

- 12:00-2:00 471 Fragment Based Molecularly Imprinted Polymers for Phenolic, Pyridine, Carboxylic Acid Compounds, Class Selective Solid-Phase Extraction (SPE), Sami Bayoudh, Delphine Derrien, Celine Perollier, Olivier Lepine, Kaynoush Naraghi, Polyintell
- 12:00-2:00 472 Characterization of Organic Compounds in Mezcal by Headspace Solid-Phase Microextraction and Stir-Bar Sorptive Extraction Followed by Gas Chromatography/Mass Spectrometry, Araceli Pena-Alvarez, Stefania Elizalde, David Reyes, Universidad nacional Autonoma de Mexico
- 12:00-2:00 473 The Effects of Vapor Pressure and Vapor Density on the Atmospheric Evaporation Rate of Solvents, Walter B. Shepherd Jr., Organomation Associates
- 12:00-2:00 474 Mephedrone: Evaluation of Extraction using Mixed-Mode Cation Exchange SPE with LC/MS/MS Analysis, Lee Williams, Rhys Jones, Steve Jordan, Helen Lodder, Biotage
- 12:00-2:00 475 Effective Strategies for Phospholipid Removal using Supported Liquid Extraction with LC/MS/MS Analysis, Lee Williams, Rhys Jones, Steve Jordan, Helen Lodder, Biotage
- 12:00-2:00 476 Development of New Stir-Bar Polymeric Coating for Multi-Residue Analysis of Pharmaceuticals in Water by GC/MS, Paulo Clairmont Gomes, Alvaro Jose Santos-Neto, Fernando Mauro Lancas, University of Sao Paulo
- 12:00-2:00 477 Quantitative Extraction of Polycyclic Aromatic Hydrocarbons in Drinking Water Samples using BEA, USY and ZSM-5 Zeolites, Walter B. Wilson, Andres D. Campiglia, University of Central Florida, Andreia A. Costa, Jose A. Dias, Silvia C. L. Dias, University of Brazil, Huiyong Wang, University of Michigan State
- 12:00-2:00 478 Using a Unique Approach to Sample Preparation to Increase the Selectivity of an LC/MS/MS Assay for Ethinylestradiol, John T. Martin, Jessalynn P. Wheaton, Erin E. Chambers, Diane M. Diehl, Waters
- 12:00-2:00 479 Effect of Analyte Desorption on Sensitivity in Dried Blood Spot Analyses, Ritu Arora, William Hudson, Paul Boguszewski, Ben Yong, Agilent Technologies
- 12:00-2:00 480 Withdrawn by the author.
- 12:00-2:00 481 A New Paradigm for Microwave Extraction of Essential Oils and Natural Compounds, Tim Michel, Melissa Lightner, Milestone
- 12:00-2:00 482 Clean-Up of Baby Food Samples using Gel Permeation Chromatography, Laura Chambers, Phil Griffiths, Jeff D'Agostino

Wednesday Afternoon, November 16, 2011

EAS Award for Outstanding Achievements in Chemometrics Honoring Dr. Beata Walczak, Silesian University

Sponsored by *Eigenvector Research*

Chair: Peter D. Wentzell, Dalhousie University

Ballroom West

- 2:00 483 New Approaches to High-Throughput Quantitative Proteomics, Peter D. Wentzell, Dalhousie University
- 2:30 484 Molecular Characterization of Zebrafish Embryogenesis via DNA Microarrays and Multi-Platform Time Course Metabolomics Studies, Tobias Karakach, Kelly Soanes, Ian W. Burton, John C. Achenbach, Joseph Hui, Susane Penny, Institute for Marine Biosciences
- 3:00 485 Chemometrics for Two-Dimensional Liquid Chromatography, Sarah Rutan, Robert C. Allen, Hope P. Bailey, Mallory G. John, Virginia Commonwealth University, Christophe Tistaert, Vrije Universiteit Brussel
- 3:30 Break
- 3:50 486 Chemometric Challenges in Metabolomics, Michal Daszykowski, University of Silesia
- 4:20 Presentation of the EAS Award for Outstanding Achievements in Chemometrics
- 4:25 487 Chemometrics in Proteomics, Beata Walczak, University of Silesian

