

2017 Preliminary Technical Oral Program

Here is the preliminary list of oral invited and contributed sessions. The Poster Sessions will be announced in mid-September. It is not too late to submit an abstract for a poster presentation! The deadline is September 1st. Visit our submission site for more details and to submit: www.EAS.org/asubmit

MONDAY MORNING, NOVEMBER 13

Time	Title, Author(s)
EAS Award for Outstanding Achievements in Magnetic Resonance Honoring Bernhard Blümich, RWTH Aachen University Sponsored by Bruker BioSpin and New Era Enterprises Chair: Songi Han, University of CA-Santa Barbara	
9:00	Presentation of the EAS Award for Outstanding Achievements in Magnetic Resonance
9:05	<i>Shrinking NMR: From the Laboratory Floor via the Tabletop to the Pocket?</i> , <u>Bernhard Blümich</u> , RWTH Aachen University
9:30	<i>Compact NMR in Clinical Diagnostics</i> , <u>David Cistola</u> , Texas Tech University
10:00	Break
10:20	<i>Porous Media, Magnetic Resonance and Machine Learning</i> , <u>Yi-Qiao Song</u> , Schlumberger
10:50	<i>Structure and Function in Metal Organic Frameworks are Informed by Portable Magnet Relaxometry, Thanks to Bernhard Blümich</i> , <u>Jeffrey A. Reimer</u> , University of California-Berkeley

New York Section of the Society for Applied Spectroscopy Gold Medal Award Honoring Richard P. Van Duyne, Northwestern University Session Chair: Kathryn Lee, rap-ID	
9:00	<i>Nanoscale Chemical Imaging with Tip-Enhanced Raman Spectroscopy</i> , <u>Richard P. Van Duyne</u> , Northwestern University
9:30	<i>Translating SERS into a Robust Detection Platform for Uranium in Complex Matrices</i> , <u>Amanda J. Haes</u> , University of Iowa
10:00	Break
10:20	<i>Polymer-Enabled Analytical SERS Sensing</i> , <u>Christy L. Haynes</u> , Victoria M. Szlag, Seyoung Jung, Theresa M. Reineke, Rebeca Rodriguez, University of Minnesota
10:50	<i>Imaging Mass Spectrometry on the Nanoscale with Cluster Ion Beams</i> , <u>Nicholas Winograd</u> , Pennsylvania State University

Monitoring Water Pollution to Prevent Future Flints Chair: Satinder Ahuja, Ahuja Consulting	
9:00	<i>Learned from the Flint Water Crisis: Communicating Science and Influencing Public Discourse Using Science</i> , <u>Ni Zhu</u> , Virginia Tech
9:30	<i>Combined Effects of Increased Temperature and Endocrine Disrupting Pollutants on Sex Determination, Survival, and Development across Generations</i> , <u>Bethany DeCourten</u> , Susanne M. Brander, University of North Carolina-Wilmington
10:00	Break
10:20	<i>Coal Use as a Cause of Water Quality Impairment</i> , <u>Larry Cahoon</u> , University of North Carolina-Wilmington
10:50	<i>Waste to Wealth: Sustainable Advancement in Greener Analytical Pathways for Remediation of Metal Contaminated Waste-Water</i> , <u>Rakesh K. Sharma</u> , University of Delhi

Building the Future in Sample Preparation with Young Investigators, sponsored by the Chromatography Forum of Delaware Valley Chair: Mary Ellen McNally, DuPont Crop Protection	
9:00	<i>Improving Metabolite Coverage in Untargeted LC-MS Metabolomics</i> , <u>Dajana Vuckovic</u> , Dmitri Sitnikov, Parsram Ramrup, Concordia University
9:30	<i>Development of Nucleic Acid Preservation and Extraction Methods</i> , <u>Jared L. Anderson</u> , Kevin D. Clark, Omprakash Nacham, Marcelino Varona, Iowa State University
10:00	Break
10:20	<i>Sample Preparation and Precision Medicine</i> , <u>Marcel Musteata</u> , Albany College of Pharmacy and Health Sciences
10:50	<i>What's the Matter with Sample Prep? Novel Approaches and Solutions</i> , <u>Roy Helmy</u> , Merck & Co.

Monday Morning continued

Industrial Applications of Atomic Force Microscopy (AFM), sponsored by The Dow Chemical Company Chairs: Amanda Mann, Matthew Lamm, Merck & Co.	
9:00	<i>Oil Reservoir Properties at the Nano-Scale: Using AFM in a Bulk Characterization Industry</i> , <u>Shannon L. Eichmann</u> , David Jacobi, Mohammad H. Haque, Aramco Services Company, Nancy A. Burnham, Worcester Polytechnic Institute
9:30	<i>Atomic Force Microscopy of Polymer Systems: From Morphology to Properties to Chemical Imaging and Spectroscopy</i> , <u>Gregory Meyers</u> , Mark A. Rickard, Carl W. Reinhardt, Jamie J. Stanley, The Dow Chemical Company
10:00	Break
10:20	<i>AFM in Pharmaceutical Formulation Development</i> , <u>Matthew Lamm</u> , Amanda Mann, Merck & Co.
10:50	<i>Atomic Force Microscopy and Nano-IR Characterization of Composites</i> , <u>William Haseltine</u> , Solvay

New Frontiers in Solid Analysis Spectroscopy Chair: Lydia Breckenridge, Bristol-Myers Squibb	
9:00	<i>LIBS and XRF: Complimentary Solid State Analysis Techniques in the Pharmaceutical Lab</i> , <u>Sharla Wood</u> , Lydia Breckenridge, Nancy Lewen, Bristol-Myers Squibb
9:30	<i>Ultrafast Magic Angle Spinning NMR of Small Molecule and Peptide Therapeutics</i> , <u>Yongchao Su</u> , Xingyu Lu, Merck & Co.
10:00	Break
10:20	<i>Laser Induced Breakdown Spectrometry/Laser Ablation</i> , <u>Matthieu Baudelet</u> , University of Central Florida
10:50	<i>New Ionization Processes in Mass Spectrometry Provide Missing Link between ESI and MALDI, Experimentally and Fundamentally</i> , <u>Sarah Trimpin</u> , Wayne State University

The Challenge of Testing for Mutagenic Impurities While Considering the Total Exposure Chairs: James Stuart, University of Connecticut and Landon Greene	
9:00	<i>Capturing Chemical Exposures: The Exposome and Human Health</i> , <u>Gary W. Miller</u> , Emory University
9:30	<i>Early Life Exposure to Environmental Chemicals and Health Trajectories</i> , <u>Manish Arora</u> , Icahn School of Medicine at Mount Sinai
10:00	Break
10:20	<i>Volatile Genotoxic Impurity Determination in Oligonucleotide API at Sub-ppm Level</i> , <u>Dora Visky</u> , Celgene Corporation
10:50	<i>Novel Approaches to Identify Metabolite-Related Mutagenic Reactions</i> , <u>James F. Rusling</u> , University of Connecticut

Funding Analytical Research in Challenging Times: NSF and Beyond Chairs: Sharon Neal, University of Delaware, Kelsey D. Cook, National Science Foundation	
9:00	<i>Opportunities and Suggestions for Securing NSF Funding</i> , <u>Lin He</u> , Michelle Bushey, Kelsey D. Cook, National Science Foundation
9:20	<i>The NSF Proposal Review Process - An Inside/Outside Perspective</i> , <u>Zeev Rosenzweig</u> , University of Maryland-Baltimore County
9:40	<i>The National Science Foundation Merit Review Criteria & Programs that Support Chemistry Education</i> , <u>Dawn Rickey</u> , National Science Foundation
10:00	Break
10:20	<i>Interpreting and Writing Reviews</i> , <u>Lisa A. Holland</u> , West Virginia University
10:40	<i>To be announced</i> , <u>Willie E. May</u> , University of Maryland-College Park
11:00	Panel Discussion

