



51st ASMS Conference

June 8-12, 2003

Program



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51st ASMS CONFERENCE ON MASS SPECTROMETRY AND ALLIED TOPICS

Welcome to the 51st ASMS Conference on Mass Spectrometry and Allied Topics. Conference sessions are in the following locations:

PLENARY SESSIONS are in Room 517 ABCD. There will be coffee available 7:30 – 8:00 am (prior to the plenary sessions) in the foyer.

ORAL SESSIONS are in 517 A, B, C, and D and in 710 A and 710 B which are up the escalator from the Foyer.

OVERFLOW. To accommodate overflow audiences for plenary sessions on Monday and Tuesday, 710 A is equipped with an A/V feed.

POSTERS AND EXHIBITS are in the Exhibit Hall (lobby level).

REGISTRATION. Registration will be open as follows: 10:00 am – 8:00 pm on Sunday, 7:30 am – 5:00 pm on Monday through Thursday.

SUNDAY TUTORIAL LECTURES. The tutorial session begins at 5:00 pm, Sunday in Room 517 AB.

5:00 - 5:45 pm Gary van Berkel, Oak Ridge National Laboratory; *Atmospheric Pressure Ionization Techniques*

5:45 - 6:30 pm Gary Valaskovic, New Objective, Inc., *Making a Start-Up Company Succeed*

LUNCHES. Cash lunches are available in the Exhibit Hall during the lunch break. There are also a restaurant (les Jardins) on the 7th level.

ORAL PRESENTATIONS. Only LCD computer projectors will be used for oral sessions. **Presenters must arrive at the session room one hour prior to the start of the session to transfer presentations on CD to the conference computers.**

- **LCD.** Speakers must provide PowerPoint presentations on PC formatted CD ROM or 100 MB Zip disk.
- **OVERHEADS.** Speakers who use overhead projection must have someone available to change transparencies as the projector is located on the floor and the speaker podium is on the stage.

SPEAKER ROOM. Previewing equipment is located in Room 515 C. The room will be open 5:00 – 9:00 pm on Sunday and 7:30 am to 5:00 pm Monday through Thursday.

POSTER PRESENTATIONS. Posters must be in place by 8:00 am on the day scheduled and removed 7:30 – 8:00 pm. Thursday posters must be removed at 6:00 pm. **REFER TO THE POSTER NUMBERS IN THIS FINAL PROGRAM FOR BOARD ASSIGNMENTS.** Authors are expected to supply their own pushpins to mount their posters.

POSTER ATTENDANCE.

- **ODD-NUMBERED POSTERS:** Authors must be present 8:45 - 10:15 am on the day scheduled.
- **EVEN-NUMBERED POSTERS:** Authors must be present 1:30 - 3:00 pm on the day scheduled.
- All poster authors are encouraged to be present during the lunch break on the day of their posters.

INTEREST GROUP MEETINGS. Interest Group meetings are scheduled during the lunch break, 12:15 – 1:30 pm. Anyone interested in the topics is encouraged to buy a lunch and bring it to the meeting.

WORKSHOPS. Workshops are scheduled 5:30 – 7:00 pm on Monday and Tuesday. There is also a lunch period workshop on Wednesday. See page 13.

EMPLOYMENT CENTER. The Employment Center is located in the Exhibit Hall. Candidates and employers may register with the center beginning at 5:00 pm on Sunday. You must supply at least 20 copies of your resumé. The center will be open Monday through Wednesday, 8:30 am to 5:00 pm, and Thursday 8:30 am to 3:00 pm. Employers and candidates may come to the room to search the databases of candidates and positions. **Participants in the Employment Center must be registered for the conference.**

CONFERENCE PROCEEDINGS. The conference proceedings will be published on CD ROM after the conference. Manuscripts must be submitted on-line prior to the end of the conference.

CORPORATE HOSPITALITY SUITES. Corporate member hospitality suites are located in the Palais des Congres. Please refer to pages 6 and 7 for locations.

CORPORATE EXHIBIT BOOTHS AND POSTERS. Corporate member exhibits and posters are located in the Exhibit Hall.

INTERNET ACCESS. Access to the internet is available in the Exhibit Hall. Please limit your access to 20 minutes if others are waiting. The Internet Café is sponsored by IBM Life Sciences.

SHUTTLE BUSES. Buses to the Hilton, Marriott, Queen Elizabeth, and Sheraton Hotels run 7:00 am to 11:00 pm. Service is more frequent increased during peak times: 7:00 - 9:00 am, noon - 2:00 pm, and 5:00 to 8:00 pm. The transportation is sponsored by Applied Biosystems. The last bus departs at 11:00 pm from the Palais des Congres.

SPECIAL EVENTS FOR REGISTRANTS.

- **Sunday, 7:00 - 9:00 pm. Welcome Mixer, Viger Lobby and the Exhibit Hall.**
- **Thursday, 5:00 – 8:00 pm. Conference Finale at the Palais des Congres.** Tickets (\$20 ea) and name badge are required.

GUEST HOSPITALITY. There is a continental breakfast for registered guests, 9:00 – 10:30 am on Monday and Tuesday in Room 511 A. A motor coach tour of the city is included on Monday afternoon. Tour buses will depart at 1:00 pm from the Viger Lobby of the Palais des Congres. The tour includes light refreshments. Guest registration is \$40.

MESSAGE CENTER. A message center is located in the Viger Lobby near conference registration.

51st ASMS CONFERENCE ON MASS SPECTROMETRY AND ALLIED TOPICS

CONFERENCE HOTELS.

<i>Hotel</i>	<i>Telephone</i>
Holiday Inn Select	514-878-9888
Wyndham	514-285-1450
Delta Centre Ville	514-879-1370
Hilton Bonaventure	514-878-2906
Fairmont Queen Elizabeth	514-861-3511
Marriott Chateau Champlain	514-878-9000
Le Centre Sheraton	514-878-2000

CONFERENCE REGULATIONS.

- **Name badges** are required for all conference sessions, including the exhibit hall and the employment center.
- **NO SMOKING** is permitted in the convention center.
- **Cell phones** must be turned off in oral sessions.
- **NO photography or recording** in any session, including posters.
- **The placement of advertising** in the meeting area is strictly limited to Corporate Members. There are poster boards and tables for corporate member notices and literature. No signs on easels are permitted except at doors to hospitality suite rooms.
- No hardware, terminals, accessories, or any items for sale may be displayed in any area of the conference, except in corporate exhibit booths and hospitality suites.
- There may be no organized activities (even off-site) other than those approved by ASMS during the conference week (5:00 pm on Sunday through 8:00 pm on Thursday).
- **No corporate or institutional logos** may appear on slides or posters in technical sessions.

SPONSORS

Applied Biosystems, Shuttle Buses
IBM Life Sciences, Internet Café

CONFERENCE FINALE

The conference will conclude with a festive buffet at the Palais des *Congrès*. The evening will be a relaxing farewell to colleagues and the beautiful city of Montreal. The evening is made possible by the generous support of these companies.

Thermo Electron
Waters - Micromass

Applied Biosystems

Agilent Technologies
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Cohesive Technologies
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ASMS
announces the election of the following members
to the ASMS Board of Directors



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<i>History of Mass Spectrometry</i>	Ross C. Willoughby Chem-Space Associates		
<i>Hydrocarbon & Chemical Processes</i>	C. Samuel Hsu ExxonMobile Res. & Engin.		
<i>Ion Trap Mass Spectrometry</i>	Jennifer Brodbelt University of Texas		
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<i>Surface Science</i>	Michael van Stipdonk Wichita State University		
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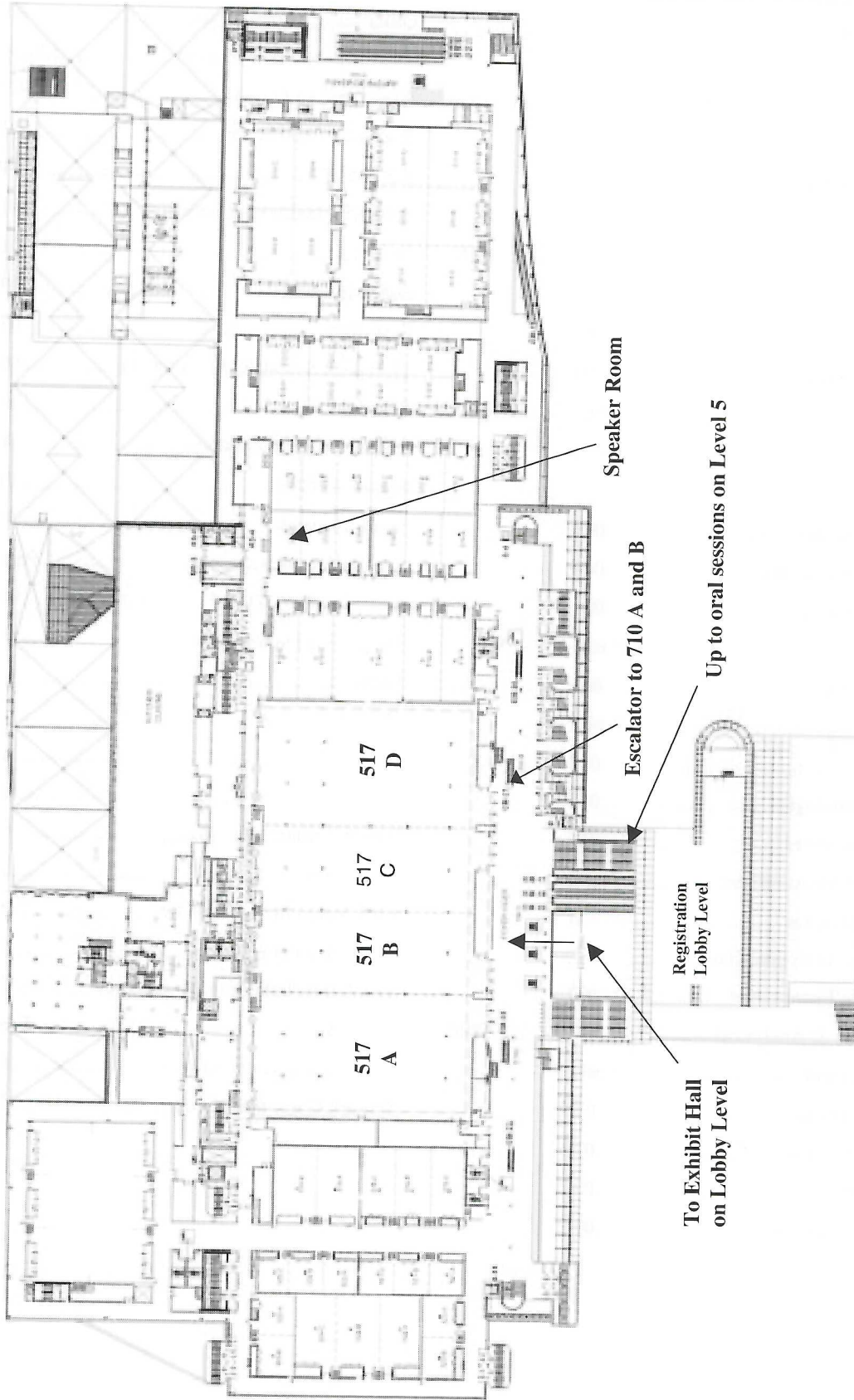
Be sure to visit the corporate suites, exhibit booths and posters. Suites are located in the Palais des Congres. The publisher's library is Room 516 B. The corporate posters and exhibit booths are located in the Exhibit Hall.