New York Section of the Society for Applied Spectroscopy Gold Medal Award

Honoring Dr. Gary Blanchard, Michigan State University

Chair: Lydia Breckenridge, Bristol-Myers Squibb

Ballroom Center

- 2:00 Presentation of the New York Section of the Society for Applied Spectroscopy Gold Medal Award
- 2:05 488 Characterizing Interfaces using Time-Resolved Spectroscopy, Gary Blanchard, Michigan State University
- 2:35 489 Nanoscale Sensor Platforms, Frank V. Bright, New York State University at Buffalo
- 3:05 490 Protein Biomarker Discovery, Mary J. Wirth, Yimun Hua, Purdue University
- 3:35 Break
- 3:55 491 Molecular Organization and Electric Field Reversal at Air/Aqueous Interfaces revealed from Phase-Sensitive Sum Frequency Generation Spectroscopy, Heather C. Allen, Wei Hua, Ohio State University
- 4:25 492 Vibrational Spectroscopy of High-Strength Fibers, D. Bruce Chase, University of Delaware

Near-Infrared Spectroscopy Applications in Biomedical and Pharmaceutical Sciences

Chair: John Bobiak, Bristol-Myers Squibb

Ballroom East

- 2:00 493 NIR Assessment of Water in Articular Cartilage as an Indirect Measure of Mechanical Properties, Nancy Pleshko, Mugdha Padalkar, Alireza Hosseini, Temple University

- 2:30 494 Determining Composite Potency by NIR for Large Dosage Forms, John Spirig, Tim Stevens, Judy Lin, Anthony Tantuccio, Bristol-Myers Squibb
- 3:00 495 Effect of Raw Material Variability and Instrument Drift on Near-Infrared Calibration Model Stability for Pharmaceutical Products, Benoit Igne, Zhenqi Shi, James K. Drennen III, Carl A. Anderson, Duquesne University
- 3:30 Break
- 3:50 496 Application of In-Line Near-Infrared Spectroscopy for Monitoring of Hot Melt Extrusion in Pharmaceutical Drug Development, Steven M. Short, Matthew J. Bigert, Brendan Meehan, Busolo Wabuyele, Gert Thurau, Merck
- 4:20 497 Determining Optical Sampling Volumes in Turbid Media, Francis W. L. Esmonde-White, Michael D. Morris, University of Michigan, Karen A. Esmonde-White, Blake J. Roessler, University of Michigan Medical School

Supercritical Fluid Chromatographs for Better Analysis

Chair: Justin Pennington, Merck

Bridgewater

- 2:00 498 Dramatic Improvement on Supercritical Fluid Chromatography(SFC) Performance using Waters Proprietary Enhancers, Chuping Luo, Ziqiang Wang, Waters
- 2:20 499 Improving Productivity in Preparative Supercritical Fluid Chromatography (SFC) Separations, Jeffrey Kiplinger, Paul Lefebvre, Michael Rego, John Tipping, Averca Discovery Services
- 2:40 500 Evaluation of Aurora Supercritical Fluid Chromatography for Chiral Chromatography Method Development Screening and High-Throughput Analysis, Zainab Pirzada, Xiaoyi Gong, Mirlinda Biba, Wes Schafer, Jian Ning, Christopher J. Welch, Merck
- 3:00 501 Interfacing Supercritical Fluid Chromatography (SFC) to Various Detectors with Emphasis on Cold Electro Spray Mass Spectrometry and Achieving the Sensitivity, Robustness, as well as, Dynamic Range Needed for Variety of Applications, Qing Ping Han, Xu Zhang, Mark Hayward, Lundbeck Research
- 3:20 Break
- 3:40 502 Supercritical Fluid Chromatography with Tandem Mass Spectrometry (SFC/MS/MS) for Quantification of Stereoisomers in *In-Vitro* and *In-Vivo* Biological Samples, Yingru Zhang, Chunlei Wang, Jun Dai, Bristol-Myers Squibb
- 4:00 503 Use of Charged Aerosol Detection and Mass Spectrometry as an Alternative to Ultraviolet Detection in Supercritical Fluid Chromatography, James F. Cuff III, Wes A. Schafer, Mirlinda Biba, Xiaodong Bu, Xiaoyi Gong, Christopher J. Welch, Merck
- 4:20 504 Utilization of Supercritical Fluid Chromatography (SFC) for Resolution of Impurities from Synthetic Peptides, Michael B. Hicks, Atsu Apedo, Douglas Moore, Michael Miller, Adam Clarke, Yingru Zhang, Bristol-Myers Squibb
- 4:40 505 Impurity Profiling of Drugs by SFC: A Viable Alternative to HPLC?, Thomas F. Hooker, Anthony J. Alexander, Frank P. Tomasella, Bristol-Myers Squibb