Development & Optimization of Analytical Methods Chair: Judy Lin, Novartis	
9:00	<i>Development of a Robust HPLC Method for Pharmaceutical Analysis Using Quality-by-Design (QbD) Approach</i> , <u>Jinjian Zheng</u> , Merck & Co.
9:20	<i>Analytical Method Development for Multicomponent Drugs, Challenges and Solutions</i> , <u>Prasad Panzade</u> , Yuliya Yarkho, Apotex Inc.
9:40	<i>System Suitability Failures Encountered in Pharmaceutical Analysis by UHPLC</i> , <u>Xiande (Andy) Wang</u> , Jessica Wysocki, Qingjun (Mike) Liu, Rosie Tran, Dave Thomas, Janssen Pharma, J&J
10:00	Break
10:20	<i>An Effective Method Development Strategy Using Fused-Core Columns</i> , <u>Thomas J. Waeghe</u> , MAC-MOD Analytical, <u>Stephanie A. Schuster</u> , <u>Conner W. McHale</u> , Advanced Materials Technology
10:40	<i>Size Exclusion Chromatography of Biopolymers and Synthetic Polymers with Common Reversed-Phase and HILIC Columns</i> , <u>Joe P. Foley</u> , Drexel University, <u>Anna M. Caltabiano</u> , GlaxoSmithKline
11:00	<i>Titration for Early Drug Discovery and Development</i> , <u>Lori Spafford</u> , Metrohm

MONDAY AFTERNOON, NOVEMBER 13

Time	Title, Author(s)
EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry Honoring Janusz Pawliszyn, University of Waterloo Sponsored by Bristol-Myers Squibb Chair: Nicholas H. Snow, Seton Hall University	
2:00	<i>Growing Up with SPME</i> , <u>Nicholas H. Snow</u> , Seton Hall University
2:30	<i>Providing Rugged Methodology for Regulated Industries</i> , <u>Mary Ellen P. McNally</u> , Stephen J. Platz, DuPont Crop Protection
3:00	Break
3:20	<i>Whole-Column Imaged Capillary Isoelectric Focusing (cIEF): From Academic Idea to Industrial Gold Standard</i> , <u>Jiagi Wu</u> , Protein Simple
3:50	<i>Medical and Pharmaceutical Applications of Solid Phase Microextracion</i> , <u>Barbara Bojko</u> , Nicolaus Copernicus University
4:20	Presentation of the EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry and Plenary Lecture, Janusz Pawliszyn, University of Waterloo

Ultrasensitive Spectroscopy, organized by NY/NJ SAS Chair: Gene S. Hall, Rutgers University	
2:00	<i>Engineering Plasmonic Nanostructures for Ultrasensitive SERS Applications</i> , <u>Laura Fabris</u> , Rutgers University
2:30	<i>From Research to Routine: Surface-Enhanced Raman Spectroscopy as a Practical Tool in Art Analysis</i> , <u>Marco Leona</u> , Metropolitan Museum of Art
3:00	Break
3:20	<i>The Resonance Raman Spectra of Salmon Oil</i> , <u>Fran Adar</u> , Horiba Instruments
3:50	<i>The Raman Spectra of cis and Trans Fatty Acids</i> , <u>Gene S. Hall</u> , Rutgers University

Solid-State NMR of Natural Products: Life without Labels Chair: Yongchao Su, Merck & Co.	
2:00	<i>Quantitative and Selective ¹³C NMR for Determining the Composition of Wood and Cork</i> , <u>Klaus Schmidt-Rohr</u> , Pu Duan, Xiaoyan Cao, Brandeis University
2:30	<i>Electron Decoupling with Frequency Agile Gyrotrons and Fluorescent Polarizing Agents for DNP in Human Cells</i> , <u>Alexander Barnes</u> , Washington University-St. Louis
3:00	Break
3:20	<i>Multinuclear Quantitative Solid-state NMR of Crystalline and Disordered Pharmaceutical Solids</i> , <u>Joe Lubach</u> , Genentech
3:50	<i>Solid-State NMR Crystallography of Pharmaceuticals Utilizing Proton-Detected and Multidimensional Techniques</i> , <u>Xingyu Lu</u> , Chengbin Huang, David Hesk, Anthony Leone, Robert T. Williamson, Wei Xu, Yongchao Su, Merck & Co.

Analytical Challenges in Assessment of Drug Formulation Performance and In-Vitro Drug Release Chair: Xujin Lu, Bristol-Myers Squibb	
2:00	<i>Dissolution Testing from Biorelevant to Quality Control - Challenges and Gaps</i> , <u>Jian-Hwa Han</u> , Abbvie
2:30	<i>Linking Dissolution Method Development and Clinical Relevance – When is a Method Appropriately Discriminating</i> , <u>Andre Hermans</u> , Merck & Co.
3:00	Break
3:20	<i>Using In-Vitro Dissolution to Support Post Approval Changes - Global Regulatory Expectation</i> , <u>Amy Bu</u> , Bristol-Myers Squibb
3:50	<i>Approaches to the Development of Biorelevant and QC Dissolution Methods</i> , <u>Michael D. Likar</u> , Ling Zhang, Pfizer

Forensic Microscopy XI "What is it? Who does it?", sponsored by the New York Microscopical Society Chair: Thomas Kubic, John Jay College	
2:00	<i>Forensic Science and the Amazing Multicolor Fur Coat: Microscopy of Dyed Beaver Hair</i> , <u>Michelle D. Miranda</u> , Farmingdale State College
2:30	<i>Microscopic Changes in Markings Made by a Tavor Rifle</i> , <u>Peter Diaczuk</u> , Pennsylvania State University, Andrew J. Winter, Centenary University
3:00	Break
3:20	<i>Forensic Analysis of Blue Glass Chips by Microspectroscopy and X-Ray Spectroscopy</i> , <u>Tiffany J. Millet</u> , Graduate Center - City University of New York, Mircea Comenescu, John Jay College
3:50	<i>The Microscopic and Spectroscopic Analysis of Organic Gunshot Residues and Explosives</i> , <u>Jennifer Leonard</u> , Graduate Center - City University of New York

Monday Afternoon continued

Quality Data for Monitoring Pollution and Climate Change, organized by The Coblenz Society Chair: Brandy Smith-Goettler, Merck & Co.	
2:00	<i>Simulation of the Entire Pathway from Atmospheric CO₂ into Oceans into Microalgal Biomass</i> , <u>Frank Vogt</u> , University of Tennessee
2:30	<i>Exploring the Multidimensionality of High-Resolution Photoluminescence Spectroscopy for the Analysis of Organic Pollutants in the Gulf of Mexico</i> , <u>Andres Campiglia</u> , University of Central Florida
3:00	Break
3:20	<i>Optical Characterization of Individual Aerosol Particles for Defense and Environmental Monitoring</i> , <u>Vasanthi Sivaprakasam</u> , Naval Research Laboratory
3:50	To Be Announced