<i>Company</i>	<i>Exh Booth/Poster</i>	<i>Suite</i>	<i>Company</i>	<i>Exh Booth/Poster</i>	<i>Suite</i>
3M Bioanalytical.....	001		Covance.....		523AB
ABB Extrel.....	Poster		Crawford Scientific.....	030	
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AIM Research Co.....	005		Domnick Hunter, Inc.....	032	
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Amer. Soc. Biochem. Molecular.....	008		Eldex Laboratories.....	035	
Amersham Biosciences Corp.....	009	514B	Elsevier Science.....	036	
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<i>Company</i>	<i>Exh Booth/Poster</i>	<i>Suite</i>	<i>Company</i>	<i>Exh Booth/Poster</i>	<i>Suite</i>
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Lab Metrix.....	055		Richard Scientific, Inc.	079	
Larian Proteomics, Inc.	056		S.E.D.E.R.E.	080	
LCMS Limited	Poster		Scientific Instrument Services.....	081.....	514C
LEAP Technologies	057	522A	Scivex.....	082	
LECO Corporation.....	058		Sepiatec GmbH.....	083	
Leybold Vacuum.....	059		SGE, Inc.	084	
Linden-ChroMasSpec	060		Shimadzu Scientific Instruments	085.....	511BC
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Proteome Sytems.....	075				
Quantar Technology Inc.....	076				

FLOOR PLAN FOR CONVENTION LEVEL



PROGRAM ACKNOWLEDGEMENTS

Alan G. Marshall, *Vice President for Programs*

STUDENT ASSISTANTS

Graduate students are assisting with all aspects of the conference, including registration, oral and poster sessions, and the employment center. The students each receive a stipend to assist with their conference expenses.

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AWARDS

Award for Distinguished Contribution in Mass Spectrometry

Award Lecture: Tuesday, 8:00 am



This Award recognizes a focused, singular achievement in, or contribution to, fundamental applied mass spectrometry. The 2003 award is presented to **Fred W. McLafferty** of Cornell University for his monumental contribution to the mechanistic definition of the 6-membered ring hydrogen rearrangement in the gas-phase ion chemistry of carbonyl compounds, now known as the "McLafferty Rearrangement". His landmark paper in the January, 1959 issue of *Analytical Chemistry* unified his and others' observations by defining an interpretative framework for this and other gas-phase ionic reactions. The importance of the McLafferty rearrangement goes beyond this interesting and structurally specific rearrangement. His work introduced a way of thinking about mass spectral fragmentation and showed that the principles of physical and physical organic chemistry are applicable to the fragmentation of ions in the gas phase.

Professor McLafferty's research over many years has touched and profoundly influenced nearly every aspect of organic, bioorganic, and analytical mass spectrometry. He has made important contributions to scientific instrumentation development: four-sector tandem mass spectrometry, neutralization/reionization mass spectrometry, biological Fourier-transform mass spectrometry, and electron capture dissociation. He is also the leader of the application of computers to the assignment and the interpretation of mass spectra, and has compiled the world's largest and most complete electron ionization mass spectral database. In all these areas, Professor McLafferty has not only made substantial scientific contributions of his own, but has also provided a vision of the potential of these methods for solving intractable problems, thus guiding the evolution and development of the field of mass spectrometry.

After receiving his Ph.D. from Cornell University and being a postdoctoral fellow at the University of Iowa, Fred McLafferty joined Dow Chemical Co. where he was in charge of mass spectrometry and gas chromatography. He was the first Director of Dow's Eastern Research Lab. for basic research. He became Professor of Chemistry in 1964 at Purdue University and in 1968 at Cornell University. Professor McLafferty has received numerous prestigious awards, including American Chemical Society awards in Chemical Instrumentation, the Fisher Award in Analytical Chemistry and the Field and Franklin Award in Mass Spectrometry. Currently, he is a Professor Emeritus at Cornell University.

The Biemann Medal

Award Lecture: Wednesday, 8:00 am



The Biemann Medal recognizes a significant achievement in basic or applied mass spectrometry made by an individual early in his or her career. The award is presented in honor of Professor Klaus Biemann and is endowed by contributions from his students, postdoctoral associates, and friends. The 2003 Medal is presented to **Carol V. Robinson** of Cambridge University for her achievements and contributions to the areas of protein mass spectrometry and structural biology.

Professor Robinson has pioneered the application of mass spectrometry to the understanding of the mechanism of protein folding and the investigation of protein-protein interactions by generating multi-molecular complexes in the gas phase. Of particular importance is her use of hydrogen-deuterium exchange monitored by mass spectrometry to elucidate pathways of protein folding and the development of similar approaches to probe the conformation of protein folding intermediates bound to GroEL. Her work provided completely new insight into the mechanism of molecular chaperone action in protein folding. Professor Robinson's contributions have made significant progress in addressing central problems of structural biology and in exploring the underlying mechanisms of amyloid diseases that are typically characterized by aberrant protein folding. She has also accomplished groundbreaking work in the mass spectrometry of large molecules exceeding one megadalton, including virus capsids and even intact ribosomes.

Professor Robinson received her Master of Science degree under Professor John Beynon at the University of Wales and her Ph.D. degree from Cambridge University under the supervision of Professor Dudley Williams. After a career break while her children were young, she received a Royal Society Research Fellowship in 1995 and assumed the position of Director of the Oxford Centre for Molecular Sciences. In 1999 she became one of the youngest professors and also one of only 17 women with the title of Professor within Oxford University. She has published over 80 papers, including two articles in *Nature* and one report in *Science*, and filed three patents for discoveries made at Oxford. She recently moved to Cambridge University and currently holds the rank of University Professor in the Department of Chemistry.

2003 RESEARCH AWARDS

Sponsored by
Thermo Electron



Michael A. Freitas
Ohio State University

Sponsored by
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Giuseppe Petrucci
University of Vermont

Sponsored by
Waters - Micromass



Andrea Grottoli
University of Pennsylvania

CALL FOR YEAR 2004 RESEARCH AWARD PROPOSALS

- OBJECTIVE** To promote academic research by young scientists in mass spectrometry.
- ELIGIBILITY** Open to academic scientists within four years of joining the tenure track faculty or equivalent of a North American university. Applicants may not have previously received an award under this program.
- APPLICATION** Applicants should submit **SEVEN COLLATED SETS** of the following:
1. One-page fiscal proposal and justification
 2. List of current research support
 3. Three-page proposal, including references, figures, etc.
 4. *Curriculum vitae*
 5. Two letters of recommendation (may be sent directly to ASMS)
- DEADLINE** Application materials, including letters of recommendation, must be received in the ASMS office by November 30. Send to:
ASMS, 2019 Galisteo Street, Building I, Suite 1, Santa Fe, NM 87505
- FISCAL** The awards of \$25,000 each will be made to a university in the name of the selected individual and for the researcher's exclusive use. In accepting this award, the institution will agree not to charge overhead on the funds.
- INFORMATION** Contact ASMS. Telephone: (505) 989-4517 • Fax: (505) 989-1073 • office@asms.org

WORKSHOPS AND INTEREST GROUP MEETINGS

All conference registrants are invited to attend workshops and Interest Group Meetings. Please purchase a box lunch in the Exhibit Hall and take to meetings scheduled over the lunch break.

12:15 – 1:30 pm

MONDAY, June 9	TUESDAY, June 10	WEDNESDAY, June 11
Interest Group: Synthetic Polymers. Organized by Peter Maziarz. <i>Room 511D</i>	Interest Group: Fundamentals. Organized by John Bartmess. <i>Room 511D</i>	Workshop: Discussion of Technologies with Imminent Practical Impact. Scheduled - FAIMS, Novel MALDI and SFC in Day-to-Day Use. Michael Balogh, presiding. <i>Room 517C</i>
Interest Group: Drug Metabolism. Organized by Swapan Chowdhury. <i>Room 511E</i>	Interest Group: Computer Applications. Organized by Randall K. Julian. <i>Room 511E</i>	Interest Group: Ion Metal Coordination. Organized by Gary Willett. <i>Room 511F</i>
	Interest Group: Young Mass Spectrometrists. Organized by Touradj Solouki. <i>Room 511F</i>	
	Interest Group: Flavor, Fragrance and Foodstuff. Organized by Charles Zha. <i>Room 510B</i>	

5:30 – 7:00 pm, WORKSHOPS

MONDAY, June 9	TUESDAY, June 10
Workshop: Is TOF MS Still Guiding Us? Bernhard Spengler, presiding. <i>Room 517B</i>	Workshop: Ion Thermochemistry: Mature or Still a Growing Kid? John Bartmess, presiding. <i>Room 517B</i>
Workshop: How Does LC/MS Enable Changes in Positioning ADMET Studies in the Drug Discovery and Development Process? Swapan Chowdhury and Cornelis Hop, presiding. <i>Room 517C</i>	Workshop: Software and Software Development for Proteomics. Randall K. Julian, presiding. <i>Room 517C</i>
Workshop: High Throughput Assays – When Are They Really Needed? Mike Lee and Alex Buko, presiding. <i>Room 517D</i>	Workshop: A discussion of Cassette Dosing for HTP Assessment of Drug Exposure: An Opportunity for Benchmark Analysis and Debate. Bradley Ackerman, presiding. <i>Room 517D</i>
Workshop: Metal Ion Coordination. Gary Willett, presiding. <i>Room 710B</i>	Workshop: Unfinished Business in Polymer Mass Spectrometry. Peter Maziarz, presiding. <i>Room 710A</i>

PROGRAM

DON'T MISS!