Immunogenicity Assessment in Biopharmaceutical Development

Chair: Dong Geng

Bernardsville

- 2:00 506 Immunogenicity Assessment in Biopharmaceutical Product Development, Dan Sikkema, GlaxoSmith-Kline
- 2:40 507 Immunogenicity Risk Assessment for Biological Drugs and Development of the Strategy for the Bioanalytical Assessments of Anti-Drug Antibodies, Sheng Dai, Centocor
- 3:20 Break
- 3:40 508 Cell Based Nab Assay: Design, Development and Validation, Shawn Li, Alliance Pharma
- 4:20 509 Overcome Matrix Interference in Immunogenicity Assay Development, Dong Geng

Analysis of Solids, Liquids and Gases in the Environment

Chair: Kate Jackson, Colgate-Palmolive Company

Hillsborough

- 2:00 510 High Resolution Mass Spectrometry for Detecting, Characterizing and Quantifying Pharmaceutical and Metabolites in Tap Water, Rebeca C. Pinhancos, Dilrukshi Ramanathan, Kean University
- 2:20 511 Withdrawn by the author.
- 2:40 512 Gas Chromatography Quadrupole Time-of-Flight (GC Q/ToF) Analysis of Fluorinated Alkyl Compounds in Bio-Solids, Anthony Macherone, Sofia Aronova, Tom Doherty, Agilent Technologies
- 3:00 513 Determination of the Vapor Pressure of Polyfluorinated Organic Compounds by Gas Phase Infrared Spectroscopy, Alexander A. Marchione, Mary A. Kaiser, Miguel A. Botelho, Raymond E. Richardson, Robert C. Buck, DuPont, Shirley Fischer-Drowos, Widener University
- 3:20 Break
- 3:40 514 What can Mid-Infrared Diffuse Reflectance Spectroscopy (DRIFTS) Tell us about Biochar?, James B. Reeves III, United States Department of Agriculture
- 4:00 515 Bisphenol A and Its Analogues in Shrimp and Lobster Samples, Yuegang Zuo, Zhuo Zhu, University of Massachusetts-Dartmouth, James D. Stuart, Hans Laufer, University of Connecticut
- 4:20 516 Moving Towards a Technical Specification for Fluorescence Excitation-Emission Mapping and Absorbance Analysis of Colored Dissolved Organic Matter, Adam M. Gilmore, Karen E. Gall, Horiba Scientific
- 4:40 517 Quantitative Analysis of Carbonyl-DNPH Derivatives by UHPLC/UV, Sergio A. Guazzotti, Guifeng Jiang, Terry Zhang, Thermo Fisher Scientific

The Analysis of the Precious Metals

Chair: Robert M. Ianniello, BASF Corporation

Westfield

- 2:00 518 Analysis of Precious Metals in Spent Autocatalysts by Handheld X-ray Fluorescence Spectroscopy, Kin-Chung Lam, Catherine S. Heneghan Perry, BASF Corporation

- 2:30 519 Determination of Platinum-Chloro Complexes in Automobile Catalyst Samples Using Ion-Exchange Chromatography, Dejan Savic, Kwan H. Nam, Catherine S. Heneghan Perry, BASF Corporation
- 3:00 520 Petrochemical Catalyst Assays: A Journey - Classical Methods to Modern Instrumental Techniques, Malkit Basi, Ledoux & Co.
- 3:30 Break
- 3:50 521 High-Performance ICP/OES Method for Platinum and Palladium Analysis using the NIST Protocol, Arnold Savolainen, Metalor Technologies
- 4:20 522 Fire Assay Tin Collection: A Practical Tool for Assaying Rhodium, Joseph Peixoto, Dana Evans, Gannon & Scott

