17TH ANNUAL SYMPOSIUM

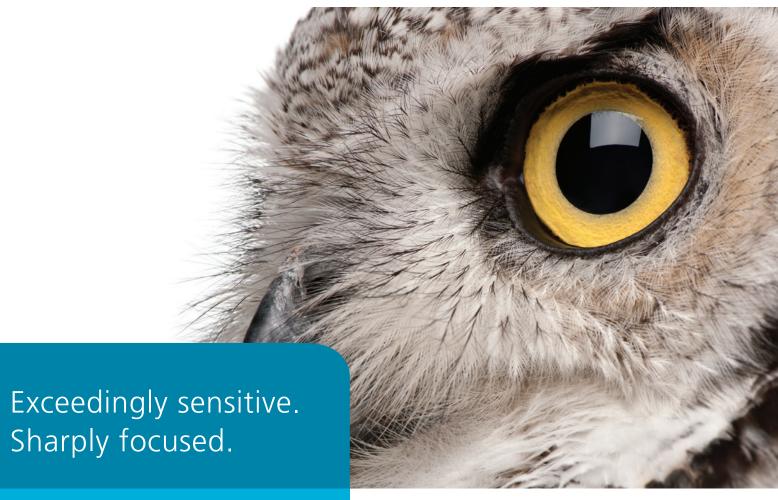
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Where Technology and Solutions Meet





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WELCOME

September 29, 2014

Inspiration. Collaboration.

Dear Colleagues:

On behalf of the organizing committee and our sponsors, it is our pleasure to welcome you to the 17th annual Symposium on Clinical and Pharmaceutical Solutions through Analysis (CPSA USA 2014). The meeting and related events feature lively discussions, memorable interactions, and the sharing of real-world experiences that focus on the unique challenges facing the modern analytical laboratory and the risks – and reality – of personalized healthcare.

The goal of CPSA is to provide timely, in-depth reviews of innovative technology and emerging practices through open discussion of industry related issues and needs. Our program chairs, Paul Corcoran and Gary Valaskovic, have followed Shane Needham's vision from last year's annual meeting to: 1) "think big" (cure disease) by working together and 2) stay connected (throughout the year) and let our meeting and/or your respective session/event literally get in the way of an ongoing discussion.

Our intent is to feature scientific leaders within diversified symposia, colloquia, and sponsored events that are specially designed to be highly interactive where professionals can openly share their experiences and visions in a collegial setting – where technology and solutions meet!

We are extremely delighted to feature a provocative line up of courses, symposia, colloquia, sponsored events, and distinguished guests. On Monday, Steven Wong Professor of Pathology at Wake Forest University and President of the American Association for Clinical Chemistry (AACC), will deliver the Distinguished Lecture on "Translational Mass Spectrometry Enabling Personalized Medicine." Our Plenary Lecture on Tuesday will feature Ann Weber, Vice President Discovery Chemistry at Merck, on "Adventures in Drug Discovery: Development of JANUVIA for Type 2 Diabetes." Andy Hoofnagle, Associate Professor of the University of Washington, will deliver the Keynote Lecture on Wednesday, "Helping the Clinical Lab Help Patients."

The short courses at CPSA continue to focus on specialized training with a unique workshop-style format that promotes open discussion on current industry practices, emerging applications and first-hand experiences with innovative analytical technologies. Symposia sessions provide a unique forum for opinion leaders to openly share and benchmark industry issues and needs as well as early experiences with new technology and methods. Colloquia sessions provide focus on industrial activities related to regulatory issues and emerging laboratory workflows. These sessions further enhance the specialized training from our CPSA Short Courses.

Communications and media have grown with CPSA and the dynamic use of video and interactive surveys are now ready to be fully integrated into CPSA events – worldwide – Brazil, China, and USA! Also, our Graduate Student Session will now be formally recognized as the Steven A. Hofstadler Graduate Student Session. Finally, we are excited to share our significant progress with our CPSA Charitable Giving and CPSA Institute initiatives during the Sponsors Dinner event.

We encourage you to actively participate, interact, and share ideas during the event. Creativity and imagination have been key ingredients to making CPSA meetings a memorable experience all over the world. In this way, a genuine passion for the analytical sciences can lead to personal growth as well as opportunities to significantly impact the field through participation and leadership.