- **Welcome Mixer, 7:00 - 9:00 pm, Sunday.** *Exhibit Hall*
- **Wake-Up Coffee, 7:30 am, Monday - Thursday.** *Foyer of Room 517*
- **Plenary and Award Lectures, 8:00 am, Monday - Thursday.** *Room 517 ABCD*
- **Nobel Prize Celebration, 3:00 - 5:00 pm, Monday.** *Room 517 ABCD*
- **ASMS Business Meeting, 5:15 pm, Wednesday.** *517 A Wine, beer and soft drinks will be served!!*
 Research Award Presentations • Reports from the Board of Directors • IJMSIP Student Awards
- **Conference Finale, 5:00 - 8:00 pm, Thursday.** *Viger Lobby* Tickets and your name badge are required.
- **Corporate Hospitality Suites, 6:30 pm, Monday, Tuesday and Wednesday**

PLENARY LECTURERS



Monday, 8:00 am

Lonnie G. Thompson
The Ohio State University
 Rapid Climate Change: Past, Present, and Future



Thursday, 8:00 am

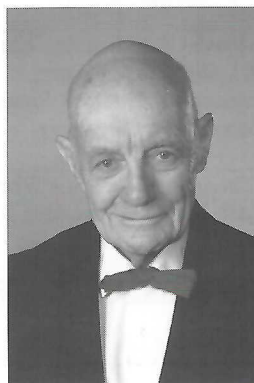
Andrew D. Hamilton
Yale University
 Targeting Protein-Protein Interactions Using Synthetic Agents

NOBEL PRIZE CELEBRATION LECTURERS



Monday, 3:15 pm

Koichi Tanaka
Shimadzu Corporation
 The Origin and the Future of Macromolecule Ionization by Laser Irradiation



Monday, 4:00 pm

John B. Fenn
Virginia Commonwealth University
 Electrospray Wings for Molecular Elephants

SUNDAY PROGRAM OVERVIEW

9:00 am - 4:30 pm	SHORT COURSES
10:00 am - 8:00 pm	REGISTRATION
5:00 - 6:30 pm	TUTORIAL LECTURES, Room 517 AB <ul style="list-style-type: none"> • Gary van Berkel, Oak Ridge National Laboratory <i>Atmospheric Pressure Ionization Techniques</i> • Gary Valaskovic, New Objective, Inc. <i>Making a Start-Up Company Succeed</i>
7:00 - 9:00 pm	WELCOME MIXER

MONDAY PROGRAM OVERVIEW

7:30 am	WAKE-UP COFFEE <i>Foyer of Room 517 ABCD</i>
8:00 - 8:45 am	PLENARY LECTURE: Lonnie G. Thompson , <i>The Ohio State University</i> Rapid Climate Change: Past, Present, and Future <i>Room 517 ABCD Additional seating in Room 710 A</i>
8:45 - 10:15 am	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i> <ul style="list-style-type: none"> • Atomic/Elemental Analysis, 1 - 7 • Bioinformatics, 8 - 23 • Carbohydrates/Oligosaccharides, 24 - 40 • Clinical Chemistry, 41 - 64 • Drug Metabolism: High Throughput, 65 - 85 • Drug Metabolism: Pharmacokinetics, 86 - 94 • Drug Metabolism: Quantitation, 95 - 128 • Environmental, 129 - 155 • ESI, Nanospray Sample Preparation, 156 - 171 • Fossil Fuels, 172 - 179 • FTMS, 180 - 194 • Instrumentation: Ion Surfaces (MALDI), 195 - 209 • Instrumentation: New Concepts, 210 - 229 • Isotope Ratio MS, 230 - 237 • Lipids: Signaling, 238 - 245 • MALDI: Sample Preparation, 246 - 268 • Metabolism: Xenobiotics, 269 - 297 • Natural Products, 298 - 311 • Non-Covalent Interactions, 312 - 329 • Nucleic Acids, 330 - 347 • Peptides: Post Translation Modification I, 348 - 372 • Peptides: Quantitation, 373 - 388 • Proteins: Modified, 389 - 425 • Proteins: Protein Folding, 426 - 438 • Proteomics: Fundamental, 439 - 450 • Proteomics: New & Improved Methods, 451 - 494 • Surface Analysis & Imaging, 495 - 514
9:00 - 11:00 am	CONTINENTAL BREAKFAST FOR REGISTERED GUESTS <i>Room 51 1A</i>
10:15 am - 12:15 pm	ORAL SESSIONS <ul style="list-style-type: none"> • MOA am: Membrane Proteins and Hydrophobic Peptides <i>Room 517 A</i> • MOB am: Time-of-Flight Mass Spectrometry <i>Room 517 B</i> • MOC am: Stable Isotope Labeling and Quantitative Proteomics <i>Room 517 C</i> • MOD am: ADME: MS Challenges and Solutions <i>Room 517 D</i> • MOE am: Gas Phase Ion Dynamics <i>Room 710 A</i> • MOF am: Synthetic Polymer Analysis <i>Room 710 B</i>
12:15 - 1:30 pm	LUNCH BREAK AND INTEREST GROUP MEETINGS <ul style="list-style-type: none"> • Interest Group: Synthetic Polymers <i>Room 511 D</i> • Interest Group: Drug Metabolism <i>Room 511 E</i>
1:30 - 3:00 pm	POSTER SESSION AND EXHIBITS
3:00 - 5:00 pm	NOBEL PRIZE CELEBRATION LECTURES <i>Room 517 ABCD Additional seating in 710 A</i> <ul style="list-style-type: none"> • Koichi Tanaka, <i>Shimadzu Corporation</i>. The Origin and the Future of Macromolecule Ionization by Laser Irradiation • John B. Fenn, <i>Virginia Commonwealth University</i>. Electrospray Wings for Molecular Elephants
5:30 - 7:00 pm	WORKSHOPS <ul style="list-style-type: none"> • Workshop: Is TOF MS Still Guiding Us? <i>Room 517 B</i> • Workshop: How Does LC/MS Enable Changes in Positioning ADMET Studies in the Drug Discovery and Development Process? <i>Room 517 C</i> • Workshop: High Throughput Assays – When Are They Really Needed? <i>Room 517 D</i> • Workshop: Metal Ion Coordination <i>Room 710 B</i>

TUESDAY PROGRAM OVERVIEW

7:30 am	WAKE-UP COFFEE <i>Foyer of Room 517 ABCD</i>
8:00 - 8:45 am	AWARD LECTURE: Fred W. McLafferty , Cornell University, Recipient of the Award for a Distinguished Contribution in Mass Spectrometry <i>Room 517ABCD Additional seating in 710 A</i>
8:45 - 10:15 am	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i> <ul style="list-style-type: none"> • Bioinformatics, 1 - 16 • Carbohydrates/Oligosaccharides, 17 - 31 • Clinical Chemistry, 32 - 51 • Drug Metabolism: High Throughput, 52 - 73 • Drug Metabolism: Metabolite and Impurity Identification, 74 - 96 • Drug Metabolism: Quantitation, 97 - 118 • Environmental, 119 - 143 • FTMS, 144 - 156 • Instrumentation: Ion Sources (ESI & APP), 157 - 171 • Instrumentation: New Concepts, 172 - 189 • Ion Structures: Energetics, 190 - 211 • Lipids: Biochemistry & Steroids, 212 - 225 • MALDI: MS/MS, 226 - 241 • MALDI: Sample Preparation, 242 - 264 • Metabolism: Xenobiotics, 265 - 279 • Microscale Separations MS, 280 - 294 • Natural Products, 295 - 306 • Noncovalent Interactions, 307 - 328 • Nucleic Acids, 329 - 345 • Peptides: Post Translational Modifications, 346 - 365 • Polymers, 366 - 391 • Proteins: General, 392 - 414 • Proteins: Membrane, 415 - 442 • Proteomics: Instrumentation and Automation, 443 - 465 • Proteomics: Labeling – Other Isotopes, 466 – 493 • Proteomics: New and Improved Methods, 494 - 532
9:00 – 11:00 am	CONTINENTAL BREAKFAST FOR REGISTERED GUESTS <i>Room 511 A</i>
10:15 am - 12:15 pm	ORAL SESSIONS <ul style="list-style-type: none"> • TOA am: FT-ICR Instrumentation <i>Room 517 A</i> • TOB am: MS and Crime and Terrorism <i>Room 517 B</i> • TOC am: Lipids in Signaling <i>Room 517 C</i> • TOD am: RNA Structure and Screening <i>Room 517 D</i> • TOE am: Polymer Mass Spectrometry: Fundamental Aspects <i>Room 710 A</i> • TOF am: Metal and Macromolecules <i>Room 710 B</i>
12:15 - 1:30 pm	LUNCH BREAK AND INTEREST GROUP MEETINGS <ul style="list-style-type: none"> • Interest Group: Fundamentals <i>Room 511 D</i> • Interest Group: Computer Applications <i>Room 511 E</i> • Interest Group: Young Mass Spectrometrists <i>Room 511 F</i> • Interest Group: Flavor, Fragrance and Foodstuff <i>Room 510 B</i>
1:30 - 3:00 pm	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i>
3:00 - 5:00 pm	ORAL SESSIONS <ul style="list-style-type: none"> • TOA pm: Forensic Applications of Mass Spectrometry <i>Room 517 A</i> • TOB pm: Instrumentation: New Front-End MALDI Techniques <i>Room 517 B</i> • TOC pm: Proteomics in Cancer Discovery <i>Room 517 C</i> • TOD pm: Pharmacology and Toxicology <i>Room 517 D</i> • TOE pm: Chiral and Other Stereochemical Determinations by Mass Spectrometry <i>Room 710 A</i> • TOF pm: Glycomics <i>Room 710 B</i>
5:30 - 7:00 pm	WORKSHOPS <ul style="list-style-type: none"> • Ion Thermochemistry: Mature or Still a Growing Kid? <i>Room 517 B</i> • Software and Software Development for Proteomics <i>Room 517 C</i> • A Discussion of Cassette Dosing for HTP Assessment of Drug Exposure: An Opportunity for Benchmark Analysis and Debate <i>Room 517 D</i> • Unfinished Business in Polymer Mass Spectrometry <i>Room 710 A</i>