Advancements in Chromatography & Electrophoresis Chair: Anne Aubry, Bristol-Myers Squibb	
2:00	<i>Peak Capacity and Peak Capacity per Unit Time in Capillary and Microchip Electrophoresis</i> , <u>Joe P. Foley</u> , Drexel University, Department of Chemistry, 3141 Chestnut St., Philadelphia, PA 19104, <u>Donna M. Blackney</u> , <u>Erin J. Ennis</u>
2:20	<i>Spiral Design Rotors: A Significant Advance in Countercurrent Chromatography</i> , <u>Martha Knight</u> , <u>Rodrigo A. Lazo-Portugal</u> , CC Biotech LLC
2:40	<i>Experimental Evaluation of Microfluidic LC Column Performance: Straight vs. Serpentine Channels</i> , <u>Martin Gilar</u> , <u>Thomas S. McDonald</u> , <u>Fabrice Gritti</u> , Waters, Inc.
3:00	Break
3:20	<i>Superficially Porous Particles with Polar C18 Selectivity</i> , <u>Richard A. Henry</u> , Independent Consultant, <u>Stephanie A. Schuster</u> , <u>Chuping Luo</u> , <u>Conner W. McHale</u> , <u>Robert E. Moran</u> , <u>William L. Johnson</u> , Advanced Materials Technology
3:40	<i>Sequential Elution Liquid Chromatography Using a Wide-Range, Mass Spectrometry Compatible pH Gradient</i> , <u>Catherine Kita</u> , <u>Joe P. Foley</u> , Drexel University
4:00	<i>Evaluating Surfactants Using Potentiometric Titration</i> , <u>Kerri-Ann Blake</u> , Metrohm USA

Increasing High-Throughput: Sample Prep to Engineering Chair: Mary Lynn Grayeski	
2:00	<i>Automated Forced Degradation Screening for Genotoxic Risk Assessment of Small Molecule Pharmaceutical Candidates</i> , <u>Kaitlin M. Grinias</u> , <u>John Campbell</u> , <u>Kenneth Wells</u> , GlaxoSmithKline
2:20	<i>Mitigating Risk for Oral Solid Dosage (OSD) Extraction Using Design of Experiment (DoE) to Define an Alternate Homogenization Sample Preparation Process</i> , <u>Adriene Malsbury</u> , <u>Khanh Ha</u> , <u>Jeff Dai</u> , <u>William Fish</u> , Bristol-Myers Squibb
2:40	<i>Transfer of Manual Sample Preparation for Content Uniformity (CU) Testing for a Capsule Formulation to an Automated Workstation Using Tablet Processing Workstation (TPW)</i> , <u>Jasvinder Gaudh</u> , <u>Bhupendra Sawant</u> , Apotex Inc.
3:00	Break
3:20	<i>Biocatalyst Development Using High-Throughput Microfluidics and Mass Spectrometry</i> , <u>Shuwen Sun</u> , Merck & Co.
3:40	<i>A New Approach to Analytical Instrumentation and Computerization</i> , <u>Scot D. Abbott</u> , <u>Ryan Taylor</u> , Phoenix First Response, <u>David W. Faries</u> , GDE Technologies
4:00	<i>SPE is LC: Using Automation and Chromatographic Principles to Achieve High Performance SPE (SmartSPE)</i> , <u>Mark Hayward</u> , <u>Kim Gamble</u> , ITSP Solutions, <u>Jonathan Ho</u> , <u>Tom Moran</u> , Shimadzu

TUESDAY MORNING, NOVEMBER 14

EAS Award for Outstanding Achievements in Separation Sciences Honoring Christopher J. Welch, Welch Innovation, LLC Sponsored by Agilent Technologies Chair: Mirlinda Biba, Merck & Co.	
9:00	<i>The Practice and Consequences of Ultrafast LC and SFC</i> , <u>Daniel Armstrong</u> , University of Texas-Arlington
9:30	<i>High-Speed Enantioselective Chromatography as the Second Dimension in Multiple Heart-Cutting and Comprehensive 2D-RPLC Analysis</i> , <u>Erik L. Regalado</u> , Merck & Co., <u>Chandan L. Barhate</u> , <u>Daniel W. Armstrong</u> , University of Texas - Arlington, <u>Christopher J. Welch</u> , Welch Innovation, LLC
10:00	Break
10:20	<i>Innovative Approaches in High-Throughput Chromatographic Analysis in Support of Pharmaceutical Development Research</i> , <u>Kerstin Zawatzky</u> , Merck & Co., <u>Christopher J. Welch</u> , Welch Innovation, LLC
10:50	Presentation of the EAS Award for Outstanding Achievements in Separation Sciences
10:55	<i>Pharmaceuticals, Separations and Separation Science</i> , <u>Christopher J. Welch</u> , Welch Innovation, LLC

Tuesday Morning continued

American Microchemical Society Benedetti-Pichler Award Honoring Somenath Mitra, NJ Institute of Technology Session Chair: Robert Vetrecin	
9:00	<i>Approaches to Modify Silica Particles for HPLC</i> , <u>Luis A. Colon</u> , Joseph R. Ezzo, Amaris C. Borges-Muñoz, Jasmely Vélez-González, University at Buffalo, The State University of New York,
9:30	<i>Multidimensional Gas Chromatography: Are More Dimensions Always Better?</i> , <u>Nicholas H. Snow</u> , Seton Hall University
10:00	Break
10:20	<i>Microfluidic High-Throughput Screening Consumables that Leverage Existing Laboratory Tools</i> , <u>Vincent T. Remcho</u> , Oregon State University
10:50	<i>Carbon Nanotube Based Chromatography, Sample Preparation and Membrane Separations</i> , <u>Somenath Mitra</u> , NJ Institute of Technology

Vibration Science and Technology in Cultural Heritage I, organized by the New York Conservation Foundation Chair: Andrew Lins, Philadelphia Museum of Art	
9:00	<i>Considerations of the Potential for Damage to Individual Works of Art caused by Vibration during Construction/Demolition Projects</i> , <u>Andrew Lins</u> , Philadelphia Museum of Art
9:30	<i>A Blueprint for Managing Construction Vibration Risk Near Sensitive Structures</i> , <u>Douglas Rudenko</u> , Mohamad Sharifinassab, Vibra-Tech Engineers
9:50	Break
10:10	<i>Vibration Risk Assessment for Immovable Artworks in Churches during a Tunneling Work</i> , <u>Anna Henningson</u> , Disent AB
10:40	<i>Vibration Protocols to Protect Museum Collections during Major Demolition Works: Experiences from Liverpool's Library Project</i> , <u>Siobhan Watts</u> , UK National Trust, David Crombie, Tracey Seddon, National Museums Liverpool

Research from our Emerging Forensic Scientists, sponsored by NJ Association of Forensic Scientists Chair: Monica Joshi, West Chester University	
9:00	<i>Determination of Gunshot Residue Settling Velocity</i> , <u>Cassidy Schultheis</u> , Stephanie Wetzel, Duquesne University, Allison Laneve, Stephanie Horner, RJ Lee Group
9:30	<i>An Investigation of the Effect of Varying Impact Force on the Formation of Three-Dimensional Fabric Impressions in Automotive Finishes</i> , Jessica Hovingh, Ralph R. Ristenbatt III, Rachel E. Downey, Pennsylvania State University, Ted Schwartz, Westchester County Forensic Science Laboratory
10:00	Break
10:20	<i>Evaluation and Preservation of Urine in Forensic Toxicology</i> , <u>Meaghan M. Ringel</u> , Arcadia University, Karen S. Scott, Shanan S. Tobe, Gail A.A. Cooper, Office of the Chief Medical Examiner
10:50	<i>Using SPME-GC/MS to Detect Volatile Compounds Remaining from the Storage of Dead Mice</i> , <u>Angelica D. Wilz</u> , Thomas A. Brettell, Thomas Pritchett, Cedar Crest College
11:20	<i>Application of Gold and Silica Nanoparticles for Explosives Detection</i> , <u>Alexandra P. Sterner</u> , Monica Joshi, Gaea Lawton, West Chester University