NMR Methods and Applications: Drug Discovery, Materials, Biological Systems

Chair: **Gregory S. Boutis, CUNY-Brooklyn**

Tewksbury

- 2:00 523 Quantum Mechanical Calculations of NMR Parameters: Applications to Structure Elucidation Problems in Drug Discovery, Alexei V. Buevich, Tze-Ming Chan, Merck
- 2:20 524 Combining Mass Spec and NMR for Structural Elucidation of an Unknown Impurity in a Pharmaceutical Dosage Form, Jack Guan, Sandoz
- 2:40 525 HSQC-1,1-ADEQUATE: A Different Approach to Establishing ¹³C-¹³C Connectivity Networks, Gary E. Martin, Bruce D. Hilton, Merck, Kirill A. Blinov, Moscow University
- 3:00 526 NMR Studies of Framework Mobility in the Metal-Organic Framework Crystal IRMOF-3, Cecil Dybowski, University of Delaware, Robert E. Taylor, William Morris, Omar M. Yaghi, Miguel Garcia-Garibay, University of California-Los Angeles
- 3:20 Break
- 3:40 527 Direct Measurement of the Correlated Dynamics of the Protein-Backbone and Proximal Waters of Hydration in Mechanically Strained Elastin, Cheng Sun, Odingo Mitchell, Jiaxin Huang, Gregory Boutis, Brooklyn College
- 4:00 528 Metabolite Analysis in Brain Extracts from Alzheimer's Transgenic Mice by NMR, Yan He, Sethu Sankaranarayanan, Maria Pierdomenico, Nelly Aranibar, Donna Barten, Stella Huang, Charlie F. Albright, Michael D. Reily, Bristol-Myer Squibb
- 4:20 529 NMR Structural and Dynamic Studies of PED/PEA-15 Protein Reveals Novel Binding Patterns with ERK2, Yufeng Wei, Dana F. Cordasco, Edward C. Twomey, Seton Hall University

Tools to Manage a Laboratory in the Global Economy, organized by ALMA

Chairs: **Dennis Swijter, International Flavors and Fragrances and Scott Hanton, Intertek ASA**

Bedminster

- 2:00 530 Alignment of Industry and Academia, Marina Despotopoulou, Arkema
- 2:25 531 A Checklist Manifesto for the Analytical Development Lab, Mary Selman, Rohto-Mentholatum

- 2:50 532 Tools for Knowledge Retention and Transfer, Scott Hanton, Intertek ASA
- 3:15 533 Implementation of an Electronic Laboratory Notebook, Paul Cihak, International Flavors and Fragrances
- 3:40 Break
- 4:00 534 Using Electronic Media to Manage the Laboratory in a Global Environment: Trends and Tools - Current and Future State, Robert D. Walla, Astrix Technology Group
- 4:25 535 Laboratory Nightmares!, Dan Klein, Disposal Consultant Services
- 4:45 536 Dramatically Improve Cash Flow and Eliminate Costs for Generating and Managing Complex Data Packages using Labcore Software, Mark S. Ferrero, Robert Corriher, Poplar Solutions
- 5:05 537 A Better Way to Manage Performance, Dennis Swijter, International Flavors and Fragrances

21st Century Forensic Science

Chair: **Matthew Wood, New Jersey State Police**

Princeton

- 2:00 538 Advances in Firearm and Toolmark Examination and Forensic Ballistics, Peter Diaczuk, John Jay College
- 2:40 539 Towards Improving DNA Extract Storage for a Range of Template Amounts of DNA, Theresa Caragine, Office of the New York City Medical Examiner
- 3:20 Break
- 3:40 540 21st Century Fire Investigation from the Laboratory Perspective, Vincent Desiderio, American Society of Trace Evidence Examiners
- 4:20 541 An Investigation of Near-Infrared Spectroscopy and Its Application to Forensic Science Drug Analysis of Gamma-Hydroxybutyrate, Kristen Johnson, Thomas A. Brettell, Cedar Crest College

Thursday Morning, November 17, 2011

American Microchemical Society Benedetti-Pichler Award Honoring Dr. Sergio Caroli, Istituto Superiore di Sanità
Chair: **Joseph Sneddon, McNeese State University**