WEDNESDAY PROGRAM OVERVIEW

7:30 am	WAKE-UP COFFEE <i>Foyer of Room 517 ABCD</i>
8:00 - 8:45 am	AWARD LECTURE: Carol V. Robinson , Cambridge University, Recipient of the Biemann Medal <i>Room 517 ABCD</i>
8:45 - 10:15 am	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i> <ul style="list-style-type: none"> • Antiterrorism MS, 1 - 23 • APCI and LCMS Sample Preparation, 24 - 46 • Biopolymer Interactions, 47 - 62 • Computer Applications, 63 - 75 • Drug Metabolism: Quantitation, 76 - 113 • Environmental, 114 - 130 • High Throughput Robotics, 131 - 139 • Instrumentation: Mass Analyzers (Quadrupoles and Traps), 140 - 160 • Ion Activation: Dissociation, 161 - 184 • Ion Molecule Reactions, 185 - 206 • Ionization Mechanisms, 207 - 220 • Lipids – Oxidized, 221 - 229 • Materials Science, 230 - 234 • Particle Analysis, 235 - 238 • Peptides: Fragmentation Sequencing, 239 - 262 • Phosphoproteins, 263 - 283 • Process Monitoring, 284 - 288 • Proteins: General, 289 - 312 • Proteins: Glycoproteins, 313 - 326 • Proteomics: Biochemistry, 327 - 351 • Proteomics: Cancer, 352 - 369 • Proteomics: Labeling, 370 - 394 • Proteomics: Medical Applications, 395 - 414 • Proteomics: New and Improved Methods, 415 - 453 • Proteomics: Sample Preparation and Methodologies, 454 - 487 • Toxicology, 488 – 517
10:15 am - 12:15 pm	ORAL SESSIONS <ul style="list-style-type: none"> • WOA am: Quadrupole Ion Traps: Instrumentation and Methods <i>Room 517 A</i> • WOB am: Protein Conformation and Binding <i>Room 517 B</i> • WOC am: LC/MS: Future of Liquid Separations <i>Room 517 C</i> • WOD am: High Throughput Screening <i>Room 517 D</i> • WOE am: Ion Catalysis <i>Room 710 A</i> • WOF am: Carbohydrates <i>Room 710 B</i>
12:15 - 1:30 pm	LUNCH BREAK AND INTEREST GROUP MEETINGS <ul style="list-style-type: none"> • Interest Group: Ion Metal Coordination <i>Room 511 F</i> • Workshop: Discussion of Technologies with Imminent Practical Impact. Scheduled-FAIMS, Novel MALDI and SFC in Day-to-Day Use <i>Room 517 C</i>
1:30 - 3:00 pm	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i>
3:00 - 5:00 pm	ORAL SESSIONS <ul style="list-style-type: none"> • WOA pm: Imaging Mass Spectrometry <i>Room 517 A</i> • WOB pm: Protein Analytics: Top Down Sequencing <i>Room 517 B</i> • WOC pm: LC/MS: Novel Technologies <i>Room 517 C</i> • WOD pm: DNA and DNA Complexes <i>Room 517 D</i> • WOE pm: Ion Thermochemistry <i>Room 710 A</i> • WOF pm: Environmental MS <i>Room 710 B</i>
5:15 – 6:00 pm	ASMS BUSINESS MEETING <i>Room 517 A Wine, beer and soft drinks!!</i>

THURSDAY PROGRAM OVERVIEW

7:30 am	WAKE-UP COFFEE <i>Foyer of Room 517 ABC</i>
8:00 - 8:45 am	PLENARY LECTURE: Andrew D. Hamilton , Yale University Targeting Protein-Protein Interactions Using Synthetic Agents <i>Room 517 ABCD</i>
8:45 - 10:15 am	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i> <ul style="list-style-type: none"> • Agriculture, 1 - 15 • Antiterrorism MS, 16 - 27 • Chiral Analysis by MS, 28 - 37 • Combinatorial Chemistry, 38 - 46 • Computer Applications, 47 - 64 • Drug Metabolism: High Throughput, 65 - 78 • Drug Metabolism: Ion Suppression, 79 - 91 • Drug Metabolism: Quantitation, 92 - 111 • Environmental Analysis, 112 - 129 • Forensics, 130 - 145 • Immunology, 146 - 158 • Instrumentation: Ion Sources, 159 - 166 • Instrumentation: Mass Analyzers (TOF), 167 - 186 • Ion Mobility, 187 - 194 • Ion Molecule Reactions, 195 - 216 • Ion Structures/Energies, 217 - 222 • Ionization Mechanisms, 223 - 239 • LC/MS Sample Preparation, 240 - 268 • Lipids: Structural Analysis, 269 - 279 • Metal Clusters, 280 - 282 • Multichannel & Multiplex Analysis, 283 - 288 • Multistage Chromatography, 289 - 296 • Neuropeptides, 297 - 308 • Peptides: Fragmentation Sequencing, 309 - 331 • Peptides: General, 332 - 344 • Phosphoproteins, 345 - 370 • Proteins: Folding, 371 - 383 • Proteomics: Biochemistry, 384 - 402 • Proteomics: Cancer Biomarkers, 403 - 420 • Proteomics: Fundamental - Other/New, 421 - 430 • Proteomics: Fundamentals, 431 - 437 • Proteomics: Lower Organisms, 438 - 459 • Proteomics: Medical Applications, 460 - 478 • Toxicology, 479 - 491
10:15 am - 12:15 pm	ORAL SESSIONS <ul style="list-style-type: none"> • ThOA am: Instrumentation: General <i>Room 517 A</i> • ThOB am: Fundamentals of Peptide Fragmentation <i>Room 517 B</i> • ThOC am: Metabonomics: Human Natural Product Profiling <i>Room 517 C</i> • ThOD am: Stability Constants of Protein Ligand Complexes: Determinations from the Equilibrium in Solution <i>Room 517 D</i> • ThOE am: Non-Covalent Protein Complexes <i>Room 710 A</i> • ThOF am: Petroleomics, Including Biomarkers and Organic Geochemistry <i>Room 710 B</i>
12:15 - 1:30 pm	LUNCH BREAK
1:30 - 3:00 pm	POSTER SESSION AND EXHIBITS <i>Exhibit Hall</i>
3:00 - 5:00 pm	ORAL SESSIONS <ul style="list-style-type: none"> • ThOA pm: Developments in Ion Mobility <i>Room 517 A</i> • ThOB pm: Microfluidic Devices, Microarrays and MS Detection <i>Room 517 B</i> • ThOC pm: Protein Phosphorylation and Phosphoproteomics <i>Room 517 C</i> • ThOD pm: Immunology and Mass Spectrometry <i>Room 517 D</i> • ThOE pm: Biodegradable/Biocompatible Polymers <i>Room 710 A</i> • ThOF pm: BioAnalytical Applications of ICP-MS <i>Room 710 B</i>
5:00 - 8:00 pm	CLOSING FINALE <i>Viger Foyer</i>

SUNDAY, June 8

TUTORIAL LECTURES

SUN 5:00 **Atmospheric Pressure Ionization Techniques;** Gary van Berkel, Oak Ridge National Laboratory
Making a Start-Up Company Succeed; Gary Valaskovic, New Objective, Inc.

MONDAY MORNING, June 9

PLENARY LECTURE

8:00 – 8:45 **Rapid Climate Change: Past, Present, and Future;** Lonnie G. Thompson, *The Ohio State University, Columbus, OH*

MEMBRANE PROTEINS AND HYDROPHOBIC PEPTIDES

MOAam 10:15 **Mass Spectrometry of Integral Membrane Proteins in Proteomics and Structural Biology;** Julian P. Whitelegge; *UCLA The Pasarow Mass Spectrometry Laboratory, Los Angeles, CA*

MOAam 10:35 **The Mitochondrial Proteome of Normal Human Heart Tissue;** Steven W. Taylor¹; Eoin Fahy¹; Bing Zhang¹; Gary M. Glenn¹; Dale E. Warnock¹; Sandra Wiley¹; Anne N. Muphy¹; Sara P. Gaucher²; Roderick A. Capaldi³; Bradford W. Gibson²; Soumitra S. Ghosh¹; ¹*MitoKor, San Diego, CA*; ²*Buck Institute for Age Research, Novato, CA*; ³*University of Oregon, Eugene, OR*

MOAam 10:55 **Characterization of Hydrophobic Fimbrial Membrane Proteins by LC-MS and LC-MS/MS;** Sonja Hess¹; Frederick J. Cassels²; John O. Cisar³; Lewis K. Pannell⁴; ¹*NIDDK, Bethesda, MD*; ²*WRAL, Silver Spring, MD*; ³*NIDCR, Bethesda, MD*; ⁴*University of Southern Alabama, Mobile, AL*

MOAam 11:15 **Disulfide Mapping of Outer Membrane Proteins from *Chlamydia trachomatis* Serovar F;** Eric A. Berg¹; Yan Wang²; Mark E. McComb¹; You X. Zhang²; Catherine E. Costello¹; ¹*Boston University School of Medicine, Mass Spectrometry Resource, Boston, MA*; ²*Boston University School of Medicine, Department of Medicine, Boston, MA*

MOAam 11:35 **Mass Spectrometry of Integral Membrane Transport Proteins;** Adam B. Weinglass¹; Julian P. Whitelegge²; Yonglin Hu¹; Gillian Verner¹; Jose L. Vazquez-Ibar¹; Wil N. Konings³; Gerard Leblanc⁴; Heinrich Jung⁵; Kym F. Faull²; Ronald H. Kaback¹; ¹*Howard Hughes Medical Institute, UCLA, Los Angeles, CA*; ²*The Pasarow Mass Spectrometry Laboratory, UCLA, Los Angeles, CA*; ³*Dept. of Microbiology, University of Groningen, Groningen, NL*; ⁴*University of Nice Sophia-Antopolis, Nice, FR*; ⁵*Fachbereich Biologie/Chemie, University of Osnabruck, Osnabruck, DE*

MOAam 11:55 **Exploring the Structure and Dynamics of Rhodopsin Using Chemical Cross-Linking and LC/MS;** Malin M. Young; Petr Novak; Gary H. Kruppa; Joe Schoeniger; *Sandia National Laboratories, Livermore, CA*

TIME-OF-FLIGHT MASS SPECTROMETRY

MOBam 10:15 **Milestones on the Time-of-Flight Journey: from Niche Technology to Mainstream MS;** Kenneth G. Standing; *University of Manitoba, Winnipeg, Canada*

MOBam 10:55 **SIMS Study Using Large Gold Cluster Primary Ions for the Detection of Small Biomolecules;**

Agnes Tempez¹; Serge Della-Negra²; Joel Depauw²; Dominique Jacquet²; Yvon Le Beyec²; Alexei Novikov²; Michele Pautrat²; Michael Ugarov¹; J. Albert Schultz¹; Katrin Fuhrer²; Marc Gonin²; Amina Woods³; ¹*Ionwerks, Houston, Texas*; ²*Institut de Physique Nucléaire, Orsay, France*; ³*NIDA IRP, Baltimore, MD*

MOBam 11:15 **A High Performance E4TOF Mass Spectrometer;** S. E. Buttrill, Jr.; David Knight; Peter Trinh; *Ciphergen Biosystems Inc., Fremont, California*

MOBam 11:35 **Simultaneous Acquisition of Peptide Mass Map and Sequence Information for Peptides, Peptide Mixtures, and Protein Digests Employing MALDI-IM-SID-TOF-MS with a Micro-Crystal ND:YAG (355nm) kHz Laser;** Earle G. Stone; Kent J. Gillig; Shane E. Tichy; David H. Russell; *Texas A&M University, College Station, Texas*

MOBam 11:55 **Tunable VUV Free Electron Laser Ionization and Analysis with a Novel Time of Flight Spectrometer;** J. F. Moore¹; W.F. Calaway¹; C.Y. Chen⁴; P. DenHartog¹; Bruce King²; J.W. Lewellen¹; Y. Li¹; S.V. Milton¹; E.R. Moog¹; M.J. Pellin¹; M. Petravici³; I.V. Veryovkin¹; ¹*Argonne National Laboratory, Argonne, IL*; ²*University of Newcastle, Newcastle, Australia*; ³*Australian National University, Canberra, Australia*; ⁴*Earth Science Institute, Taipei, Taiwan*

STABLE ISOTOPE LABELING AND QUANTITATIVE PROTEOMICS

MOCam 10:15 **Stable Isotope Tagging for Quantitative Proteomics;** Ruedi H. Aebersold; *Institute for Systems Biology, Seattle, WA*