Spectroscopy for Counterfeit Detection, organized by The Coblenz Society Chair: Brandye Smith-Goettler, Merck & Co.	
9:00	<i>Determination of Adulterated Neem and Flaxseed Oil Compositions by FTIR Spectroscopy and Multivariate Regression Analysis</i> , <u>Sayo Fakayode</u> , North Carolina A&T State University
9:30	<i>Field-Deployable Applications of Raman Spectroscopy for Screening of Unapproved and Counterfeit Drugs</i> , <u>Jason D. Rodriguez</u> , United States Food & Drug Administration
10:00	Break
10:20	<i>Portable Raman Spectroscopy for Rapid Identification of Unknown Precious Gemstones</i> , <u>Kristen A. Frano</u> , Dawn Yang, B&W Tek
10:50	<i>Biotherapeutics Counterfeit Determination</i> , <u>Ishan Barman</u> , John Hopkins University

Integrating Solid State NMR Experiment and Prediction Chair: Dewey Barich, GlaxoSmithKline	
9:00	<i>Characterization of Solid Pharmaceutical Compounds and their Dosage Forms Using Solid-State NMR of Quadrupolar Nuclei and Plane-Wave DFT Calculations</i> , <u>Robert Schurko</u> , David A. Hirsh, Sean T. Holmes, Austin A. Peach, University of Windsor
9:30	<i>Multinuclear Solid-State NMR Investigation of Atorvastatin Calcium</i> , <u>Steve Bai</u> , Sean Holmes, University of Delaware
10:00	Break
10:20	<i>Moving Towards Fast Characterization of Polymorphic Drugs by Solid-State NMR Spectroscopy</i> , <u>Rosalynn Quiñones</u> , Marshall University, Robbie J. Iulucci, Washington and Jefferson College
10:50	<i>Developing Accurate Crystallography without Diffraction</i> , <u>James Harper</u> , University of Central Florida

Tuesday Morning continued

Innovative Analytical Approaches in Biotechnology Chair: Dil Ramanathan, Kean University	
9:00	<i>Quantification of Oleic Acid in Biologics Solutions Enables Early Detection of Host Cell Protein Mediated Polysorbate 80 Degradation</i> , <u>Meng Xu</u> , Zhihua Liu, Dilusha Dalpathado, Joseph Valente, Mark Bolgar, Bristol-Myers Squibb
9:20	<i>Effective Determination of Pharmaceutical Impurities by Two-Dimensional Liquid Chromatography (2DLC)</i> , <u>Zhimin Li</u> , Paula Hong, Patricia McConville, Waters, Inc.
9:40	<i>Sol-Gel Capillary Microextraction with Niobia-, Tantalum-, and Zirconia-based Sorbents Providing Selective Enrichment of Phosphopeptides and Neurotransmitters for Online HPLC Analysis</i> , <u>Abdul Malik</u> , Sheshanka Kesani, MinhPhuong Tran, Abdullah Alhendal, Mohanraja Kumar, University of South Florida
10:00	Break
10:20	<i>Advantages of Cold Electron Ionization LC-MS for Structure Elucidation</i> , <u>Ryan D. Cohen</u> , Christine Fisher, Renee Dermerjian, Merck & Co.
10:40	<i>Differentiation of Isomeric Metabolites of Diclofenac Using Electron Induced Dissociation Mass Spectrometry</i> , <u>Zhidan Liang</u> , Wendy Zhong, Merck & Co.
11:00	<i>Fast Isotope Ratio Mass Spectrometry (FIRMS): A Tandem Mass Spectrometry Technique for the Rapid and Semi-Comprehensive Evaluation of Isotope Ratios</i> , Fredrick M. Ochieng, Brian A. Logue, South Dakota State University, Paul J. Hinker, South Dakota School of Mines and Technology
11:20	<i>Application of Pre-Filtering Human Serum for the Determination of Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) by High-Performance Liquid Chromatography-Online Solid Phase Extraction-Tandem Mass Spectrometry</i> , <u>Chang Ho Yu</u> , Bhupendra R. Patel, Zhihua (Tina) Fan, Bahman Parsa, New Jersey Department of Health

Modern Advances of Gas Chromatography Chair: James Stuart, University of Connecticut	
9:00	<i>Study of VOC Exposure at Fuel Stations with a Portable GC System</i> , <u>Anika Poli</u> , Douglas R. Adkins, Patrick R. Lewis, Defiant Technologies
9:20	<i>High-Throughput Implementation of Gas Chromatography with Automated Sample Preparation and Universal Carbon Response Calibration</i> , <u>Marcelo Filgueira</u> , Reetam Chakrabarti, Marie Devlin, Dow Chemical Company
9:40	<i>Fast Gas Chromatography of Residual Solvents in Pharmaceutical Excipients Using a Novel Vacuum Ultraviolet Spectroscopy Detector</i> , <u>Lindsey Shear-Laude</u> , Jack Cochran, VUV Analytics
10:00	Break
10:20	<i>Universal Carbon Detection as a Means of Streamlining Gas Chromatography Analyses and Improving Productivity</i> , <u>Ken Law</u> , Christie Bowden, Arkema
10:40	<i>Towards Understanding the Basis of Oddy Test Failures via Volatile Organics and Other Analytical Analyses</i> , <u>Eric B. Monroe</u> , Kelli Stoneburner, Cynthia Connelly Ryan, Fenella France, Library of Congress
11:00	<i>Guidelines on Selecting, Determining, and Interpreting Analytical Detection Limits</i> , <u>Ephraim M. Govere</u> , Pennsylvania State University

Transforming Multivariate Data into Knowledge Chair: Suzanne Schreyer	
9:00	<i>Root Cause Investigation of Contaminants in Raw Materials and Active Pharmaceutical Ingredients</i> , <u>Olga Laskina</u> , Kathryn Lee, Oliver Valet, Markus Lankers, rapID Inc.
9:20	<i>In-Vivo, Glucose Detection using Mid-Infrared Laser Spectroscopy and Multivariate Analysis</i> , <u>Alexandra Werth</u> , Sabbir Liakat, Claire Gmachl, Princeton University
9:40	<i>Integrating Instrument Standardization Methods into Data Preprocessing Schemes</i> , <u>Barry M. Wise</u> , Robert T. Roginski, Benjamin Kehimkar, Eigenvector Research
10:00	Break
10:20	<i>Applications of FT-NIR in Hot Melt Extrusion Process Monitoring</i> , <u>Herman He</u> , Scott Martin, Thermo Fisher Scientific, Anh Vo, Jiaxiang Zhang, Michael Repka, University of Mississippi
10:40	<i>Validation of ATR Correction and Reverse ATR Correction Algorithms, Improved by Optimized Corrections</i> , <u>Gregory M. Banik</u> , Michelle Dsouza, Keith Kunitsky, Robin O'Connor, Bio-Rad Laboratories
11:00	<i>CLS & PCR Analysis of Liquids, Elucidating the Connection between Physics and Chemometrics</i> , <u>Howard Mark</u> , Mark Electronics

TUESDAY AFTERNOON, NOVEMBER 14

EAS Award for Outstanding Achievements in Chemometrics Honoring Barry Lavine, Oklahoma State University Sponsored by Eigenvector Research Chair: Steven Brown, University of Delaware	
2:00	<i>Mapping Polyethylene Reactor and Product Space Using Multivariable Analysis of Digital Distributions</i> , Paul J. DesLauriers, Jeff S. Fodor, Chevron Phillips Chemical Company
2:30	<i>Stacking the Deck in Calibration: Better Models and Better Transfers with Stacked Calibration Methods</i> , Steven Brown, Dominic Poerio, University of Delaware
3:00	Break
3:20	<i>Investigation of Meteor and Meteor Impact Samples by Raman Spectroscopy and Multivariate Curve Resolution</i> , Karl Booksh, University of Delaware
3:50	Presentation of the EAS Award for Outstanding Achievements in Chemometrics
3:55	<i>Multivariate Curve Resolution, Genetic Algorithms, and Cross Correlation Library Searching Applied to the Forensic Examination of Automotive Paints</i> , Barry Lavine, Undugodage Perera, Matthew D. Allen, Francis Kwofie, Collin White, Oklahoma State University