Special thanks go to the sponsors of this unique event. All CPSA sponsors share the passion and commitment for both innovative technologies and the acceleration of product development. CPSA sponsors and participants are dedicated to the spirit of cooperation. Imagination needed!

Sincerely,

Mike S. Lee, Ph.D.

Paul Corcoran

Jany Valal
Gary Valaskovic, Ph.D.



2014 ORGANIZING COMMITTEE

PROGRAM CO-CHAIRS

Paul Corcoran McKinley Scientific **Gary Valaskovic** New Objective

SYMPOSIA & SESSIONS

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Dave Abramowitz
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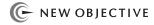


SPONSORS

Thank You!

The CPSA annual symposium is made possible by the broad-based support of industry sponsors. The passion for the analytical sciences and the accelerated discovery and development of pharmaceuticals is shared by each sponsor. As a result, the event is dedicated to promoting awareness and understanding of the issues and needs associated with research and development in the hopes of inspiring significant advances in the field.









































































EXHIBITION

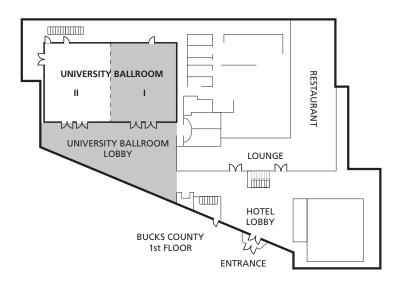
Wednesday October 1

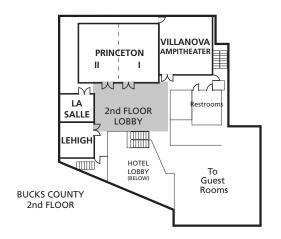
EXHIBITORS	воотн
AB SCIEX	16
Agilent Technologies	26
Alturas Analytics	1
Biotage	5
Cambridge Isotope Labs	35
Drummond Scientific	4
ES Industries	17
GenTech Scientific	21
InfoClinika	31
Intertek	20
IONICS Mass Spectrometry Group	14
ITSP Solutions	11
MAC-MOD Analytical	30
McKinley Scientific	3
Merrill Lynch	28
Metanomics Health	15
Molecular Discovery	29
MS Mass Spec Consultants	33
mSPEC Group	6
New Objective	2
Novatia	9
Novilytic	24
OpAns	10
Perfinity Biosystems	7
PharmaCadence Analytical Services	13
PRA Health Sciences	8
Primera Analytical Solutions	32
Prosolia	12
QPS	34
Shimadzu Scientific	25
Tandem Labs, a Lab Corp Company	18
Thermo Scientific	23
Waters Corporation	19
Wiley & Sons	22

EXHIBIT LOCATIONS

Exhibit booths are located in University I Ballroom, University Ballroom Lobby, and in the 2nd Floor Lobby

Booths 1 - 14 University Ballroom I
Booths 15 - 26 University Ballroom Lobby
Booths 27 - 35 2nd Floor Foyer







SHORT COURSES & EVENTS

Monday September 29

7:30 AM - 8:30 AM	REGISTRATION & CONTINENTAL BREAKFAST	•

2nd Floor Lobby

8:30 AM - 4:00 PM SHORT COURSES 2nd Floor Ballrooms

Princeton I Protein ID and Biomarker Analysis by Mass Spectrometry:

Challenges and Solutions for Quantification and Differential Analysis

Instructors: Nalini Sadagopan, Agilent Technologies, Gary Valaskovic, New Objective, Nathan

Yates, University of Pittsburgh

Princeton || LC-MS Regulated Bioanalysis for Large and Small Molecules: Methods, Practices,

Technologies and Instrumentation

Instructors: Shane Needham, Alturas Analytics, Jim Shen, Bristol-Myers Squibb and

Dave Abramowitz, AB SCIEX

Lehigh Building a Better Clinical Mass Spectrometry Lab

Instructors: Timothy Garrett, University of Florida; Mark Hayward, Active Ingredient

Technologies; and Kenneth Lewis, OpAns

9:00 AM - 3:00 PM CPSA OPEN GOLF OUTING

Makefield Highlands Golf Course, Yardley, PA

Organizers: Brad Coopersmith, Waters Corporation; John Butler, Agilent Technologies, and

.....