MOCam 10:55 **Selective Extraction of Labeled Entities by Charge derivatization and Tandem Mass Spectrometry (SELECT): A Novel Approach for Identification and Quantitation of Differential Protein Expression;** Gavin E. Reid¹; Richard J. Simpson¹; A.J. O'Hair²; ¹*Joint ProteomicS Laboratory, Ludwig Institute for Cancer Research, Parkville, Victoria, Australia*; ²*Ludwig Institute for Cancer Research, Parkville, Victoria, Australia*

MOCam 11:15 **Mass Spectrometric Quantitation of Histone H3 Methylation Mediated by an Early Development Regulator Protein Ezh2;** Andrew N. Krutchinsky; Su I-hsin; Alexander Tarakhovskiy; Brian T. Chait; *The Rockefeller University, New York, NY*

MOCam 11:35 **Dynamics of Large Multi-Protein Complexes Studied by Stable Isotope Labeling with Amino Acids in Cell Culture;** Jens S Andersen¹; Yun W Lam²; Shao-En Ong¹; Angus I Lamond²; Mathias Mann¹; ¹*University of Southern Denmark, Odense, Denmark*; ²*University of Dundee, Dundee, UK*

MOCam 11:55 **Absolute Quantification (AQUA) of Posttranslationally-Modified Proteins;** Scott A. Gerber¹; John Rush²; Junmin Peng¹; Steven P. Gygi¹; ¹*Harvard Medical School, Boston, MA*; ²*Cell Signaling Technology, Inc., Beverly, MA*

ADME: MS CHALLENGES AND SOLUTIONS

MODam 10:15 **LC-MS - A Critical Tool for ADME Studies;** Cornelis E.C.A. Hop; *Pfizer Global Research & Development, Groton, CT*

MODam 10:55 **Bioanalytical Challenges Associated with the Use of *in vitro* Methods to Assess Clinical Drug-Drug Interaction Potential;** Bradley L. Ackermann; James E. Eckstein; Barbara J. Ring; Ajai K. Chaudhary; *Drug Disposition, Eli Lilly and Company, Indianapolis, IN*

- MODam 11:15 **A Sensitive Method for Plasma Metabolite Identification Using Nano LC/Ion Trap MS in Conjunction with a Microplate Scintillation Counter;** Richard Gedamke; Weiping Zhao; Stephen Gozo; James Mitroka; Mingshe Zhu; *Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ*
- MODam 11:35 **Using MALDI TOF/TOF MS/MS to Provide Simultaneous Drug/Metabolite Quantification and Identification;** Edward J. Takach¹; Qing Zhu¹; Golnaz Shapurian¹; Jennifer M. Campbell²; Marvin L. Vestal²; Paul Danis²; Lawrence Gan¹; Sandeepraj Pusalkar¹; Frank Hsieh¹; ¹*Millennium Pharmaceuticals, Cambridge, MA*; ²*Applied Biosystems, Framingham, MA*
- MODam 11:55 **Molecular Imaging of Small Molecules in Tissue Using Orthogonal Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry;** Yunsheng Hsieh¹; Michelle L. Reyzer²; Richard M. Caprioli²; Jane Y. Zhao³; Min Yang³; Kwokei Ng¹; Walter Korfmacher¹; ¹*Schering-Plough Research Institute, Kenilworth, NJ*; ²*Vanderbilt University, Nashville, TN*; ³*Applied Biosystems / MDS Sciex, Concord, Ontario, Canada*

GAS PHASE ION DYNAMICS

- MOEam 10:15 **Photoelectron Photocoïncidence Spectroscopy with Velocity Imaging of Threshold Electrons;** Tomas Baer; Balint Sztaray; *University of North Carolina, Chapel Hill, NC*
- MOEam 10:55 **Charge Transfer Reactions of O₂⁺ with Alkylbenzenes at High Pressure: Stabilization of the Excited Intermediate and Determination of the Step Sizes for Collisional Energy Transfer;** Albert A. Viggiano¹; Skip Williams¹; Jurgen Troe²; Thomas M. Miller¹; Abel Fernandez¹; J.F. Friedman¹; S.T. Arnold¹; J.V. Seeley³; ¹*Air Force Research Laboratory, Hanscom AFB, MA*; ²*University of Goettingen, Goettingen, Germany*; ³*Oakland University, Rochester, MI*
- MOEam 11:15 **Interstellar Ion Chemistry: Reactions of Organic Anions with Atomic Hydrogen, Nitrogen, and Oxygen;** Veronica M. Bierbaum; Theodore P. Snow; Brian Eichelberger; Momir Stepanovic; Cynthia Barckholtz; *University of Colorado, Boulder, CO*
- MOEam 11:35 **Periodicities in the Reactivities of Transition-Metal Cations with NO in the Gas Phase;** Eric Flaim²; Michael J.Y. Jarvis¹; Voislav Blagojevic¹; Diethard K. Bohme¹; ¹*Department of Chemistry, York University, Toronto, Canada*; ²*Department of Chemistry, University of Alberta, Edmonton, Canada*
- MOEam 11:55 **Effect of the Surface on the Energy Transfer in Ion-Surface Collisions;** Julia Laskin; Jean H Futrell; *Pacific Northwest National Laboratory, Richland, WA*

SYNTHETIC POLYMER ANALYSIS

- MOFam 10:15 **Mass Spectrometry of Polymers;** Scott D. Hanton; *Air Products and Chemicals, Inc., Allentown, PA*
- MOFam 10:55 **On-Line Coupling of Atmospheric-Pressure Ionization Mass Spectrometry with Size-Exclusion Chromatography for Polymer Analysis;** Laszlo Prokai¹; William J. Simonsick, Jr.²; ¹*University of Florida, Gainesville, FL*; ²*Du Pont Marshall Laboratory, Philadelphia, PA*
- MOFam 11:15 **Characterizing Co-Polyesters by MALDI FTICR and Gel Permeation Chromatography;** Todd H. Mize¹; William J. Simonsick²; I. Jonathan Amster¹; ¹*Department of Chemistry, University of Georgia,*

Athens, GA; ²*Dupont Marshall R & D Laboratory, Philadelphia, PA*

- MOFam 11:35 **MALDI-MS Characterization of Hyperbranched Polymers;** Chrys Wesdemiotis¹; Michael J. Polce¹; Frank W. Harris²; Jong-Beom Baek²; ¹*The University of Akron, Department of Chemistry, Akron, OH*; ²*The University of Akron, Department of Polymer Science, Akron, OH*
- MOFam 11:55 **Characterization of Oligomeric HALS (Hindered Amine Light Stabilizers) by MALDI, LC/MS and ESI;** Ted T. Chang; Michael J. Piquette; Martin L. Cohen; *Cytec Industries Inc., Stamford, CT*

MONDAY AFTERNOON

NOBEL PRIZE CELEBRATION

- 3:00 – 5:00 **Koichi Tanaka**, *Shimadzu Corporation*
John Fenn, *Virginia Commonwealth University*

TUESDAY MORNING, June 10

AWARD LECTURE

- 8:00 – 8:45 **Recipient of the Award for a Distinguished Contribution in Mass Spectrometry**
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- FT-ICR: INSTRUMENTATION**
- TOAam 10:15 **High Speed Data-Dependent HPLC FT-ICR MS/MS;** Greg T. Blakney; Michael J. Chalmers; TuKiet T. Lam; Mark R. Emmett; Christopher L. Hendrickson; Alan G. Marshall; *Ion Cyclotron Resonance Program, National High Magnetic Field Laboratory, Tallahassee, FL*
- TOAam 10:35 **Automated High Throughput Peptide Mapping with a Novel MALDI FT-ICR Mass Spectrometer;** David M. Horn; Ansgar Brock; Eric C. Peters; Qui T. Phung; Daniel E. Mason; *GNF, San Diego, CA*
- TOAam 10:55 **Utilizing Q-FTMS toward Automated Top-Down Proteomics of *Methanococcus jannaschii* and *Saccharomyces cerevisiae*;** Steven M. Patrie; Andrew J. Forbes; Fanyu Meng; Leah M. Miller; Gregory K. Taylor; Yong-Bin Kim; Ryan E. McCarthy; Dana E. Robinson; Neil L. Kelleher; *University of Illinois, Urbana, IL*
- TOAam 11:15 **Development and Application of Combined Infrared Multiphoton and Electron Capture Dissociation with a Hollow Electron Beam in Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Youri O. Tsybin¹; Matthias Witt²; Frank Kjeldsen¹; Goekhan Baykut²; Roman A. Zubarev¹; Per Hakansson¹; ¹*Division of Ion Physics, Uppsala University, Uppsala, Sweden*; ²*Bruker Daltonik GmbH, Bremen, Germany*
- TOAam 11:35 **Instrumentation for High Throughput Fourier Transform Ion Cyclotron Resonance Analysis of Non-Covalent RNA Complexes and PCR Products;** Jared J. Drader; James C. Hannis; Steven A. Hofstadler; *Ibis Therapeutics - A Division of Isis Pharmaceuticals, Carlsbad, CA*
- TOAam 11:55 **A Hybrid Two-Dimensional Quadrupole Ion Trap/Fourier Transform Ion Cyclotron Mass Spectrometer: Accurate Mass and High Resolution at a Chromatography Timescale;** Stevan Horning¹; Robert Malek¹; Andreas Wieghaus¹; Michael W. Senko²; John E.P. Syka²; ¹*Thermo Electron, Bremen, Germany*; ²*Thermo Electron, San Jose, CA*

MS AND CRIME AND TERRORISM

- TOBam 10:15 **The use of Mass Spectrometry for the Identification of Explosives and Poisons in the Israeli Police;** Tsippy Tamiri; *Israel Police, Jerusalem, Israel*
- TOBam 10:55 **Forensics and Terrorism: Useful Stable Isotope Approaches;** James R. Ehleringer; *University of Utah, Salt Lake City, UT*
- TOBam 11:15 **Traces, Trials and Tribulations - the Use of Mass Spectrometry for the Trace Analysis of Explosives;** Andrew Crowson; *Forensic Explosives Laboratory, Dstl., Sevenoaks, Kent, UK*
- TOBam 11:35 **Where Does the Mass Spectrometer Fit Inside the Fire Investigator's Tool Box?** Raymond J. Kuk; *United States Bureau of Alcohol, Tobacco, Firearms and Explosives, Beltsville, MD*
- TOBam 11:55 **Mass Spectral Confirmation of Nitro-Based Explosives Using Negative Chemical Ionization Mass Spectrometry with Alternate Reagent Gasses;** Jeffrey G McDonald; Kelly Mount; Mark L Miller; *Federal Bureau of Investigation, Quantico, VA*