Emerging Frontiers in High-Throughput Analysis for Process Research & Development Chair: Wes Schafer, Merck & Co.	
2:00	<i>Enabling High-Throughput Experimentation through High-Throughput Analysis</i> , Wes Schafer, Merck & Co.
2:30	<i>Reactivity-Based High-Throughput Analysis of Heavy Metals</i> , Kazunori Koide, University of Pittsburgh
3:00	Break
3:20	<i>Asymmetric Reaction Screening with Chiroptical Sensors</i> , Christian Wolf, Georgetown University
3:50	<i>Enabling Modern Catalysis in Drug Discovery and Development with High-Throughput Experimentation Chemistry and (Ultra!) Fast Analysis</i> , Spencer Dreher, Merck & Co.

Desorption Mass Spectrometry Chair: Barbara S. Larsen, DuPont	
2:00	<i>Fundamentals and Applications of Matrix-Assisted Ionization: Zero Energy Input Ionization</i> , Charles N. McEwen, Khoa Hoang, University of Sciences, Milan Pophristic, MSTM, LLC
2:30	<i>Imaging Mass Spectrometry in Drug Development: Visualizing Tissue with a Molecular Lens</i> , Reid Groseclose, GlaxoSmithKline
3:00	Break
3:20	<i>Improving Quantitation through a Fundamental Understanding of the MALDI Sample Preparation Process</i> , Kevin G. Owens, Drexel University
3:50	<i>Industrial Applications of the Bruker™ MALDI-TOF Biotyper</i> , Suzanne K. Singles, Barbara S. Larsen, DuPont Corporate Center for Analytical Sciences

Breaking Bad Chemistry: The Forensic Response to Clandestine Labs Chair: Thomas Blackwell, US Drug Enforcement Administration	
2:00	<i>Supervisory Chemist</i> , Edward J. Kovacs III, US Drug Enforcement Administration
2:30	<i>Investigating One Pot Methamphetamine Clandestine Laboratories</i> , Jarrad Wagner, Oklahoma State University
3:00	Break
3:20	<i>Drug and Explosive Overlap in Clandestine Laboratories</i> , Jarrad Wagner, Oklahoma State University
3:50	<i>Impurity Profiling</i> , Noel Vadell, US Drug Enforcement Administration

Vibration Science and Technology in Cultural Heritage II, organized by the New York Conservation Foundation Chair: John C. Scott, New York Conservation Foundation	
2:00	<i>Protecting Stained Glass Windows from Vibrations Caused by Construction Operations</i> , Dean Koga, Erica Morasset, Building Conservation Associates, David Woodham, Atkinson Noland and Associates
2:30	<i>Earthquake Damage Mitigation for Collections: A Review of Principles and Recent Developments</i> , Jerry Podany
3:00	Break
3:20	<i>Vibration Research and Testing: What was the Question?</i> , William Wei, Cultural Heritage Agency of the Netherlands
3:50	<i>Vibration Related Risk in Loan Traffic</i> , Cindy Zalm, Netherlands National Museum of World Cultures

Tuesday Afternoon continued

NMR Analysis of Complex Systems: Computer Assisted Analysis and Pulse Sequence Development	
Chair: Gary Martin, Merck & Co.	
2:00	<i>Unequivocal Determination of Complex Molecular Structures with Anisotropic NMR Measurements</i> , <u>Yizhou Liu</u> , Josep Saurí, Gary E. Martin, Robert Thomas Williamson, Merck & Co., Emily Mevers, Jon Clardy, Harvard University, Mark W. Pecuh, University of Connecticut, Henk Hiemstra, University of Amsterdam
2:20	<i>Towards Unbiased and more Efficient NMR Based Structure Elucidation: A Powerful Combination of CASE Algorithms and DFT Calculations</i> , <u>Alexei V. Buevich</u> , Merck & Co., Mikhail E. Elyashberg, Advanced Chemistry Development
2:40	<i>NMR Characterization of Complex Natural Products: Opportunities and Challenges in Structure Elucidation</i> , <u>Kirk R. Gustafson</u> , Kentaro Takada, Naoya Oku, National Cancer Institute, Yizhou Liu, Josep Saurí, R. Thomas Williamson, Gary Martin, Merck & Co.
3:00	Break
3:20	<i>Discovery of Unique Hydrogen Bonding Motif in Nucleosides Leads to a Novel Protecting-Group Free Selective 3' Nucleoside Functionalization Chemistry</i> , <u>Mikhail Reibarkh</u> , Merck & Co.
3:40	<i>Applications of New Pulse Sequences and Unequivocal Determination of Complex Molecular Structures Using Anisotropic NMR Measurements</i> , <u>Gary E. Martin</u> , Yizhou Liu, Josep Sauri, Alexei V. Buevich, Mikhail Reibarkh, R. Thomas Williamson, Merck & Co.
4:00	<i>Broadband 19F TOCSY with Spin Lock Effected by BURBOP Pulses</i> , <u>Alexander A. Marchione</u> , Chemours
Performance Testing and Impurity Analysis of Pharmaceutical Analysis	
Chair: Leonel Santos, United States Pharmacopeia	
2:00	<i>Analyzing Multi Component Dissolution Samples Using Chemometrics and In-Situ Fiber Optic UV Spectrophotometry</i> , <u>Andrew Kielt</u> , Ishai Nir, Jeff Seely, Distek
2:20	<i>Novel Instrument Solution for Content Uniformity Sample Preparation</i> , <u>Ishai Nir</u> , Andrew Kielt, Jeff Seely, Distek
2:40	<i>Use of Biphasic Dissolution to Improve Bioprediction for an Amorphous Low Solubility Crystallizer</i> , Gregory Johnson, Wei Xu, Merck & Co.
3:00	Break
3:20	<i>Development of Solution Based Certified Reference Materials for the Analysis of Pharmaceutical Impurities in Monograph Testing Methods</i> , <u>Uma Sreenivasan</u> , Sarah Aijaz, Zoe Ruan, Maysa Bakir, Nicholas Hauser, Cerilliant Corporation - MilliporeSigma
3:40	<i>NMR and HPLC Investigation of the E/Z Interconversion of Hydrolysis Impurities Present in Raltegravir Drug Substance</i> , <u>David J. Schenk</u> , Ryan D. Cohen, Robert Hartman, Kristine Cappuccio, Gary E. Martin, Robert A. Reamer, Merck & Co.
4:00	<i>Process Patent Protection via Analysis of Stable Isotope Ratios</i> , John P. Jasper, Molecular Isotope Technologies, Ann Pearson, Harvard University, Anthony D. Sabatelli, Dilworth Intellectual Property Law
Surface Science and Spectroscopy	
Chair: Andrew Teplyakov, University of Delaware	
2:00	<i>Recent Advances in Raman Microscopy for Pharmaceutical and Life Science Applications</i> , <u>Alexander Rzhevskii</u> , Thermo Fisher Scientific
2:20	<i>Applications of Nanoscale IR Spectroscopy and Imaging in Pharmaceutical Science</i> , <u>Curtis Marcott</u> , Light Light Solutions, Eoghan Dillon, Kevin Kjoller, Craig Prater, Anasys Instruments
2:40	<i>Confocal Raman Microscopy Characterization of Waterborne Coatings</i> , <u>Dana Garcia</u> , Arkema Inc, 900 First Ave., King of Prussia, PA 19406, Wenjun Wu
3:00	Break
3:20	<i>Mapping the Surface Concentration of Coatings on Metal and Glass Surfaces using FTIR Reflectance Spectroscopy</i> , <u>Mary Thomson</u> , Peter Melling, Remspec Corp., Robert Kertayasa, Rolink LLC
3:40	<i>Probing Nanoscale Hydrophobicity and Chemical Distribution of Surface Modified Polyethersulfone (PES) Membranes</i> , <u>Wanyi Fu</u> , Wen Zhang, New Jersey Institute of Technology
4:00	<i>The Interactions between Amine-Rich Poly [oxo-norbornenes]-Coated Gold Nanoparticles and Phospholipid Membranes</i> , <u>Zeev Rosenzweig</u> , University of Maryland Baltimore County, Zheng Zheng, David Boschert, Karen Lienkamp, University of Freiburg, Bo Zhi, Christy L. Haynes, University of Minnesota
4:20	<i>Sustainable Magnetically Retrievable Nanoadsorbents for Selective Removal of Pb²⁺ and Pd²⁺ Ions from Different Charged Wastewaters</i> , <u>Sriparna Dutta</u> , University of Delhi