Bridgewater

- 9:00 542 Approaches to Biodistribution Studies of Noble Metal Nanoparticles by Inductively Coupled Plasma Mass Spectrometry (ICP/MS), Petra Krystek, VU University of Amsterdam
- 9:25 543 How Unbiased is Non-Targeted Metabolomics and is Targeted Pathway Screening the Solution?, Uwe Christians, Jacek Klepacki, Jelena Klawitter, Jost Klawitter, University of Colorado
- 9:50 544 Measurement of Metalloids Species in Food and Vitamin Supplements using HPLC/ICPMS, William Maher, Frank Krikow, Simon Foster, Rajani Ragtap, University of Canberra, Michael Ellwood, Australian National University
- 10:15 Break

- 10:35 545 From Speciation to Isotopic Signatures for Human Health: A Long Journey, Olivier F. X. Donard, D. Amouroux, Emmanuel Tessier, Vladimir Epov, Université de Pau et des Pays de l'Adour
- 11:00 546 Metals in Seafood: Potential Threat to Human Health, Joseph Sneddon, McNeese State University
- 11:25 Presentation of the American Microchemical Society Benedetti-Pichler Award
- 11:30 547 Depleted Uranium in Biological Material: An Analytical Challenge, Sergio Caroli, Istituto Superiore di Sanità

Industrial Microscopy**Chair: John R. Reffner, Dow Chemical***Hillsborough*

- 9:00 548 Industrial Application of Transmission Electron Microscopy (TEM) for Catalyst Evaluation, George R. Munzing Jr., BASF Catalysts
- 9:30 549 Characterization of Ca Metallurgical Wire, John W. Catino, R. Michael Kroc, Gary P. Tomaino, Minerals Technologies, Yves Vermeulen, MINTEQ International Inc.
- 10:00 550 Microscopy of Rubber-to-Metal Bond Failures, Terri Powell, DOW Chemical 10:30 Break
- 10:50 551 Multimode Microprobe Analysis, John A. Reffner, John Jay College
- 11:20 552 Parenteral Primary Packaging Analysis Through Microscopy, Julian Popchock, West

Composition Information from Chemometrics**Chair: Paul T. Richardson, DuPont***Westfield*

- 9:00 553 Applying Multivariate Analysis to Morphological Descriptors and Raman Spectra of Mixed Particulates, Eunah Lee, Jeff Bodycomb, David Tuschel, Horiba, Philo Morse, Particle Sciences, Jeremy Shaver, Eigenvector Research
- 9:30 554 ATR FT/IR and Chemometrics Compositional Analysis of Fluoropolymer Acrylic Coating Formulations. Exploiting Information from Loading Spectra to Improve Calibration Model Robustness, Dana Garcia, Ravi Gupta, Kurt Wood, Wayne Skilton, Lonnie Bryant, Naoki Yoshida, Arkema
- 10:00 555 Examination of the Effect of Data Resolution on IR Spectral Database Search Results, Ty Abshear, Gregory Banik, Marie Scandone, Bio-Rad Laboratories
- 10:30 Break
- 10:50 556 Improving Near-Infrared Calibration Model Accuracy and Robustness by Optimized Population Structure and Spectral Processing, Chris Heil, David Drapcho, Chris Moreland, Herman He, Michelle Pressler, Thermo Fisher Scientific
- 11:20 557 Differentiating UV/VIS Spectra by Normalized Line Spectra Analysis, Thomas H. Pritchett, Kelsey Wilkinson, Cedar Crest College

Science Behind the Standards, Sponsored by United States Pharmacopeia**Chairs: Oscar Liu, Merck and Behnam Davani, United States Pharmacopeia***Tewksbury*

- 9:00 558 USP Monograph Modernization Initiative, Behnam Davani, United States Pharmacopeia
- 9:30 559 Heparin Monograph Revision, Samir Wahab, United States Pharmacopeia
- 10:00 560 Recent Revisions to General Chapter <621> Chromatography, Horacio N. Pappa, United States Pharmacopeia
- 10:30 Break
- 10:50 561 Elemental Impurity: USP's Perspective, Kahkashan Zaidi, United States Pharmacopeia
- 11:20 562 Elemental Impurities - Development of Modern Analytical Procedures, Heather Joyce, Jennifer L. Belsky, Premal A. Bhatt, Samir Wahab, Patricia A. White, Kahkashan Zaidi, United States Pharmacopeia