LIPIDS IN SIGNALING

- TOCam 10:15 **Oxidized Phospholipids: Interesting Activity and Interesting Tandem Mass Spectrometry;** Robert C. Murphy¹; Kathleen Harrison¹; Marvin Vestal²; Jennifer Campbell²; ¹*National Jewish Medical and Research Center, Denver, CO*; ²*Applied Biosystems, Framingham, MA*
- TOCam 10:55 **Lipidomics of Lipid Rafts: A Quantitative Electrospray Ionization Mass Spectrometric Analysis;** Xianlin Han; *Washington University School of Medicine, St. Louis, MO*
- TOCam 11:15 **Sphingolipidomics: Utilization of Mass Spectrometry to Unravel the Complexities of Sphingolipid Metabolism and Cell Signaling;** M. Cameron Sullards; Alfred H. Merrill, Jr; Elaine W. Wang; Samuel L. Kelley; *Georgia Institute of Technology, Atlanta, GA*
- TOCam 11:35 **Phosphoinositide Profiling in Complex Lipid Mixtures Using Electrospray Ionization Mass Spectrometry;** Markus R Wenk¹; Louise Lucast¹; Walter McMurray³; Pietro De Camilli²; ¹*Yale University School of Medicine, New Haven, CT*; ²*Howard Hughes Medical Institute, New Haven, CT*; ³*W.M. Keck Mass Spectrometry Resource, New Haven, CT*
- TOCam 11:55 **Rapid Monitoring of Cardiolipin Oxidations by ESI-MS/MS;** Steven C Halls; Marc Fariss; James E Bruce; William F Siems; *Washington State University, Pullman, WA*

RNA STRUCTURE AND SCREENING

- TODam 10:15 **Modified Nucleotides in RNA: Putting Them in Their Place;** Pamela F. Crain; *University of Utah, Salt Lake City, UT*
- TODam 10:35 **FTMS-Based Strategies for Protein-RNA Footprinting: Investigation of the Interactions between HIV-1 Nucleocapsid Protein p7 and Psi-RNA;** Eizadora Yu; Kathy Kellersberger; Daniele Fabris; *University of Maryland, Baltimore County, Baltimore, MD*
- TODam 10:55 **Modifications in *Thermus thermophilus* 23S rRNA: Involvement in RNA-RNA Contact;** Jonas Mengel-Jørgensen; Jacob Pøhlsgaard; Jens J.L. Iversen; Finn Kirpekar; *Dept. of Biochem. & Mol. Biol., University of Southern Denmark, Odense, Denmark*

- TODam 11:15 **Mapping of Pseudouridine Residues in Large RNAs by LC/MS/MS;** Steven C Pomerantz; James A. McCloskey; *University of Utah, Salt Lake City, UT*
- TODam 11:35 **Functional Microfabricated Devices for the Mass Spectral Analysis of Nucleic Acids;** Beniam Berhane; Patrick A Limbach; *University of Cincinnati, Cincinnati, OH*
- TODam 11:55 **RNA Structure Mapping Using High Performance Mass Spectrometry;** Lendell L. Cummins; Kristin A. Sannes-Lowery; Richard H. Griffey; Tom Hall; Steven A. Hofstadler; *Ibis Therapeutics, a Division of Isis Pharmaceuticals, Inc., Carlsbad, CA*

POLYMER MASS SPECTROMETRY: FUNDAMENTAL ASPECTS

- TOEam 10:15 **Thermochemical and Conformational Properties of Oligomeric Ions from Gas Phase Ion Studies;** Douglas P. Ridge; Burnaby Munson; Michael Lassman; *University of Delaware, Newark, DE*
- TOEam 10:55 **Fundamental Aspects of Polymer Fragmentation;** Michael J. Polce; Chrys Wesdemiotis; *The University of Akron, Akron, OH*
- TOEam 11:15 **Molecular Mass Determination of Saturated Hydrocarbons Using Organometallic Ion Chemistry;** H.C. Michelle Byrd¹; Charles M. Guttman¹; Scott Robinson²; Douglas P. Ridge²; ¹*National Institute of Standards and Technology, Gaithersburg, MD*; ²*University of Delaware, Newark, DE*
- TOEam 11:35 **Analysis of Non-Polar Hydrocarbon Polymers by Using Laser-Induced Acoustic Desorption Fourier Transform Ion-Cyclotron Resonance (LIAD/FT-ICR) Mass Spectrometry;** J. Larry Campbell; Kenroy M. Crawford; Hilkka I. Kenttamaa; *Department of Chemistry, Purdue University, West Lafayette, IN*
- TOEam 11:55 **A Study of Metal Ion Attachment to Non-Ionic Surfactants by Electrospray Ionization FTICR Mass Spectrometry;** Khaled M. Edbey; Grainne M. Moran; Gary D. Willett; *The University of New South Wales, Sydney, Australia*

METAL IONS AND MACROMOLECULES

- TOFam 10:15 **Aromatic Ring Destruction in Complexes of Metal Dications;** Alexandre A. Shvartsburg; *FDA National Center for Toxicological Research, Jefferson, AR*
- TOFam 10:35 **Gas Phase Ion/Ion Reactions as a New Technique for Generating and Studying Interactions of Metal Ions with Peptide and Protein Ions;** Kelly A. Newton; Scott A. McLuckey; *Department of Chemistry, Purdue University, West Lafayette, IN*
- TOFam 10:55 **Why is Al₁₁B₂⁻ Not a Magic Number in TOF-MS?;** Jian Wan; Rene Fournier; *York University, Toronto, Canada*
- TOFam 11:15 **Complexation of Silver and Co-Recovered Metals with Novel Aza-Crown Ether Macrocyces by ESI-MS;** Sheldon M. Williams¹; Jennifer S. Brodbelt¹; Alan P. Marchand²; ¹*University of Texas, Austin, TX*; ²*University of North Texas, Denton, TX*
- TOFam 11:35 **The Synergy of Tandem Atomic and Molecular Mass Spectrometry Approaches for Characterizing Metalloproteins;** Sandra N. Mounicou; Juris Meija; Patrick A. Limbach; Joseph A. Caruso; *University of Cincinnati, Department of Chemistry, Cincinnati, OH*
- TOFam 11:55 **Mass Spectrometry as a Tool to Determine the Coordination Structure of Metal-Containing**

Proteins; Jihyeon Lim; Richard W. Vachet;
University of Massachusetts, Amherst, MA

TUESDAY AFTERNOON

FORENSIC APPLICATIONS OF MASS SPECTROMETRY

- TOApm 3:00 **Mass Spectrometry as a Tool for Biodetection**; Kent J. Voorhees¹; Jon C. Rees¹; Angelo Madonna¹; Ted L. Hadfield²; Virgine Ruelle¹; ¹*Colorado School of Mines, Golden, CO*; ²*Armed Forces Institute of Pathology, Washington, DC*
- TOApm 3:40 **Forensic Comparison of Packaging Tapes - An Elemental and Isotopic Perspective**; Andrew M. Dobney; Wim Wiarda; Peter de Jooode; Gerard J.O. van der Peijl; *Netherlands Forensic Institute (NFI), Rijswijk, The Netherlands*
- TOApm 4:00 **Optimization of Electrospray Ionization Mass Spectrometric Detection for the Analysis of Smokeless Powders**; John A. Mathis; Olivier Collin; Bruce R. McCord; *Ohio University, Athens, OH*
- TOApm 4:20 **The Application of MALDI-TOF MS for Bacterial Identification in a Forensic Environment**; Karen L. Wahl; Nancy B. Valentine; Sharon C. Wunschel; David S. Wunschel; Catherine E. Petersen; Kristin H. Jarman; *Pacific Northwest National Laboratory, Richland, WA*
- TOApm 4:40 **Analysis of Pen Inks Dyes and Pigments by Laser Desorption Mass Spectrometry**; John Allison; Jamie Dunn; Leah Balko; Donna Grim; *Michigan State University, East Lansing, MI*

INSTRUMENTATION: NEW FRONT-END MALDI TECHNIQUES

- TOBpm 3:00 **On-Target Clean-Up and Concentration of Biological Samples**; Ron Orlando; *CCRC/UGA, Athens, GA*
- TOBpm 3:20 **New Surface Enhanced Neat Desorption SELDI Protein Biochip Arrays for Evaluating the Low Molecular Weight Proteome**; Scot R. Weinberger; Shanhua Lin; Rosa Viner; Noataka Kitagawa; Daniel Chang; Ning Tang; *Ciphergen Biosystems, Fremont, CA*
- TOBpm 3:40 **Low Cost Hydrophobic/Hydrophilic Single Use MALDI Targets and Precision Multicolumn Direct Deposition Device for Off-Line μ LC MALDI MS**; Ansgar Brock; Qui T. Phung; Eric C. Peters; *Genomics Institute of the Novartis Research Foundation, San Diego, CA*
- TOBpm 4:00 **Orthogonal Ion Extraction MALDI-TOF with a Single-Quadrupole: Features and Applications for DNA/RNA Analysis**; Stefan Berkenkamp¹; Franz Hillenkamp²; Dirk van den Boom¹; ¹*Sequenom Inc., San Diego, CA*; ²*University of Muenster, Münster, Germany*
- TOBpm 4:20 **MALDI MS/MS on a Triple Quadrupole Mass Spectrometer: A New Technology for High Throughput Small Molecule Quantitation**; Jay J. Corr; Thomas R. Covey; Tung K. Chau; Peter Kovarik; William Fisher; *MDS SCIEX, Concord, Ontario*
- TOBpm 4:40 **Off-Line HPLC MALDI MS: New Interfacing Technology and Applications**; Liang Li; Boyan Zhang; Chris McDonald; Alan Doucette; Nancy Zhang; Nan Li; Hongying Zhong; *Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada*

PROTEOMICS IN CANCER DISCOVERY

- TOCpm 3:00 **Multiple High-Resolution Serum Proteomic Features for Ovarian Cancer Detection**; Thomas P. Conrads¹; Vince Fusaro²; Sally Ross²; Ben Hitt⁴; Peter Levine⁴; Seth Steinberg²; David Fishman⁵; Emanuel F. Petricoin III³; Lance A. Liotta²; Timothy D. Veenstra¹; ¹*SAIC-Frederick, Frederick, MD*; ²*National Cancer Institute, Bethesda, MD*; ³*Food and Drug Administration, Bethesda, MD*; ⁴*Correlogic Systems Inc, Bethesda, MD*; ⁵*Northwestern University Medical School, Chicago, IL*
- TOCpm 3:40 **Affinity Capture of Signal Transduction Protein Complexes from Ovarian Carcinoma and Benign Ovarian Epithelium**; David M. Berman¹; Ie-Ming Shih²; Lorri-Anne Burke¹; Timothy Veenstra⁵; Ying-Ming Zhao³; Thomas Conrads⁵; Sung Won Kwon³; Van Hoang⁵; Li-Rong Yu⁵; Ming Zhou⁵; Emmanuel F. Petricoin⁴; Lance A. Liotta¹; ¹*National Cancer Institute, Bethesda, MD*; ²*Johns Hopkins University School of Medicine, Baltimore, MD*; ³*University of Texas Southwestern Medical Center, Dallas, TX*; ⁴*Food and Drug Administration, Bethesda, MD*; ⁵*SAIC-Frederick Inc., National Cancer Institute, Bethesda, MD*
- TOCpm 4:00 **Protein Microarray for Prostate Cancer Using Liquid Proteome Fractionation**; Fang Yan¹; Arun Sreekumar²; Bhrathi Laxman²; Arul Chinnaiyan³; David M. Lubman¹; ¹*Department of Chemistry, The University of Michigan, Ann Arbor, MI*; ²*Department of Pathology, The University of Michigan, Ann Arbor, MI*; ³*Pathology, Urology and Cancer Center, The University of Michigan, Ann Arbor, MI*
- TOCpm 4:20 **New Approaches to the Detection of Cancer Biomarkers from Small Sample Sizes Using Laser Capture Microdissection with Mass Spectrometry**; Billy Wu¹; Geoffrey G. Goodrich²; Steven T. Kunitake²; William S. Hancock³; ¹*Thermo Electron, San Jose, CA*; ²*Arcturus, Mountain View, CA*; ³*Northeastern University, Boston, MA*
- TOCpm 4:40 **Protein Biomarkers in Oncology**; Stephen Naylor; *Beyond Genomics, Waltham, MA*