Tuesday Afternoon continued

The Depth & Breath of Vibrational Spectroscopy Chair: Jim Rydzak, Specere Consulting	
2:00	<i>See Through Barrier Using Raman Spectroscopy with Large Sampling Volume</i> , <u>Jun Zhao</u> , Jack Zhou, Katherine Bakeev, BW&Tek
2:20	<i>Using a New Horizontal Transmission Cell for FT-IR Characterization of Edible Oils</i> , <u>Gene S. Hall</u> , Rutgers University
2:40	<i>Reagent Free Near-Infrared (NIR) Spectroscopic Analysis of Moisture in Lyophilized Products</i> , <u>Kyle Hollister</u> , Metrohm USA
3:00	Break
3:20	<i>Molecular Separations and Vibrations of Aged Book Paper</i> , <u>Andrew Davis</u> , Amanda Jone, Library of Congress
3:40	<i>Absolute Temperature Measurement by Single Material Based Two-color Infrared Detectors</i> , <u>Yasin Kaya</u> , Arvind Ravikumar, Claire F. Gmachl, Princeton University, Guopeng Chen, Maria C. Tamargo, Aidong Shen, The City College of New York
4:00	<i>Continuous Gradient Temperature Raman Spectroscopy of Highly Polyunsaturated Lipids Critical to Brain Function</i> , <u>Catherine L. Broadhurst</u> , Walter F. Schmidt, Julie K. Nguyen, Jianwei Qin, Kuanglin Chao, Moon S. Kim, USDA Agricultural Research Service

WEDNESDAY MORNING, NOVEMBER 15

EAS Award for Outstanding Achievements in Mass Spectrometry Honoring Scott McLuckey, Purdue University Chair: Alice Pilo, Merck & Co.	
9:00	<i>Gas-Phase Ion/Ion Reactions: Oxidation and the Dehydroalanine Effect</i> , <u>Alice Pilo</u> , Merck & Co., Zhou Peng, Scott McLuckey, Purdue University
9:30	<i>Top-Down Proteomics for Clinical Assay Development</i> , <u>James Stephenson</u> , Thermo Fisher Scientific
10:00	Break
10:20	<i>Characterization and Optimization of Ion Trapping Fields in Toroidal Coordinates</i> , <u>Stephen Lammert</u> , PerkinElmer, Robert H. Jackson III, Instrumental Design Physics
10:50	Presentation of the EAS Award for Outstanding Achievements in Mass Spectrometry
10:55	<i>The Study of Protein Folding and Unfolding via Theta-Tip Nano-Electrospray Ionization</i> , <u>Scott McLuckey</u> , Purdue University

EAS Young Investigator Award, Recent Advances in 2D-LC, Part 1: Fundamentals, Instrumentation, and Column Technology Honoring Dwight Stoll, Gustavus Adolphus College Chair: William Barber, Chromatography Forum of Delaware Valley	
9:00	Presentation of the EAS Young Investigator Award
9:05	<i>Moving into the Mainstream – Reflections on Recent Developments in Two-Dimensional Liquid Chromatography</i> , <u>Dwight Stoll</u> , Gustavus Adolphus College
9:30	<i>Orthogonality Measurements for Multidimensional Chromatography in Three and Higher Dimensional Separations</i> , <u>Mark R. Schure</u> , Kroungold Analytical, Joe M. Davis, Southern Illinois University - Carbondale
10:00	Break
10:20	<i>Recent Developments in Active Temperature Control for Improved Chromatographic Performance</i> , <u>Stephen R. Groskreutz</u> , Anthony R. Horner, Michael T. Rerick, Rachael E. Wilson, Stephen G. Weber, University of Pittsburgh
10:50	<i>A Research Adventure Behind Vacuum-Jacketed Chromatographic Columns: Curiosity, Theory, Development, and Applications</i> , <u>Fabrice G. Gritti</u> , Joseph A. Jarrell, Martin Gilar, Waters, Inc.

Challenges of Lifecycle Management for Method Validation Chairs: Kim Huynh-Ba, Pharmalytik and Karen Lucas, Janssen	
9:00	<i>Lifecycle Management of Analytical Methods for Biotechnology Products: A Regulatory Perspective</i> , <u>Rashmi Rawat</u> (Invited), US Food & Drug Administration
9:30	<i>Lifecycle Management of Methods in Animal Health</i> , <u>John Hayes</u> , Merck Animal Health
10:00	Break
10:20	<i>Lifecycle Management of Analytical Methods for Cleaning Verification Support</i> , <u>Mariann Neverovitch</u> , Antonio Fernandez, Elizabeth Moroney, Bristol-Myers Squibb
10:50	<i>Lifecycle Management: USP Perspectives</i> , <u>Gregory Martin</u> , Complectors Consulting

Wednesday Morning continued

The Cannabinoids Story - From Research, Medical Use, and Abuse, sponsored by NJ Association of Forensic Scientists Chair: Michelle R. Peace, Virginia Commonwealth University	
9:00	<i>Turning Over a New Leaf: The Endogenous Cannabinoid System</i> , <u>Aron H. Lichtman</u> , Virginia Commonwealth University
9:30	<i>Unintended Consequences of Preclinical Cannabinoid Research: Emergence of Synthetic Cannabinoids</i> , <u>Aron H. Lichtman</u> , Virginia Commonwealth University
10:00	Break
10:20	<i>These Aren't Your Grandfather's Cannabinoids</i> , <u>Justin L. Poklis</u> , Virginia Commonwealth University
10:50	<i>Today's Marijuana and Marijuana Products</i> , <u>Michelle R. Peace</u> , Virginia Commonwealth University

Vibrational Characteristics of Biologics Chairs: Anna Luczak, Varsha.Ganesh, Bristol-Myers Squibb	
9:00	<i>Resonance Raman Scattering in Cancer Tissue, Arterial Plaques, and Resonance Stimulated Raman Scattering in Carotene- Methanol Solution</i> , <u>Robert Alfano</u> , City University of New York
9:40	<i>Characterization of Therapeutic Protein Stability and Aggregation at High Concentration via Concomitant DLS and Raman Spectroscopy</i> , <u>Chen Zhou</u> , Eli Lilly, John Carpenter. University of Colorado
10:10	Break
10:20	<i>Use of Raman and Raman Optical Activity for the Structural Characterization of a Therapeutic Monoclonal Antibody Formulation Subjected to Heat Stress</i> , <u>Geetha Thiagarajan</u> , Merck & Co.
10:50	<i>Ligand-Receptor Binding Investigated by Tip-Enhanced Raman Spectroscopy</i> , <u>Lifu Xiao</u> , Zachary Schultz, University of Notre Dame
11:20	<i>Confocal Raman Microscopy Tracks Flufenamic Acid Delivery Using Lipophilic versus Hydrophilic Penetration Enhancers</i> , <u>Qihong Zhang</u> , Yelena Pyatski, Richard Mendelsohn, Carol R Flach, Rutgers University-Newark