Hyphenated Chromatography, organized by North Jersey Chromatography Group**Chairs: Landon Greene, Bristol-Myers Squibb and Steven Toth, International Flavors and Fragrances***Bedminster*

- 9:00 563 Column Switching and Multi-Dimensional Chromatography in LC/MS Analysis, Eduard Rogatsky, Albert Einstein College of Medicine
- 9:40 564 Radiopharmaceutical Drug Development: Chromatographic Support, Shannon L. Phillips, Druce Crump, Jason A. Rogers, Jakob E. Baumeister, IsoTherapeutics Group
- 10:20 Break
- 10:40 565 From Speciation to Metallomics – the Essential Role of LC/ICPMS, Joseph A. Caruso, University of Cincinnati
- 11:20 566 A Selectable One-Dimensional or Two-Dimensional GC/MS System Based on Capillary Flow Technology for Trace Detection, John R. Stuff, Jacqueline A. Whitecavage, Nobuo Ochiai, Kikuo Sasamoto, Gerstal

The Diverse World of Spectroscopy**Chair: Peter Stchur, DuPont***Bernardsville*

- 9:00 567 Using the Power of SERS in Routine Analysis, Paulette Guillory-Gardner, Thermo Fisher Scientific
- 9:20 568 Eye Safe Raman at 1550 nm, Wayne Smith, Carl Brouillette, Hermes Huang, Stuart Farquharson, Real-Time Analyzers
- 9:40 569 Can Raman Spectroscopy Determine if Your Fish Oil Dietary Supplement is Natural or Synthetic?, Gene S. Hall, Rutgers University, Fran Adar, Horiba Jobin Yvon
- 10:00 570 The Identification and Quantitative Determination of Hydrocarbon Contaminations in Soil by a Hand-Held NIR Spectrometer, Heinz W. Siesler, University of Duisburg-Essen

- 10:20 Break
- 10:40 571 An Innovative New Plasma Source for Elemental Analysis using Atomic Spectroscopy, Doug Shrader, Eric Vanclay, Mike Hammer, Craig Taylor, Agilent Technologies
- 11:00 572 Terahertz Spectrometry and Applications in Analytical and Biological Sciences, Anis Rahman, Aunik K. Rahman, Applied Research & Photonics
- 11:20 573 Using Nature's Barcode™; Fast, Easy Stable Isotope Analyses to Track Origin of Raw Materials and Products, Iain Green, Nabil Saad, Picarro, Inc.
- 11:40 574 The Fluorescence Study of the Interaction of Curcumin with L-Histidine in Simulated Body Fluid, Maurice O. Iwunze, Adedunni Adeyemo, Morgan State University

A Symposium to Honor Mary A. Kaiser, a Premier Chromatographer and Scientist: Science, History and Experiences

Chair: Edward Davis, DuPont

Princeton

- 9:00 575 Tribute to a Scholar, Colleague, and Friend, Shirley Fischer-Drowos, Widener University
- 9:20 576 Computer-Assistance in Optimizing Separations in Gas Chromatography, Eugene F. Barry, University of Massachusetts-Lowell
- 9:40 577 The Importance of Proper Instrument Calibration and Peak Shape Analysis in Size-Exclusion Chromatography of Polymers, Joseph L. Glajch, Momenta Pharmaceuticals
- 10:00 578 Stationary Phase Selectivity in Gas Chromatography, Matthew S. Klee, JAS Inc.
- 10:20 Break
- 10:40 579 Fitness for Purpose: Analytical Methods for Highly Fluorinated Materials, Barbara S. Larsen, DuPont
- 11:00 580 Mary A. Kaiser: A Champion for Analytical Chemistry, Anita J. Brandolini, Ramapo College of New Jersey
- 11:20 581 Collaborative Trial for Oxamy!: Internal Versus External Calibration is One Better than the Other? Mary Ellen McNally, Qirong Wu, Thomas Cosgrove, William L. Champion, DuPont Crop Protection

Thursday Afternoon, November 17, 2011

New York Microscopical Society Ernst Abbe Award Honoring Dr. E. Neil Lewis, Malvern instruments