PHARMACOLOGY AND TOXICOLOGY

- TODpm 3:00 **Mass Spectrometry In Pharmacology And Toxicology**; Ian A. Blair; *Center for Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA*
- TODpm 3:20 **Independent Generation of 5-(2'-deoxycytidiny)methylene Radical from Photolabile Precursor and the Formation of a Novel Cross-Link Lesion between 5-Methylcytosine and Guanine**; Qibin Zhang; Yinsheng Wang; *University of California, Riverside, CA*
- TODpm 3:40 **New Strategies in Characterization and Quantitation of Antibody-Targeted Drug Conjugates in Plasma Using LC/LC/MS**; Miryam Kadkhodayan; Emily E Mann; Fred Jacobson; Chien Lee; *Genentech, Inc., South San Francisco, CA*
- TODpm 4:00 **Probing the Reactivity of Specific Positions within DNA towards Carcinogens and Drugs by Stable Isotope Labeling HPLC-ESI-MS/MS**; Natalia Tretvakova; Rebecca Ziegel; Brock Matter; *University of Minnesota, Minneapolis, MN*
- TODpm 4:20 **Study of Cisplatin Induced Hemoglobin Structural Changes Using HPLC/ICPMS and Nanospray**

Tandem MS; Xing-Fang Li; Rupasri Mandal; Robyn Kalle; *University of Alberta, Edmonton, Canada*
 TODpm 4:40 **Comprehensive Protein Mapping of Rat Liver Mitochondria**; Richard C. Jones; Ritchie J. Feuers; Ricky D. Edmondson; *National Center for Toxicological Research/FDA, Jefferson, AR*

CHIRAL AND OTHER STEREOCHEMICAL DETERMINATIONS BY MASS SPECTROMETRY

TOEpm 3:00 **Stereoselectivity and Chiral Recognition. What Can One Expect from Mass Spectrometry?**; Frantisek Turecek; *University of Washington, Seattle, WA*
 TOEpm 3:40 **Exploring Quantitative Methods for Enantiomeric Measurements by Mass Spectrometry**; W. Andy Tao¹; Lianming Wu²; R. Graham Cooks²; ¹*Institute for Systems Biology, Seattle, WA*; ²*Purdue University, West Lafayette, IN*
 TOEpm 4:00 **The Role of Selectors in Gas-Phase Selective Reactions**; Carlito B. Lebrilla; *University of California, Davis, CA*
 TOEpm 4:20 **Collision Induced Dissociation of Diastereomeric Gas Phase Salt Complexes**; Scott Gronert; Keiko Okamoto; Adelaide Fagin; *San Francisco State University, San Francisco, CA*
 TOEpm 4:40 **In situ Recognition of Molecular Chirality by Mass Spectrometry. Influence of Hydration On Chirality Effects on DMT Cluster Stability**; Eugene N Nikolaev¹; Graham Cooks²; ¹*The Institute for Energy Problems of Chem. Phys. Russian Acad. of Sci., Moscow, Russia*; ²*Purdue University, West Lafayette, IN*

GLYCOMICS

TOFpm 3:00 **Glycomics of Glycosaminoglycans by Capillary Electrophoresis/Quadrupole Time-of-Flight Tandem Mass Spectrometry**; Alina D. Zamfir¹; Daniela G. Seidler²; Hans Kresse²; Jasna Peter-Katalinic¹; ¹*Institute for Medical Physics and Biophysics, Muenster, Germany*; ²*Institute for Physiological Chemistry and PathobioChemistry, Muenster, Germany*
 TOFpm 3:20 **Structural Characterization of Oligosaccharides Using MALDI/TOF/TOF Tandem Mass Spectrometry**; Yehia Mechref¹; Cheni Krishnan²; Milos V. Novotny¹; ¹*Indiana University, Bloomington, IN*; ²*Applied Biosystems, Framingham, MA*
 TOFpm 3:40 **Characterisation of Complex Oligosaccharides Using a MALDI QIT TOF Mass Spectrometer**; Chris W Sutton¹; Rachel Martin¹; David Harvey²; ¹*Shimadzu Biotech, Manchester, UK*; ²*Glycobiology Institute, Oxford, UK*
 TOFpm 4:00 **Application of Proteomics for Mapping Post-Translational Modifications in *Pseudomonas aeruginosa***; Michael Schirm¹; Susan Logan²; Ian Schoenhofen²; Reuben Ramphal³; Karen Waldron¹; Pierre Thibault⁴; ¹*University of Montreal, Montreal, Canada*; ²*Institute for Biological Sciences, NRC, Ottawa, Canada*; ³*University of Florida, Gainesville, FL*; ⁴*Caprion Pharmaceuticals, Montreal, Canada*
 TOFpm 4:20 **Development of Functional Group Selective Ion/Molecule Reactions with FT-ICR Mass Spectrometry for Screening of Phosphorylated Metabolites in Biological Mixtures**; Christopher J. Petzold; Michael D. Leavell; Julie A. Leary; *University of California, Dept. of Chemistry, Berkeley, CA*

TOFpm 4:40 **Sequencing the Primary Structure of Anionic Potato Peroxidase**; Julian A Saba¹; Werner Ens²; Kenneth G Standing²; Mark A Bernards³; Helene Perreault¹; ¹*University of Manitoba, Department of Chemistry, Winnipeg, Canada*; ²*University of Manitoba, Department of Physics, Winnipeg, Canada*; ³*University of Western Ontario, Department of Plant Sciences, London, Canada*

WEDNESDAY MORNING, June 11

AWARD LECTURE

8:00 – 8:45 **Recipient of the Biemann Medal**

QUADRUPOLE ION TRAPS: INSTRUMENTATION AND METHODS

WOAam 10:15 **Frontiers in Quadrupole Ion Traps**; R Graham Cooks¹; Robert J. Noll¹; Alexander Makarov²; Zheng Ouyang¹; ¹*Purdue University, West Lafayette, IN*; ²*ThermoFinnigan, Bremen, Germany*
 WOAam 10:35 **Characterization of Intact Proteins Using IRMPD and Quadrupole Ion Trap Mass Spectrometry**; David M Black; Johanna D Stephens; Gary L Glish; *University of North Carolina, Chapel Hill, NC*
 WOAam 10:55 **Manipulation of Protein Charge States and Polarity *in vacuo***; Min He; Scott, A. McLuckey; *Department of Chemistry, Purdue University, West Lafayette, IN*
 WOAam 11:15 **The Effect of Dual Detectors on Linear Ion Trap Quantitative and Qualitative Performance**; Rohan A Thakur; Jae Schwartz; *ThermoElectron Corp, San Jose, CA*
 WOAam 11:35 **Ion Trap Mass Spectrometry of Fluorescently Labeled Nanoparticles and High Mass Biomolecules**; Wen-Ping Peng; Yong Cai; Huan-Cheng Chang; *Institute of Atomic and Molecular Sciences (IAMS), Taipei, Taiwan*
 WOAam 11:55 **A Non-Linear Ion Trap Mass Spectrometer with High Ion Storage Capacity**; Carsten Baessmann; Andreas Brekenfeld; Gabriela Zurek; Ulrike Schweiger-Hufnagel; Markus Lubeck; Thorsten Ledertheil; Ralf Hartmer; Michael Schubert; *Bruker Daltonik GmbH, Bremen, Germany*

PROTEIN CONFORMATION AND BINDING

WOBam 10:15 **Identification of Temperature Dependent Conformational Changes in the *E. coli* Heat Shock Transcription Factor by Hydrogen/Deuterium Exchange**; Wolfgang Rist¹; Thomas D.J. Jorgensen²; Peter Roepstorff²; Bernd Bukau¹; Matthias P. Mayer¹; ¹*Zentrum für Molekulare Biologie, Universität Heidelberg, Heidelberg, Germany*; ²*Department of Biochemistry and Molecular Biology, Odense, Denmark*
 WOBam 10:35 **PLIMSTEX: A Novel Method for Quantification of Protein-Ligand Interactions by Mass Spectrometry, Titration, and H/D Exchange**; Michael L. Gross; Mei M. Zhu; Don L. Rempel; Zhaohui Du; *Washington University, St. Louis, MO*
 WOBam 10:55 **From Epitope Mapping to Structures of Protein-Protein Complexes Using Amide H/D Exchange and Protein Docking**; Elizabeth Komives; Ganesh Anand; Dennis Law; Lynn Ten Eyck; Susan, Taylor; *University of California, San Diego, CA*
 WOBam 11:15 **Photochemical Protein Surface Mapping as an Indicator of Computational Structure Model Accuracy**; Joshua S. Sharp¹; Juntao Guo¹; Vibha

- Gupta⁴; Tomoaki Uchiki¹; Kyle Ellrott¹; Jeffrey M. Becker¹; Dong Xu³; Ying Xu³; Chris Dealwis¹; Robert L. Hettich²; ¹*School of Genome Science and Technology, University of Tennessee, Knoxville, TN*; ²*Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN*; ³*Computational Biology Group, Oak Ridge National Laboratory, Oak Ridge, TN*; ⁴*BCMB Department, University of Tennessee, Knoxville, TN*
- WOBam 11:35 **Elucidating RNA-Protein Interactions Using Surface Plasmon Resonance Biosensor and Mass Spectrometry**; John J. Gilligan; Emine Yikilmaz; Tracey A. Rouault; Alfred L. Yergey; *NICHD, NIH, Bethesda, MD*
- WOBam 11:55 **Electron Transfer Induced Fragmentations for the Structural Probing of Non-Covalent Interactions in Native Cytochrome *c* by FT-ICR Mass Spectrometry**; Kathrin Breuker; *Department of Chemistry, Innsbruck University, Innsbruck, Austria*