Paul Corcoran, McKinley Scientific

12:00 PM - 4:00 PM MOLECULAR DISCOVERY USERS MEETING

Villanova Amphitheater Discussion Leader: Ismael Zamora, Molecular Discovery

Sponsored by Molecular Discovery

2:00 PM - 4:00 PM FROM NATURE PRODUCTS TO BIOLOGICS – APPLICATIONS OF ADVANCED ANALYTICAL TECHNOLOGIES

University I Sponsored by North Jersey ACS Mass Spectrometry Discussion Group

Discussion Leaders: Discussion Leaders: Ronald Kong, PTC Therapeutics; Min Liu, Merck; Jasmine Lu, Shimadzu

► Interactions of Botanical Dietary Supplements with Drug Metabolizing Enzymes: Application of UHPLC-MS/MS

Richard van Breemen, University of Illinois at Chicago

▶ Integration of Multiple Datasets: Big and Fast Data

Darryl Davis, Janssen

► A Top-down MS/MS Approach to Characterize Product-related Impurities for Antibody Therapeutics

Yan-Hui Liu, Merck

▶ Incorporating Novel Technologies in the DMPK Laboratory; Problems and Solutions using High-Resolution Mass Spectrometry for Biopharmaceutical Bioanalysis Christopher Evans, GlaxoSmithKline



MEETINGS & EVENTS

Monday September 29

4:30 PM - 5:30 PM EXECUTIVE ROUNDTABLE: WHERE TECHNOLOGY AND SOLUTIONS MEET BUSINESS

University I & II Hosted by McKinley Scientific

Discussion Leader: Timothy Olah, Bristol-Myers Squibb

Expanding Pharmaceutical and Biochemical Diagnostics for

Personalized Health Management

6:00 PM - 9:00 PM RECEPTION & SPONSOR'S DINNER

University I & II Hosted by AB SCIEX

▶ Opening Remarks - Disease is the Enemy!

Paul Corcoran, McKinley Scientific; Gary Valaskovic, New Objective; Mike Lee, Milestone

Development Services

▶ CPSA Charitable Foundation

Paul Corcoran, McKinley Scientific; Emily Ehrenfeld, Mozaic Solutions; Joe Fox, AB SCIEX; Shane Needham, Alturas Analytics; Robyn Rourick, Genentech; Tony Yeung, Fox Chase Cancer Center

► Distinguished Lecture Series

Translational Mass Spectrometry Enabling Personalized Medicine Steven Wong, Wake Forest University and President AACC



Tuesday September 30

7:30 AM - 8:30 AM	REGISTRATION & CONTINEN	TAL BREAKFAST
	University Ballroom Lobby	
7:30 AM - 8:30 AM	GRADUATE STUDENT / MENTOR BREAKFAST	
	University I & II	
8:30 AM – 9:00 AM	OPENING REMARKS	
University I & II	Welcome <i>Mike Lee, Milestone Developm</i>	ent Services
	Objectives, Format, and Ope Paul Corcoran, McKinley Scient	ning Remarks ific and Gary Valaskovic, New Objective
9:00 AM - 9:45 AM	PLENARY LECTURE	
University I & II	Adventures in Drug Discover Ann Weber, Vice President Disc	y: Development of JANUVIA for Type 2 Diabetes overy Chemistry, Merck
10:00 AM - 11:45 AM	CONCURRENT SESSIONS	
Track I		Track II
Symposium Session		Colloquium Session
Villanova Amphitheater		Princeton I & II
Clinical Sciences	s of Mass Spectrometry in / Garrett, University of Florida and	Crystal City V Guidance - How is the Guidance Being Used? Discussion Leaders: Shane Needham, Alturas Analytics and Naidong Weng, Janssen Pharmaceuticals
► Breaking Down Barrie	ers to Adoption of Mass	Speakers/Panelists:
Spectrometry in the Routine Clinical Laboratory Lori Bachmann, VCU		Mark Arnold, Bristol-Myers Squibb Chad Briscoe, PRA Health Sciences
► From Dried Blood Spots to Dried Urine Spots - Challenges and Advantages David Millington, Duke University		Binodh DeSilva, Bristol-Myers Squibb Timothy Highman, Pfizer Scott Reuschel,Tandem Labs, a LabCorp Company
► Transforming the Application of MS in Clinical Sciences through Digital LC: What Would You Do with Infinite Speed? Gary Valaskovic, New Objective		Mark Stiles, Quality & Compliance Consulting Eric Woolf, Merck