Chair: John A. Reffner, John Jay College

Hillsborough

- 1:00 582 Imaging Molecular Chemistry, John A. Reffner, John Jay College
- 1:30 583 Pharmaceutical Problem Solving with NIR Chemical Imaging, Janie Dubois, University of Maryland, E. Neil Lewis, Malvern Instruments
- 2:00 584 Putting the More Back in Morphology: The use of Machine-Learning Software and Multispectral Imaging for Microscopy-Based Image Segmentation and Signal Quantitation, James R. Mansfield, Caliper Life Sciences

- 2:30 Break
- 2:50 585 Initial Investigations into a Novel Resolution Target for Raman Microscopy, Neil Everall, Intertek MSG
- 3:20 Presentation of the New York Microscopical Society Ernst Abbe Award
- 3:25 586 Measuring the Chemical and Morphological Properties of Particulate and Composite Materials and Products: When one Spectrum is Simply not Enough, E. Neil Lewis, Malvern Instruments

Near-Infrared Analysis - Back to Basics

Chair: David Hopkins, NIR Consultant

Bridgewater

- 1:00 587 What You can See with NIR: Interpreting the Bumps and Squiggles, Jerome Workman, Unity Scientific
- 1:30 588 Examining Diffuse NIR Reflection and Transmission Spectra More Thoroughly, Karl Norris, NIR Consultant, Stephen Delwiche, United States Department of Agriculture
- 2:00 589 A New Paradigm for NIR Calibration Transfer, Howard Mark, Mark Electronics
- 2:30 Break
- 2:50 590 Spectroscopic Assays Under Adverse Conditions, Franklin E. Barton II, James A. de Haseth, Light Light Solutions
- 3:20 591 Using Multiplicative Scatter Correction Effectively, David W. Hopkins, NIR Consultant, Olga Kolomiets, SPRL Bel Ru

Pharmaceutical Solid Analyses Off-Line, On-Line, and Field Testing

Chair: Kate Jackson, Colgate-Palmolive Company

Bernardsville

- 1:00 592 At-Line and In-Line Monitoring of Blending, Ribbon Density and Tablet Potency and Content Uniformity of a Solid Dosage Form, Claudia C. Corredor, Brian Yan, Anthony Tantuccio, Tim Stevens, Douglas Both, Kevin Macias, Bristol-Myers Squibb
- 1:20 593 Blend End-Point Monitoring by Near-Infrared Spectroscopy and Its Effect on Tablet Content Uniformity: Effect of Different End-Point Criteria, Sameer Talwar, Benoit Igne, Carl A. Anderson, James K. Drennen III, Duquesne University
- 1:40 594 A Demonstration of On-Line Raman Spectroscopy for the Prediction and Control of Crystalline Form Purity in Fluid Bed Granulation and Drying, Brian M. Zacour, James K. Drennen III, Carl A. Anderson, Duquesne University
- 2:00 595 Bringing Near-IR Analysis to the Tablet Press, Gael Rolland, Ronald Rubinovitz, Nutsima Schnell, Buchi Corporation
- 2:20 Break
- 2:40 596 Using Real-Time Near-Infrared Data to Predict Post Relaxation Radial Tensile Strength of Pharmaceutical Tablets, Sameer Talwar, Benoit Igne, Zhenqi Shi, James K. Drennen III, Carl A. Anderson, Duquesne University
- 3:00 597 Laser-Induced Breakdown Spectroscopy for the Assessment of Tablet Lubrication, Lydia Breckenridge, Nancy Lewen, Bristol-Myers Squibb

- 3:20 598 Analysis of Active Pharmaceutical Ingredients and Impurities in the Solid Dosage Form using Energy Dispersive X-Ray Spectroscopy, Tara L. Nylese, Bob Anderhalt, EDAX, Utsav Patel, New Jersey Institute of Technology
- 3:40 599 Real-Time Field Pharmacy Testing: Linking Product Quality and Anti-Counterfeiting, Gary E. Ritchie, Sharon Flank, InfraTrac, Narender Dhallan, River Rx Pharmacy, Igor Nazarov, Thermo Fisher Scientific