Characterization and Control of mAb, Protein & Peptide Therapeutics Chair: Mike Hicks, Merck & Co.	
9:00	<i>Capillary Nanogel Electrophoresis for Analyses of Proteins and Biological Therapeutics</i> , <u>Lisa A. Holland</u> , Cassandra L. Crihfield, Srikanth Gattu, Lloyd Bwanali, West Virginia University
9:20	<i>Fast, High Resolution Size Exclusion Chromatography of Monoclonal Antibodies (mAbs) and Antibody Drug Conjugates (ADCs)</i> , <u>Stacy L. Shollenberger</u> , Phu T. Duong, Atis Chakrabarti, Keegan Gike, Tosoh Bioscience
9:40	<i>Determination of pH-Induced Oligomerization of a Lipidated Peptide by IMS-MS</i> , <u>Elizabeth E. Pierson</u> , Nicholas A. Pierson, Justin P. Pennington, Merck & Co.
10:00	Break
10:20	<i>An Immuno-Analytical Separation Instrument for the Determination of Bioactive Peptides in Biosamples</i> , <u>Norberto Guzman</u> , Princeton Biochemicals
10:40	<i>Chemical Identification of Subvisible Particles in Protein-Based Formulations and Impact of Silicone Oil on the Protein Aggregation</i> , <u>Olga Laskina</u> , Oliver Valet, Markus Lankers, rapID
11:00	<i>Generation of Mouse and Rabbit Monoclonal Antibodies</i> , <u>Q. Julia Zhao</u> , Bowen Bioscience

NMR Spectroscopy of Unique Materials and Unusual Applications Chair: Christina Robb, Connecticut Agricultural Experimental Station	
9:00	<i>Analysis of Ghanaian Calcined Clay mixed with Bio-Degradable Substances as a Supplementary Cementitious Material Using Solid State NMR Spectroscopy</i> , <u>Sudhaunshu S. Purohit</u> , RTI Laboratories, Mark Bediako, CSIR- Building & Road Research Institute, John T. Kevern, Nathan A. Oyler, University of Missouri Kansas City
9:20	<i>Water Exchange Dynamics in Hollow Colloids Studied by Diffusion NMR</i> , <u>Emilia V. Silletta</u> , Theodore Hueckel, Stefano Sacanna, Alexej Jerschow, New York University
9:40	<i>NMR Pulse Design for Measuring Highly Conductive Materials</i> , <u>Boris Kharkov</u> , Leonard Strouk, Alexej Jerschow, New York University
10:00	Break
10:20	<i>Dynamics and Solvation Structure of Lithium Ions in Li-Ion Battery Electrolyte</i> , <u>Mohaddese Mohammadi</u> , Evgeny Nimerovsky, Alexej Jerschow, New York University
10:40	<i>Unusual Properties of Water Studied by 17-O NMR</i> , <u>Emilia V. Silletta</u> , Alexej Jerschow, New York University

Wednesday Morning continued

Vibration Science and Technology in Cultural Heritage III, organized by the New York Conservation Foundation Chair: William Wei, Cultural Heritage Agency of the Netherlands	
9:00	<i>Protecting a Cultural Icon: Moving the Liberty Bell with Minimal Vibration</i> , <u>Karie Diethorn</u> , Independence National Historical Park
9:30	<i>Strategy of Measurement and Data Analysis for the Monitoring during the Transport of Paintings</i> , <u>Matthias Läuchli</u> , Nathalie Bäschlin, Museum of Fine Arts Bern, Cornelius Palmbach, Bern University of the Arts
10:00	Break
10:20	<i>Transport of Pastel Paintings: Fatigue Damage due to Vibrations</i> , <u>Leila Sauvage</u> , Rijksmuseum
10:50	<i>Conundra in Analysis of Damage Causation</i> , John C. Scott, Conservator of Art and Architecture

Quality Control of Pharmaceutical Products Chair: Jason Shen, Celgene	
9:00	<i>Thermogravimetric Analysis of Dilute Aqueous Solutions</i> , <u>Charles Potter</u> , TA Instruments
9:20	<i>Understanding the Effect of Hydration-State Variability on the Solid-State Characterization of a Pharmaceutical Non-Stoichiometric Hydrate</i> , <u>Roxana F. Schlam</u> , Bristol-Myers Squibb
9:40	<i>A Practical Approach of Determining the Cause of ICH Accelerated Stability Failure of Solid Dosage Formulations through Scientifically Designed Forced Degradation Studies and Selecting Optimum Packaging to Prevent Stability Failures</i> , <u>Ajith S. Nair</u> , Bilcare Research
10:00	Break
10:20	<i>3-D Raman Imaging: A Method to Study the Effects of Lubrication on the Microstructure of Tablets</i> , <u>Shashwat Gupta</u> , Savitha Panikar, Fernando Muzzio, Rutgers University
10:40	<i>Ion Pairing Chiral Separation of Two Positively Charged Amphiphilic Diastereomeric Degradation Products in Tablet Formulation</i> , <u>Preeti Patel</u> , Dawen Kou, Larry Wigman, Genentech
11:00	<i>Proposed United States Pharmacopeia Validated Method for Analysis of Chlorpheniramine Maleate and its Organic Impurities in Over the Counter Tablets and Extended Release Tablets Using Silica Hydride HPLC Columns</i> , <u>Joshua E. Young</u> , Bill Ciccone, MicroSolv Technology Corporation, Richard B. Nguyen, United States Pharmacopeial Convention, Joseph J. Pesek, Maria T. Matyska, San Jose State University

WEDNESDAY AFTERNOON, NOVEMBER 15

Recent Advances in 2D-LC, Part 2: Solving Real-World Problems in the Pharmaceutical and Chemical Industries, sponsored by the Chromatography Forum of Delaware Valley Chair: William Barber, Chromatography Forum of Delaware Valley	
2:00	<i>Fast Chiral Chromatography as the Second Dimension in 2-D HPLC</i> , <u>Christopher J. Welch</u> , Welch Innovation, LLC
2:30	<i>Characterization of Synthetic Polymers Using Ultra-high Pressure Two-Dimensional Liquid Chromatography</i> , <u>Lu Bai</u> , Wei Gao, Peilin Yang, Miroslav Janco, James Alexander IV, The Dow Chemical Company, Kimy Yeung, Dow Coating Materials
3:00	Break
3:20	<i>Expanding the Biologics CMC Analytical Toolkit with Two Dimensional Liquid Chromatography</i> , <u>Douglas Richardson</u> , Yuetian Chen, Jun Heo, Bhumit Patel, Jayesh Desai, David Pollard, Merck & Co.
3:50	<i>Application of Multidimensional Chromatography in Real World Pharmaceutical Analysis</i> , <u>CJ Venkatramani</u> , Mohammad Al-Sayah, Ila Patel, Larry Wigman, Jacob Kay, Meenakshi Goel, Genentech, Shu Rong Huang, University of Washington