Tuesday September 30

12:00 PM – 1:00 PM	SPONSORED LUNCH & ROUN	IDTABLE DISCUSSION
University I & II	8040 Ultrafast Triple Quad Richard van Breemen, Univer	f UHPLC-MS/MS Using Shimadzu LCMS-8050 and LCMS-rupole Mass Spectrometers sity of Illinois at Chicago
	► Multiplexed Plasma Sampl Fred Regnier, Purdue Univers	ing From A Single Finger Stick ity and Novilytic Laboratories
1:00 PM – 3:00 PM	POSTER SESSION & ROUNDT	ABLE DISCUSSION
University Lobby	Discussion Leaders: Mark Cancilla, Szapacs, GlaxoSmithKline; Tracie	, Merck; Helene Cardasis, Thermo Fisher Scientific; Matthew Williams, CDC
3:15 PM - 4:45 PM	CONCURRENT SESSIONS	
Track III		Track IV
Symposium Session	า	Colloquium Session
University I		University II
 Metabolomics for R Alla Kloss, Genzyme Understanding N-Te Proteins by High Re Charles Cheng, Alexic Diagnosis and Disco Metabolism via an I 	elle Clasquin, Agios and Roy Vaz,	Novel Solutions to Novel Milla & Macro-Molecule Analysis by LC/MS Discussion Leaders: Mark Arnold, Bristol-Myers Squibb and Chad Briscoe, PRA International ► Trends in Peptide and Protein Quantification by LC-MS Nico van de Merbel, PRA Health Sciences ► Bioanalysis of Oligonucleotides using LC-MS: Challenges and Solutions Laixin Wang, Tandem Labs, a LabCorp Company ► It's "milla" Time Timothy Olah, Bristol-Myers Squibb

2nd Floor Lobby Break sponsored by McKinley Scientific

LET THEM EAT CAKE!

4:45 PM - 5:15 PM

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- Ultrafast MRM transition speeds, up to 555 MRMs per second
- Newly developed heated ESI probe facilitates ionization allows for high-sensitivity analysis of a wide range of compounds
- New high-efficiency CID cell maintains signal intensity and suppresses crosstalk, even for high-speed or simultaneous multicomponent analysis
- Nexera UHPLC features the world's fastest cycle time

Equipped with a variety of data processing features, LCMS solution software allows the creation of quantitation methods for multi-component analysis, enabling anyone to perform quantitative analyses with ease.

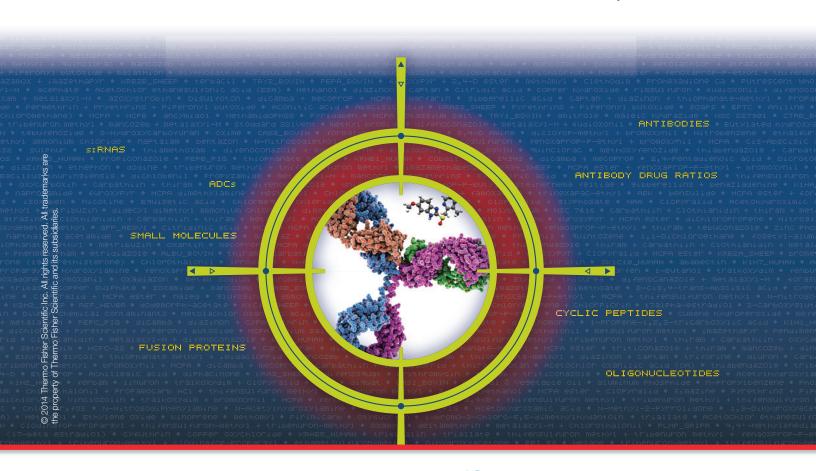


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Tuesday September 30

5:00 PM - 6:00 PM

SOCIAL HOUR & SPONSORED WORKSHOPS

Princeton I

WORKSHOP

Sponsored by AB SCIEX

▶ Innovative Bioanalytical Approaches for Biomarker Quantitation Naidong Weng, Janssen Research and Development

► High Throughput Functional Lipidomics: Putting Biology to Work for Theranostic and Biomarker Discovery

Michael Kiebish, BERG

Princeton II

WORKSHOP

Sponsored by McKinley Scientific

Follow the Money - The Realities and Risks of Business and Science

Panelists:

Tim Garrett, University of Florida Shane Needham, Alturas Analytics

Villanova Amphitheater

WORKSHOP

Sponsored by InfoClinika

Cloud-Based Solutions for Life Sciences & Healthcare

Andrey Bondarenko, InfoClinika Nathan Yates, University of Pittsburgh



Program Chair
Philip Timmerman
Janssen Pharmaceuticals

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Connecting the Dots: Sharing Science Across Disciplines Helps Projects Progress

6th Annual Shanghai Symposium on

Clinical & Pharmaceutical Solutions through Analysis

Make plans now to attend CPSA Shanghai 2015! This annual meeting is evolving into the premier industry-led event dedicated to promoting awareness of issues and needs associated with global research and development.

