioselective Sub/Supercritical Fluid Chromatography of Ru(II) and Os(II) Coordination Complexes</i> , Troy Handlovic, M. Farooq Wahab, Houston Cole, Nagham Alatrash, Elamparuthi Ramasamy, Frederick MacDonnell, Sherri McFarland, Daniel Armstrong, The University of Texas at Arlington

<b>Advances in Proteomics &amp; Metabolomics Research</b> Chair: Costel Daria, Clarkson University	
9:00am	<i>Optimization of the In-Gel Sample Preparation for Mass Spectrometry-Based Proteomics</i> , Mary Donnelly, Hannah Yorkey, Danielle Whitham, Costel Daria, Clarkson University
9:30am	<i>Investigation of the Effects of Human Jumping Translocation Breakpoint (hJTB) Protein for Potential use as a Cancer Biomarker</i> , Madhuri Jayathirtha, Danielle Whitham, Shelby Alwine, Hannah Yorkey, Costel Daria, Clarkson University
10:00am	Break
10:30am	<i>Proteomic Analysis of Human Breast Milk Using Mass Spectrometry to Reveal Protein Biomarkers for Early Breast Cancer Detection</i> , Danielle Whitham, Roskanak Aslebagh, Devika Channaveerappa, Costel C. Daria, Clarkson University, Brian Pentecost, Kathleen F. Arcaro, University of Massachusetts Amherst
11:00am	<i>Proteomics Analysis of Sera from an Asian American woman with Triple Negative Breast Cancer and a Matched Control: A Case Study Investigation for Biomarker Discovery</i> , Isabelle Sullivan, Panashe Mutsengi, Danielle Whitham, Costel Daria, Clarkson University, Brian Pentecost, Kathleen F. Arcaro, University of Massachusetts Amherst

### WEDNESDAY AFTERNOON, NOVEMBER 16

**PLENARY LECTURE**  
Wednesday, November 16, 12:00pm – 1:00pm

**Professor Angela Belcher**  
**Materials Chemist & Biological Engineer**  
**Massachusetts Institute of Technology**

*All registered Attendees are invited to attend.*

*Poster Sessions are from 12:30 – 1:30pm located on the Bridge to the Hotel*

Time	Title, Author(s)
<b>EAS Award for Outstanding Achievements in Mass Spectrometry</b> Honoring Martin Jarrold, Indiana University Chair: David Clemmer, Indiana University Sponsored by the American Microchemical Society	
1:30pm	David Clemmer, Indiana University
2:00pm	<i>Advanced Mass Spectrometric Approaches to Pharmaceutical Product Development</i> , Elizabeth Pierson, Josey Topolski, Alyssa Stiving, Dave Foreman, Huaming Sheng, Merck & Co., Inc.
2:30pm	Break
3:00pm	<i>Native Ion Mobility-Mass Spectrometry for Studies of Membrane Protein Complexes</i> , David Russell, Texas A&M University
3:30pm	Martin Jarrold, Indiana University

Preliminary Program as of September 22, 2022

## 2022 Preliminary Technical Oral Program

Wednesday Afternoon continued

<b>Solving your PAT Problems with Technology</b> Chair: James Rydzak, Specere Consulting	
1:30pm	<i>Visualizing Reactions and Particle Transformations Using Online and Offline Raman, FTIR and Optical Microscopy</i> , Charles Goss, Daniel Green, Anthony Nocket, Andrew DiPietro, Kevin Chu, Swetha Ainampudi, Alexis Venere, Alicia Potuck, Kaitlyn Lehman, Nick Radziul, Connor Faith, Luke Huelsenbeck, GlaxoSmithKline, Anjan Pandey, Mettler Toledo AutoChem
2:00pm	<i>The Driving Sustainable Research: Maximizing Spectroscopy and Spectrometry Tools</i> , John Wasyluk, Robert Wethman, Ming Huang, Bristol Myers Squibb
2:30pm	Break
3:00pm	<i>Highly Selective Small Molecule Impurity Monitoring Using Molecular Rotational Resonance: From Residual Solvents to Challenging Isomers</i> , Alexander Mikhonin, Reilly Sonstrom, Justin Neill, Brightspec, Inc.
3:30pm	<i>Do You Really Understand Your Crystallization - The Value of PAT</i> , Norman Wright, Brian Wittkamp, Charlie Rabinowitz, Mettler-Toledo

<b>Optical Technologies in the Fight Against Disease</b> Session Chair: Fay Nicolson, Dana-Farber Cancer Institute	
1:30pm	<i>A-TEEM - A Spectroscopic Tool for the Rapid Characterization of Low Concentration Therapeutics</i> , Linda Kidder, Adam Gilmore, HORIBA Scientific
2:00pm	<i>Point-of-Care Diagnostics Devices for Targeting Emerging Biomarkers</i> , Samuel Mabbott, Texas A&M University
2:30pm	Break
3:00pm	<i>Chemically Defined Media Analysis by Absorbance-Transmission &amp; Fluorescence Excitation Emission Matrix (A-TEEM)</i> , Andrew Lewis, Janssen
3:30pm	<i>Targeting the Oncogene HPV16 E7 with Affibody Molecules in Head and Neck Cancer</i> , Sheryl Roberts, Karmanos Cancer Institute, Wayne State University