Analysis of Peptides and Proteins in Biological Samples in Support of Drug Discovery and Development, sponsored by MicroSolv Technology Corporation Chairs: Wenying Jian, Janssen	
2:00	<i>Merck Strategy on Handling Hybrid Assay Coupling Immunoaffinity Purification with LC-MS/MS for Peptide Quantification in Regulated Bioanalysis to Support GLP TK and Clinical PK Studies</i> , <u>Yang Xu</u> , Merck & Co.
2:30	<i>Antibody Drug-Target Engagement Measurement in Tissue Using Quantitative Affinity Extraction Liquid Chromatography-Mass Spectrometry</i> , <u>Eugene F. Ciccimaro Jr.</u> , Bristol-Myers Squibb
3:00	Break
3:20	<i>Considerations for Assay Platform and Reagent Selection to Quantify Endogenous Protein Biomarker; a FGF21 Case Study</i> , <u>Yue Zhao</u> , Bristol-Myers Squibb
3:50	<i>Subunit-Level and Intact Analyses of Monoclonal Antibodies from In-Life Samples: LC-MS Methods for Pharmacokinetic Quantitation, Critical Quality Attributes, and Biotransformation</i> , <u>John Kellie</u> , GlaxoSmithKline

Wednesday Afternoon continued

In- or Out-Sourcing. That is the Question Chair: Dennis Swijter, ALMA	
2:00	<i>Comparative Review of Keeping Special Microbiology in a Hospital Lab vs. Out-Sourcing to Reference Labs</i> , <u>Margaret E. Blaetz</u> , East Coast Clinical Consultants
2:30	<i>Increasing Laboratory Efficiency through In-Sourcing and Out-Sourcing Strategies</i> , <u>Todd Mitchell</u> , Pace Analytical
3:00	Break
3:20	<i>Lab Coat Safety 101: Common Misconceptions Debunked – Top 4 Things Every College or University must know</i> , <u>Pascual Laquerria</u> , Cintas Corporation
3:50	<i>Leveraging CRO Relationships to Accelerate New Product Development</i> , <u>Scott Hanton</u> , Intertek

Innovations and Applications in Mass Spectrometric Analysis, organized by the North Jersey Mass Spectrometry Discussion Group Chair: Jim Shen, Bristol-Myers Squibb	
2:00	<i>Mechanistic Study of the Gas-Phase In-Source Hofmann Elimination of Doubly Quaternized Cinchona-Alkaloid Based Phase-Transfer Catalysts by (+)-Electrospray Ionization/Tandem Mass Spectrometry</i> , <u>Huaming Sheng</u> , Merck & Co.
2:30	<i>Implementation of an Agilent 6230B LC-TOF for the Dual Work Flow HRMS Analysis of ADCs and Small Molecules in a Walk-Up Environment</i> , <u>Michael Peddicord</u> , Bristol-Myers Squibb
3:00	Break
3:20	<i>Application of LC-HRMS in a Regulated CRO Laboratory</i> , <u>Lian Shan</u> , Q ² Solutions
3:50	<i>Implementation of Electron-based Dissociation on Biomolecules Structure Elucidation</i> , <u>Zhidan Liang</u> , Merck & Co.

Spectroscopic Applications of PAT in the Biopharmaceutical and Chemical Industries, organized by The Coblenz Society Chair: Brandye Smith-Goettler, Merck & Co.	
2:00	<i>Downstream Process Control Using Real Time Molecular Weight with Light Scattering</i> , <u>Bhumit Patel</u> , <u>Adrian Gospodarek</u> , <u>Mark Brower</u> , <u>Douglas Richardson</u> , <u>David Pollard</u> , Merck & Co., <u>Michael Larkin</u> , <u>Sophia Kendrick</u> , <u>Izhar Medalsy</u> , Wyatt Technology
2:30	<i>Raman-Based Nutrient and Metabolite Control in Bioprocessing Optimizes Product Quality and Peak Viable Cell Density</i> , <u>Karen Esmonde-White</u> , Kaiser Optical Systems
3:00	Break
3:20	<i>PAT for Vial-Filling Operations: High Speed Video Analysis Using Common Spectroscopy Tools</i> , <u>John Bobiak</u> , <u>Xiaodong Chen</u> , Bristol-Myers Squibb
3:50	<i>Simultaneous Monitoring of Reactions by NMR, Raman, IR, and NIR</i> , <u>Xiaoyun Chen</u> , <u>Donald Eldred</u> , <u>Xianghuai Wang</u> , <u>Siyu Tu</u> , <u>Li Cui</u> , <u>Paul LaBeaume</u> , <u>Mark Rickard</u> , <u>Jing Liu</u> , <u>Hsu Chiang</u> , <u>Kwan Skinner</u> , The Dow Chemical Company

Forensics in Focus Chair: Matthew Wood, Ocean County Sheriff Department	
2:00	<i>Analysis of Pesticide Residues in Cannabis Regulated by Oregon State Using LC-MS/MS</i> , <u>Jamie S. Foss</u> , <u>Sharanya Reddy</u> , PerkinElmer
2:20	<i>Quantitative Determination of Pesticides in Cannabis Plant Material Using Gas Chromatography-Mass Spectrometry</i> , <u>Daniel J. Wene</u> , <u>Zhihua (Tina) Fan</u> , <u>Bhupendra R. Patel</u> , New Jersey Department of Health
2:40	<i>The Effect of Environmental Conditions and Substrate Material on the Weathering of Gasoline and Light Petroleum Distillates</i> , <u>Brooke W. Kammrath</u> , <u>Matthew Ciano</u> , <u>Robert Powers</u> , University of New Haven, <u>Erika Chen</u> , Forensic Consultant
3:00	Break
3:20	<i>Harnessing Emerging IR and Raman Technologies to Obtain the Best Chemical Information from Pharmaceutical Products</i> , <u>Thomas Tague Jr.</u> , Bruker Corporation
3:40	<i>Complimentary Micro EDXRF and Micro Raman To Characterize Children's Crystal Accented Watches</i> , <u>Gene S. Hall</u> , Rutgers University

Wednesday Afternoon continued

Go with the Flow: Flavonoids, Formulation and Volatiles in Foods Chair: Kate Jackson, Colgate-Palmolive Co.	
2:00	<i>UHPLC-HRMS Analysis of Theobromine in Theobroma Cacao and Chocolates</i> , <u>Katarina Mladenovic</u> , Yuriko Root, Dil Ramanathan, Kean University
2:20	<i>Identification and Comparison of Flavonoids (Anthocyanins, Flavonols and Proanthocyanidins) and Organic Acids in Cultivated and Wild Blueberry Species</i> , <u>Yifei Wang</u> , Ajay Singh, Nicholi Vorsa, Rutgers University, Jennifer Johnson-Cicalese, Philip E. Marucci Center for Blueberry and Cranberry Research and Extension
2:40	<i>Incorporating Rheological and Tribological Techniques in the Food Industry</i> , <u>James P. Eickhoff Jr.</u> , Anton Paar USA, 10215 Timber Ridge Dr., Ashland, VA 23005, Charlotte Reppich
3:00	Break
3:20	<i>Quantitative Headspace Measurement of Volatiles to Semi-Volatiles in Dairy Products using Vacuum Assisted Sorbent Extraction (VASE) and GCMS Analysis</i> , <u>Daniel B. Cardin</u> , Victoria L. Noad, Entech Instruments
3:40	<i>Naked-Eye Electrochemical E.coli. Detection</i> , <u>Kwok-Fan Chow</u> , Sachintha Wijesinghe, Jung-Min Oh, University of Massachusetts Lowell
4:00	<i>UHPLC-HRMS Analysis of Aechmea Magdalenae Rhizome's Antibacterial Activity against E. coli Using Phospholipids as an Indicator</i> , <u>Mirna E. Giron</u> , Quintin Ferraris, Anima Ghosal, Yuriko Root, Dil Ramanathan, Kean University