Short Courses • Symposia • Roundtables Expo • Workshops • Student Awards

April 15 - 17, 2015 Renaissance Shanghai Pudong Hotel

Where Technology and Solutions Meet. Where East Meets West



Tuesday September 30

6:30 PM - 9:30 PM

SPONSOR HOSPITALITY & EVENING WORKSHOPS

Food Quality & Safety Summit University I	Microsampling Summit University II
 Sponsored by Agilent Technologies Discussion Leaders: István Pelczer, Princeton University and David Perlman, Princeton University ▶ An Overview of Analytical Technologies to Detect Adulteration of Botanical Ingredients in Dietary Supplements Stefan Gafner and Mark Blumenthal, American Botanical Council ▶ The New Normal - Changes in How Dietary Supplements Are Being Analyzed for Identity, Pesticides, Clandestine Adulteration and Other Compounds of Regulatory Concern under 21 CFR Part 111 Steven Royce, Agilent Technologies ▶ Accurate Mass Q-TOF Utilizing a Personal Compound Database and Library for the Detection of Clandestine Phosphodiesterase-5 Inhibitor Adulteration in Men's Virility Formulations and Dietary Ingredients Jerry Zweigenbaum, Agilent Technologies 	Sponsored by Drummond Scientific and McKinley Scientific Discussion Leaders: Qin Ji, Bristol-Myers Squibb and Olga Kavetskaia, AbbVie ► Assuring the Quality of the Filter Paper Matrix Victor DeJesus, CDC ► Challenges of Quantitative Dried Spot Sampling in Clinical Diagnostics Ken Lewis, OpAns ► Update: Industry Status on Microsampling Research Tim Olah, Bristol-Myers Squibb Discussion Panel: Donald Chace, Pediatrix Analytical Victor DeJesus, CDC Christopher Evans, GlaxoSmithKline Kenneth Lewis, OpAns Wenkui Li, Novartis Timothy Olah, Bristol-Myers Squibb Shane Needham, Alturas Analytics Matthew Rieser, AbbVie Yang Xu, Merck Enaksha Wickremsinhe, Eli Lilly & Company



Wednesday October 1

7:30 AM – 8:30 AM	REGISTRATION & CONTINENTAL BREAKFAST	
	University Ballroom Lobby	
8:30 AM – 10:00 AM	SYMPOSIA & ROUNDTABLE I	DISCUSSION
University I & II	•	lew Technologies in the Modern Bioanalysis Lab hen, Merck; Timothy Olah, Bristol-Myers Squibb; aceutical Consulting, LLC
10:15 AM – 11:45 PM	CONCURRENT SESSIONS	
Track V Symposium Session Villanova Amphitheater		Track VI Innovator Award Session Princeton I & II
Metabolomics - The Art and Lab Science of Discussion Leaders: Don Chapelesus, CDC Second Tier Metabolic by Adjusting the Hue Victor DeJesus, CDC Imaging MS: Painting Timothy Garrett, University Openation of Metabolic Control of C	c Assays: Improving Specificity of the Newborn Screen Picture Pictures of Disease with Ions saity of Florida bolomics - Minimalism vs How Much is Enough?	Innovative Technologies, Products and Services Discussion Leader: Kevin Bateman, Merck Speakers to be announced

12:00 PM -1:00 PM SPONSORED LUNCH & ROUNDTABLE

University I & II

Sponsored by Thermo Scientific

Exploration of Cloud-based Tools

- ► Very High Resolution Spectral Library Trees Acquired Under Diverse Conditions Accessible from the Cloud Tim Stratton, Thermo Fisher Scientific
- ▶ Re-Thinking and Re-Creating the Modern Scientific Data Analysis Paradigm: Mass Spectrometry Moves Big Data out of the Lab and on to the Cloud Nathan Yates, University of Pittsburgh