<b>Data Integrity and Security in Pharmaceuticals</b> Chairs: Mariann Neverovitch, Bristol Myers Squibb, Brandy Young, University of Rochester	
1:30pm	<i>LIMS, Automation Software and Data Integrity: Why it Matters</i> , Christine Paszko, Accelerated Technologies Laboratories
2:00pm	<i>Data Integrity and Compliance – A Lab Scientist's Perspective</i> , Sharla Wood, Bristol Myers Squibb
2:30pm	Break
3:00pm	<i>Delivering Secure and Reliable Data with LIMS</i> , David Minicuci, Thermo Fisher Scientific
3:30pm	<i>Data Security in Gene Therapy</i> , Lake Paul, BioAnalysis LLC

<b>Forensic Microscopy "What is it? Who does it?", sponsored by ACS New York Section</b> Chair: Thomas A. Kubic, John Jay College & The Graduate Center, CUNY	
1:30pm	<i>Microscopy &amp; Microanalysis of Temporary Tattoos</i> , Michelle Miranda, Farmingdale State College-SUNY
2:00pm	<i>Hammer Bounce</i> , Peter Diaczuk, John Jay College of Criminal Justice
2:30pm	Break
3:00pm	<i>The Application of Electron Backscatter Diffraction to the Forensic Analysis of Minerals</i> , Tiffany Millett, John Jay College & The Graduate Center, CUNY
3:30pm	<i>Look Before You Leap</i> , Peter DeForest, Forensic Consultants

<b>Enhanced Approaches to LC Method Development, sponsored by Waters Corporation</b> Chair: Isabelle Vu Trieu, Waters Corp.	
1:30pm	<i>USP &lt;1220&gt; and ICH Q14: Differences and Similarities</i> , Horacio Pappa, United States Pharmacopeia
2:00pm	<i>Phase-Appropriate Implementation of AQbD Method Development</i> , Jinjian Zheng, Xiaohua Zhang, Pankaj Aggarwal, Merck & Co., Inc.
2:30pm	Break
3:00pm	<i>Expanding the Use of AQbD Tools to Address Small Molecule Pharmaceutical Development Challenges</i> , Fadi Alkhateeb, Paul Rainville, Waters Corporation
3:30pm	<i>Effective Use of Strategic Analytical Quality-by-Design Tools in Stage 1 of the Analytical Procedure Lifecycle Management Workflow</i> , George Cooney, S-Matrix Corporation

<b>1+1=3: Applications of Automated Particle Imaging Combined with Raman Spectroscopy</b> Chair: Brooke Kammrath, University of New Haven	
1:30pm	<i>Follow that Particle: Applying Morphological and Spectral Analysis to Pharmaceutical Product Development and Process Understanding</i> , Anne Virden, Deborah Huck-Jones, Malvern Panalytical Ltd.
2:00pm	<i>Automated Particle Correlated Raman Spectroscopy: Case Studies from Microplastics and Pharma to Illustrate Correct Methodology for Diverse Samples</i> , Bridget O'Donnell, HORIBA
2:30pm	Break
3:00pm	<i>Raman Spectroscopy of Sedimentary Grains Shows Potential for Use in Provenance Analysis</i> , Tim Prusnick, Sarah Shidler, Lucy Grainger, Renishaw Inc., Achim Hermann, Louisiana State University
3:30pm	Panel Discussion

## 2022 Preliminary Technical Oral Program

Wednesday Afternoon continued

<b>New Advances and Trends in HPLC/UHPLC</b> <b>Chair: Robert Menger, Bristol Myers Squibb</b>	
1:30pm	<i>Cannabinoid Separation: A New HPLC System Suitable for Cannabis Research</i> , <a href="#">Alicia Stell</a> , Benedict Liu, Candice Cashman, CEM Corporation
2:00pm	<i>Addressing Secondary Interactions in Size Exclusion Chromatography of Protein Therapeutics</i> , <a href="#">Lavelay Kizekai</a> , Stephen Shiner, Matthew Lauber, Szabolcs Fekete, Mathew Delano, Yeliz Sarisozen, Nicole Lawrence, Waters Corporation
2:30pm	Break
3:00pm	<i>Applying Method Operable Design Region (MODR) and Replication Strategy Optimization Results to Support Analytical Procedure Lifecycle Management (APLM) Stage 2 Method Validation and Transfer and APLM Stage 3 Procedure Monitoring</i> , <a href="#">Richard Verseput</a> , S-Matrix Corporation
3:30pm	<i>Alternative Approach to HPLC Instrumentation</i> , <a href="#">Yury Zelechonok</a> , Bradley Widawer, Olga Kolesnik, Denis Vakulenko, SIELC Technologies