Using Novel Excipient Strategies in Drug Product Development

Chair: **Magali Hickey, Alkermes**

Westfield

- 1:00 600 The Regulatory and Safety Evaluation of New Excipients, Christopher Demerlis, Colorcon
- 1:25 601 Quality Considerations to the Qualification of a New Excipient or Excipient Supplier, Irwin Silverstein, IBS Consulting in Quality
- 1:50 602 The Role of Formulations in Patent Life Cycle Management, Andrina Zink, Alkermes
- 2:15 Break
- 2:35 603 Considerations when Selecting Inactive Ingredients: Formulation Design Based on Excipient Chemistry, Julius F. Remenar, Alkermes
- 3:00 604 Moisture Sorption Profiles of Excipients and Excipient Blends and Their Impact on Drug Product Performance, Roman Shimanovich, Melanie Cooke, Jared Forman, Matthew Peterson, Amgen
- 3:25 605 Use of Pluronic as Precipitation Inhibitors in Biologicals Drug Product Development, Wei-Guo Dai, Johnson & Johnson

Pushing the Limit - Novel Applications of Trace Detection

Chair: **Hugh Yao, Bristol-Myers Squibb**

Tewksbury

- 1:00 606 Strategies for Lowering Detection Limits in Chromatography using Common Sense Chemistry and Off-the-Shelf Devices, Nicholas H. Snow, Seton Hall University
- 1:30 607 Femtosecond Laser Mass Spectroscopy for Protein and Tissue Analysis, Robert J. Levis, Temple University
- 2:00 608 Trace Metal Analysis in Pharmaceuticals, Nancy Lewen, Bristol-Myers Squibb
- 2:30 Break
- 2:50 609 Harnessing the Power of Chemical Derivatization to Enhance Trace Level Detection of Genotoxic Impurities, David Q. Liu, Mingjiang Sun, Alireza S. Kord, GlaxoSmithKline
- 3:20 610 An Optical Nose Approach to Explosive Detection, Trocia Clasp, Scott W. Reeve, Arkansas State University

LC/MS Analysis for Pharmaceuticals, Biomarkers and Petroleum Products

Chair: **William Barber, Agilent Technologies**

Bedminster

- 1:00 611 Application of a Design of Experiment Approach in the Development of a Sensitive Bioanalytical Assay in Human Plasma, Michelle L. Dawes, James S. Bergum, Alan E. Schuster, Anne-Francoise Aubry, Bristol-Myers Squibb
- 1:20 612 Simultaneously Extracting Extremely Hydrophobic Acidic/Basic and Hydrophilic Neutral Analytes in Biological Fluids – A Special Application of Mix-Mode SPE Technology, Yuzhu Xue, Viya Pharma
- 1:40 613 A Sensitive LC/MS/MS Method to Measure 13C10-BMS-790052 and BMS-790052 in Plasma from a Monkey Study for Metabolism Comparison, Hao Jiang, Wenying Li, Jianing Zeng, Anne-Francoise Aubry, Mark A. Arnold, Bristol-Myers Squibb
- 2:00 614 Improving the Cleanliness of DBS Extracts using a 96-Well Phospholipid Removal Plate and Single Step Method, Jessalynn P. Wheaton, Erin E. Chambers, Diane M. Diehl, Waters
- 2:20 Break
- 2:40 615 Rapid Detection and Differentiation of Staphylococcus Epidermidis and Staphylococcus Aureus using the ACB2000 System, Parag Borgaonkar, Akshay Pujara, Jyoti Roy, Gerald D. Bonnar, Al Limaye, ACBirox, David Perlin, Stephen Park, University of Medicine and Dentistry New Jersey, Waleed D. Maswadeh, Pete Snyder, United States Army
- 3:00 616 A UHPLC/MS Approach for Uniformity Analysis of Agglomerate Based Dry Powder Inhalers: From Single Agglomerate to Unit Dose, Justin Pennington, Joseph Medendorp, John Lena, Gary Ewing, Brent Donovan, Merck
- 3:20 617 Ultra-High-Resolution Time-of-Flight Mass Spectrometry used for Differential Analysis of Aromatic and Heteroatomic Components of Crude Petroleum from Various Sources, Kevin Siek, Joe Binkley, Jeffrey S. Patrick, John Heim, David Alonso, LECO