Wednesday October 1

1:15 PM - 2:15 PM

Princeton I	WORKSHOP
	Sponsored by AB SCIEX
	► LC-MS/MS Quantitative Analysis of Peptide Biomarkers in Human Body Fluids Ron Huang, Biogen Idec
	► Tame the Flow: Macro and Micro Molecule Bioanalysis Suma Ramagiri, AB SCIEX
Princeton II	WORKSHOP
	Sponsored by New Objective
	Fast and Robust Quantitation: Nanospray MS for Biomarkers and Beyond
	► Welcome and Thank you Gary Valaskovic, New Objective
	► Sliding into Multi-dimensional, Multi-channel LC/LC-MS/MS Using the PicoSlide Nathan Yates, University of Pittsburgh
	► Lipids and PicoChip LC-MS: Not Just for Proteomics Anymore Susan T. Weintraub, University of Texas Health Science Center at San Antonio

SOCIAL HOUR & SPONSORED WORKSHOPS

Villanova Amphitheater

WORKSHOP

Sponsored by Thermo Scientific

Modern LC-MS Bioanalysis Shane Needham, Alturas Analytics

Targeted Peptide Quantitation and Implications for Clinical Utility

▶ What Can We Learn by Quantifying Peptides that Map within Various Regions of the Hypercholesterolemia Causative Protein PCSK9 in Patient Cohorts? Benoit Coulombe, Institut de Recherches Cliniques de Montréal (IRCM)

▶ MIcrospray and MicroFlow Liquid Chromatography: PicoFuze Technology for

▶ Development and Application of Automated, Highly Multiplexed immunoMRM Eric Kuhn, The Broad Institute of MIT and Harvard



Wednesday October 1

2:30 PM – 3:30 PM CONCURRENT SESSIONS		
Track VII Symposium Session University II	Steven A. Hofstadler Graduate Student Session Villanova Amphitheater	
Defining the Future of Clinical Protein Biomarker Discovery, Development and Deployment Discussion Leader: Brad Ackermann, Eli Lilly and Company	Inspiring Career Paths in the Sciences for Young Scientists Sponsored by McKinley Scientific, New Objective and OpAns	
Speakers/Panelists: Binodh DeSilva, Bristol-Myers Squibb Andy Hoofnagle, University of Washington Randall Nelson, Arizona State University Hendrik Neubert, Pfizer Nadir Rafai, Children's Hospital Boston Russell Weiner, Merck	Mentors: Susan Abbatiello, Thermo Fisher Scientific; Brad Ackermann, Eli Lilly & Company; Hong Cai, GlaxoSmithKline; Lucinda Cohen, Merck; Jonathan Josephs, Thermo Fisher Scientific; Kenneth Lewis, OpAns; Eric Milgram, PepsiCo; Shane Needham, Alturas Analytics; Timothy Olah, Bristol-Myers Squibb; Joanna Pols, Merck; Robyn Rourick, Genentech; Petia Shipkova, Bristol-Myers Squibb; Anthony Yeung, Fox Chase Cancer Center	
	► Quantitative Measurements of Proteoform-Resolved Markers of Health and Disease Timothy Toby, Northwestern University	
	 Metabolomics Analysis of Skeletal Muscles and Fiber Types Using Mass Spectrometry Yu-Hsuan Tsai, University of Florida 	
	► Fundamental Aspects of Quantitative Measurements in Complex Biological Systems: Considerations from a Systems Biology Approach Phillip Loziuk, North Carolina State University	

3:45 PM – 5:30 PM	VENDOR SESSION - "5 MINUTES OF FAME"
Princeton I & II	Discussion Leaders: Mark Hayward, Active Ingredient Technologies, Matt Szapacs, GlaxoSmithKline; Nicole Donnelly, PharmaCadence Analytical Services
	Hosted by Bernard Hirsh, Merrill Lynch
5:30 PM – 6:30 PM	EXHIBITION & SOCIAL HOUR - WHERE TECHNOLOGY AND SOLUTIONS MEET!
University I, 2nd Floor Lobby University Ballroom Lobby	Held in conjunction with the North Jersey ACS Mass Spectrometry and Delaware Valley Drug Metabolism Discussion Groups