<b>Proteomics &amp; Metabolomics: Challenges and Recent Developments</b> <b>Chair: Debopreeti Mukherjee, Merck &amp; Co., Inc.</b>	
1:30pm	<i>Automated Platform Analytical Method to Determine Polysorbate 80 Content in Biopharmaceutical Drug Product Using the Andrew Robot: A Practical Approach to Automation</i> , <a href="#">Sharon Matamoros</a> , Katie Carnes, Dao Nguyen, Kaitie Grinias, GlaxoSmithKline
2:00pm	<i>Enhanced Sensitivity for Peptide and Protein Applications Using the 1.5mm ID Column</i> , <a href="#">Peter Pellegrinelli</a> , Stephanie Schuster, Conner McHale, AMT
2:30pm	Break
3:00pm	<i>A Proteomic Investigation of Human Serum from Donors with Triple Negative Breast Cancer and Matched Controls to Identify Protein Biomarkers for Breast Cancer Detection</i> , <a href="#">Danielle Whitham</a> , Panashe Mutsengi, Costel Darie, Clarkson University, <a href="#">Brian Pentecost</a> , <a href="#">Kathleen F. Arcaro</a> , University of Massachusetts Amherst
3:30pm	<i>A Proteomics Investigation of Human Sera from African American Donors with Invasive Ductal Carcinoma Breast Cancer and Matched Controls</i> , <a href="#">Panashe Mutsengi</a> , <a href="#">Danielle Whitham</a> , Costel Darie, Clarkson University, <a href="#">Brian Pentecost</a> , <a href="#">Kathleen F. Arcaro</a> , University of Massachusetts Amherst

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## WORKSHOPS

Workshops are FREE to all registered attendees.

**Tuesday, October 18, 12:00pm – 1:00pm**

### **Resume and Interview Hints Helpful for Obtaining Positions at Any Level**

Roy Helmy -Executive Director at Merck & Co.

Gino Salituro – Principle Scientist and Hiring Manger at Merck & Co.

Live ONLINE workshop

Learn the secrets of locating positions. Understand the importance of how to read a job description so that you can submit an effective application. Format a resume appropriately tailored to a specific job description, generic resumes are not as effective. This workshop takes you from preparing the resume to accepting the offer by reviewing 1) writing a resume, 2) preparing for a phone screen, 3) what to expect in a typical candidate on-site interview experiences and questions, and 4) taking the time to review the offer and how to respond to the human resources and or hiring manager. This session is interactive.

**Tuesday, November 1, 12:00pm – 1:00pm**

### **Building and Nurturing a Professional Network**

Stephen Scypinski, Ph.D., Vice President, VBI Vaccines Inc.

Live ONLINE workshop

In today's high-paced and internet-centric environment, it is much easier to build and maintain a professional network than it was in the days of business card files and phone calls. Having an up to date network can be valuable in many situations. For example, who would you call if you were about to undergo a government inspection and needed an experienced opinion? Where would you turn if your position is being eliminated and you want to know who is hiring? Who would you contact regarding the reputation of a contractor or consultant you might want to business with? In this workshop you will learn how to build, expand, and nurture an up to date scientific professional network that is so essential for these and other circumstances. Professional social media, such as LinkedIn, present a multitude of opportunities for members to network and communicate with colleagues and friends in their industry. This presentation will highlight guidance as well as specific examples.

**Tuesday, November 15, 12:00pm – 1:00pm**

### **Career Change – Unlocking your Potential**

Reno DeBono, Ph.D., QC Manager – Analytical & Metals, EMD Electronics

IN-PERSON at the Crowne Plaza Conference Center

This workshop will provide attendees the opportunity to discover and communicate core skill sets during breakout sessions. The objective of the workshop is to help the experienced technical person to identify and win opportunities outside their current area of specialty.

- Understanding and communicating your core skills
- Understanding and identifying the core skills required in new careers
- Identifying the gaps and problems of a position/company in the new area you can bring value to
- Identifying your success stories
- How to generalize highly specialized knowledge

## SPEED MENTORING

The Coblentz Society will offer an in person Speed mentoring event on Monday of the conference.

Speed Mentoring is a fun and fast paced session that enables a structured interaction with two dozen or more scientists from various industries, academia, and government labs that enable the mentees to get an understanding of what it's like to work in those areas. These interactions can be the basis of an ongoing mentoring relationship session if that is of interest and is a wonderful networking opportunity for job hunting or just getting a better understanding of life as a spectroscopist. This proved to be a good way to connect students with a variety of mentors and spark conversations in many possible career paths.

Mentors and Mentees must register for the Eastern Analytical Symposium & Exposition. Part of the online registration process you will need to respond to the question asking if you want to be a mentor or a mentee. The Speed Session will be approximately 1.5 hours on November 14; a box lunch will be provided. Space is limited and we encourage you to register in advance. EAS registration is now open [www.eas.org](http://www.eas.org)