Wednesday October 1

6:30 PM - 7:30 PM

CPSA DINNER LECTURES & AWARD PRESENTATIONS

University II

ANNOUNCEMENTS

► CPSA SHANGHAI

Eric Yang, GlaxoSmithKline; Naidong Weng, Janssen Pharmaceuticals

► CPSA BRASIL

Paul Corcoran, McKinley Scientific Gary Impey, AB SCIEX Shane Needham, Alturas Analytics

► Innovator Award Presentation

Kevin Bateman, Merck

► Steven A. Hofstadler Graduate Student Award/Recognition

Presented by the Mentors

▶ Program Chair Recognition

Mike Lee, Milestone Development Services

7:30 PM - 9:00 PM

KEYNOTE LECTURE & DISTINGUISHED ANALYTICAL SCIENTIST AWARD PRESENTATION

University II

- ► Helping the Clinical Lab Help Patients Andy Hoofnagle, University of Washington
- ▶ Presentation of The Distinguished Analytical Science Award Presented by Lucinda Cohen, Merck
- ▶ Bioanalysis, Smart PK/PD and the Future of Drug Development Kevin Bateman, Merck



Thursday October 2

7:30 AM – 8:30 AM	REGISTRATION & CONTINENTAL BREAKFAST
	2nd Floor Lobby
8:30 AM – 10:00 AM	COLLOQUIA & ROUNDTABLES
Princeton I & II	Bioanalysis in Personalized Medicine: Where do Biomarkers Fit In?
	Discussion Leaders: Noel Premkumar, Alturas Analytics and Jim Shen, Bristol-Myers Squibb
	► A Role for Mass Spectrometry in Personalized Medicine Michael Lassman, Merck
	► Biomarkers and Personalized Medicine: Platforms, Compliance, Validations and Applications and a Dozen More Choices Patrick Bennett, PPD
	► A Discussion Surrounding Fit-for-Purpose Biomarker Validation Jim Shen, Bristol-Myers Squibb

0:15 AM - 11:45 AM CONCURRENT SESSIONS

Track VIII	Track IX
Symposium Session Villanova Amphitheater	Colloquium Session Lehigh
Measurement and Application of Metabolite Biomarkers Discussion Leader: Petia Shipkova, Bristol-Myers Squibb ▶ Metabolomic Applications for Discovery of New Targets in Sickle Cell Anemia Annie Evans, Metabolon ▶ Metabolic Consequences of Pyruvate Kinase Deficiency Michelle Clasquin, Agios	The Ever Expanding Role for the Definitive Structure Elucidation of Drug Metabolites, Degredates, and Trace Impurities in the Pharmaceutical Industry Discussion Leader: James Small, Merck Speakers/Panelists: David Detlefsen, Novatia Mark Hail, Novatia Ismael Zamora, Molecular Discovery
► The Use of Stable Isotopes in Translational Biomarker Development David McLaren, Merck	

12:00 PM – 1:15 PM SPONSORED LUNCH & ROUNDTABLE DISCUSSION

Princeton I & II

Sponsored by Waters Corporation

► Metabolic Phenotyping and Translational Medicine Robert Plumb, Department of Surgery and Cancer, Imperial College, London



Thursday October 2

1:30 PM – 3:00 PM	SYMPOSIA & ROUNDTABLE DISCUSSION

Villanova Amphitheater New Alternative Instrumentation

Discussion Leaders: Kevin Bateman, Merck and Rick King, PharmaCadence Analytical Services

3:00 PM ADJOURN

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LOCAL AREA DISCUSSION GROUPS CHROMATOGRAPHY FORUM OF THE DELAWARE VALLEY

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www.dvdmdg.org

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www.gbmsdg.org

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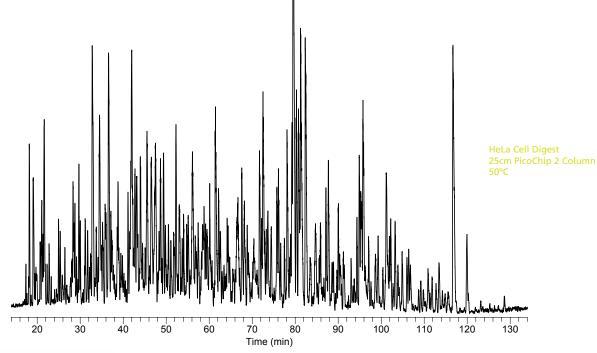
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