LCMS: FUTURE OF LIQUID SEPARATIONS

- WOCam 10:15 **Liquid Chromatography Desorption/Ionization on Silicon (LC DIOS)**; Eden Go¹; Jessica Prenni¹; Dan Wall³; Wei Chen²; Zhouxin Shen²; Gary Siuzdak¹; ¹*The Scripps Research Institute, La Jolla, CA*; ²*Mass Consortium Corporation, San Diego, CA*; ³*Waters Corporation, Milford, MA*
- WOCam 10:35 **Characterization of MALDI on a Triple Quadrupole Mass Spectrometer for Analysis and Quantitation of Small Molecules**; Mark J. Cole¹; John S. Janiszewski¹; Jason S. Gobey¹; Jay J. Corr²; Tung K. Chau²; Thomas R. Covey²; ¹*Pfizer Global Research and Development, Groton, CT*; ²*MDS Sciex, Concord, Ontario*
- WOCam 10:55 **Evaluation of a Combined Electrospray and Photoionization Source**; Karl Hanold; Tom Lynn; Jack Syage; *Syagen Technology Inc, Tustin, CA*
- WOCam 11:15 **LC Option: Fast and Effective GC/LC-MS Conversion for Full Range Operation**; Achille Cappiello; Pierangela Palma; Giorgio Famiglini; Antonella Siviero; Filippo Mangani; *Istituto di Scienze Chimiche, Università di Urbino, Urbino, Italy*
- WOCam 11:35 **Microfluidic HPLC System for Highly Sensitive Peptide Identification by LC-MS**; David Never; Christopher Bailey; Karen Hahnenberger; Phil Paul; David Rakestraw; Jason Rehm; *Eksigent Technologies, Livermore, CA*
- WOCam 11:55 **A Novel Microfluidics Orthogonal Electrospray - APCI Ion Source**; Paul C Goodley; Mark Werlich; Michael Zumwalt; *Agilent Technologies, Santa Clara, CA*

HIGH THROUGHPUT SCREENING

- WODam 10:15 **Determination of the Substrate Specificity of Ubiquitin C-Terminal Hydrolases by LC-MS Analysis of a Positional Scanning Peptide Library with Four Diversified Positions**; Daniel E. Mason; Jennifer L. Harris; Eric C. Peters; Jared Ek; *Genomics Institute of the Novartis Research Foundation, San Diego, CA*
- WODam 10:35 **Development of an LC-MS Based Enzyme Assay for Screening Inhibitors and Mechanistic Studies of *Escherichia coli* UDP-N-Acetylmuramyl-L-Alanine Ligase (MurC)**; Gejing Deng; Rong-Fang Gu; Stephen Marmor; Stewart L. Fisher; Haris Jahic; Gautam Sanyal; *Infection Discovery, Dept. of Biochemistry, AstraZeneca R&D Boston, Waltham, MA*

- WODam 10:55 **Development of a True Mass Spectrometry Based High Throughput Screening Method for Discovering Small Molecule Inhibitors for Protein Targets**; Mark T. Cancelli; Simone L. Evarts; Jun Wang; Andrew C. Braisted; Jeff W. Jacobs; Daniel A. Erlanson; James A. Wells; *Sunesis Pharmaceuticals, South San Francisco, CA*
- WODam 11:15 **Genome-Scale Drug Discovery by Affinity Selection-Mass Spectrometry-Based Screening of Mass-Encoded Small Molecule Libraries**; Allen Annis; *NeoGenesis Pharmaceuticals Inc., Cambridge, MA*
- WODam 11:35 **High-Throughput Analysis of Protein-Ligand Interactions Using a MALDI- and H/D Exchange-Based Technique**; Kendall D. Powell; Michael C. Fitzgerald; *Duke University, Durham, NC*
- WODam 11:55 **Enhanced Frontal Affinity Chromatography/Mass Spectrometry for Molecular Interaction Analysis**; Gordon W. Slys; Ella S.M. Ng; John K. Chik; David C. Schriemer; *University of Calgary, Calgary, Alberta, Canada*

ION CATALYSIS

- WOEam 10:15 **Elementary Steps in Gas-Phase Catalysis as Studied by Mass Spectrometry and Computational Chemistry**; Helmut Schwarz; *Institut fuer Chemie, Technische Universitaet Berlin, Berlin, Germany*
- WOEam 10:55 **Heterogeneous Catalysis in the Gas Phase: Size-Specific Reactions of Iron Cluster Cations with Ammonia**; Rohana Liyanage; Peter B. Armentrout; *Department of Chemistry, University of Utah, Salt Lake City, UT*
- WOEam 11:15 **Homogeneous Atomic Metal Ion Catalysis of the Reduction of NO_x in the Presence of CO to N₂ and CO₂ in the Gas Phase**; Voislav Blagojevic; Michael J.Y. Jarvis; Eric Flaim; Gregory K. Koyanagi; Vitali V. Lavrov; Diethard K. Bohme; *Department of Chemistry, York University, Toronto, Canada*
- WOEam 11:35 **Catalyzed Tautomerization Reactions in Ion-Neutral Complexes Studied by Tandem Mass Spectrometry**; Lisa N. Heydorn; Johan K. Terlouw; *McMaster University, Hamilton, Ontario, Canada*
- WOEam 11:55 **Metal Cationization Catalyzes the Gas-Phase Tautomerization of 2-Hydroxypyridine to 2-Pyridone**; Mary T. Rodgers; *Wayne State University, Detroit, MI*

CARBOHYDRATES

- WOFam 10:15 **Recent Advances in the Use of MALDI and Electrospray Ionization Mass Spectrometry for the Analysis of Carbohydrates and Glycoconjugates**; David J. Harvey; *Department of Biochemistry, University of Oxford, Oxford, UK*
- WOFam 10:35 **LC-ES-MS² of N- and O-Linked Oligosaccharides Applicable to 1-D and 2-D SDS-Page Separated Glycoproteins**; Niclas G. Karlsson; Nicole L. Wilson; Benjamin L. Schulz; Leanne Robinson; Nicole H. Packer; *Proteome Systems Ltd., Sydney, Australia*
- WOFam 10:55 **Characterization of Glycosylation Expression of Glycoproteins by MS**; Mark E McComb; Eric A Berg; Catherine E Costello; *Boston University School of Medicine, Boston, MA*
- WOFam 11:35 **Towards High-Throughput Glycomics: Development of the StrOligo Program for Automated Analysis of N-linked Glycans MS/MS Spectra for Structure Determination**; Martin Ethier¹; Julian A. Saba¹; Maureen Spearman³; Oleg Krokhin²; Michael Butler³; Werner Ens²; Kenneth G.

Standing²; H el ene Perreault¹; ¹*Department of Chemistry, University of Manitoba, Winnipeg, Canada;* ²*Department of Physics, University of Manitoba, Winnipeg, Canada;* ³*Department of Microbiology, University of Manitoba, Winnipeg, Canada*

WOFam 11:55 **Compositional Analysis and Quantification of Heparin and Heparan Sulfate by Electrospray Ionization Ion Trap Tandem Mass Spectrometry;** Ola Saad; Julie A. Leary; *University of California, Berkeley, CA*

WEDNESDAY AFTERNOON

IMAGING MASS SPECTROMETRY

WOApm 3:00 **Imaging Mass Spectrometry: A Brief Review and Perspective;** Richard M. Caprioli; *Vanderbilt University School of Medicine, Nashville, TN*

WOApm 3:40 **Molecule-Specific Imaging of Single-Cell Membranes with Secondary Ion Mass Spectrometry;** Sara G. Ostrowski; Thomas P. Roddy; Christopher W. Szakal; Andrew G. Ewing; Nicholas Winograd; *The Pennsylvania State University, University Park, PA*

WOApm 4:00 **A High Spatial Resolution Gallium Liquid Metal Ion Source TOF-SIMS with High Mass Accuracy FTMS Capability;** Gary H. Kruppa; Richard Behrens; Robert J. Bastasz; Sean A. Maharrey; Saskia Hoffer; *Sandia National Laboratory, Livermore, CA*

WOApm 4:20 **Optimization and Application of MALDI MS Imaging in Biomedical Research;** Markus Stoeckli; Dieter Staab; Luca Signor; Jan Tromp; *Novartis Institutes for BioMedical Research Basel, Basel, Switzerland*

WOApm 4:40 **The Mass Microscope : A New Look at Biomolecular Surfaces;** Ron M.A. Heeren; Stefan L. Luxembourg; A. F. Maarten Altelaar; Sander R. Piersma; Jaap J. Boon; Frans G. Giskes; Gert B. Eijkel; Liam McDonnell; Todd H. Mize; Dirk-Jan Spaanderman; *FOM Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands*

PROTEIN ANALYTICS: TOP DOWN SEQUENCING

WOBpm 3:00 **Key Features of Top Down Mass Spectrometry;** Fred W. McLafferty; Huili Zhai; Vladimir Zabrouskov; HanBin Oh; Cheng Lin; Harold Hwang; *Cornell University, Ithaca, NY*

WOBpm 3:40 **Top Down Proteomics of *Saccharomyces cerevisiae* Driven by Q-FT Mass Spectrometry and Automated Nanospray;** Fanyu Meng¹; Leah M. Miller¹; Steven M. Patrie¹; Andrews J. Forbes¹; Gregory K. Taylor²; Yong-Bin Kim²; Yi Du¹; Michael J. Roth¹; Neil L. Kelleher¹; ¹*Department of Chemistry, University of Illinois, Urbana, IL;* ²*Department of Computer Science, University of Illinois, Urbana, IL*

WOBpm 4:00 **Top-Down/Bottom-Up Characterization of the PP3 Bovine Milk Protein with and without Post-translational Modifications by (Hot) Electron Capture Dissociation;** Frank Kjeldsen³; Kim F. Haselmann³; Bogdan A. Budnil³; Esben S. Sorensen²; Roman A. Zubarev¹; ¹*Uppsala University, Uppsala, Sweden;* ²*Aarhus University, Aarhus, Denmark;* ³*University of Southern Denmark, Odense, Denmark*

WOBpm 4:20 **Terminus-Specific Fragmentation, a Novel Tool for the Direct Characterization of Intact Proteins;** Anja Resemann; Detlev Suckau; *Bruker Daltonik, Bremen, Germany*

WOBpm 4:40 **Top-Down Analysis of Protein Mixtures without a Magnet;** Scott A. McLuckey¹; Ravi Amunugama¹; Kelly A. Newton¹; Jason M. Hogan¹; Ethan R. Badman¹; Sharon Pitteri¹; Dawn M. Watson¹; Peng Pan¹; Gavin E. Reid²; ¹*Purdue University, West Lafayette, IN;* ²*Joint Protein Structure Laboratory, Ludwig Institute for Cancer Research, Melbourne, Australia*

LCMS: NOVEL TECHNOLOGIES

WOCpm 3:00 **Liquid Chromatography and Mass Spectrometry: Technology Begets Technology;** Arthur Moseley; *GlaxoSmithKline, RTP, NC*

WOCpm 3:20 **Reduction of Bioanalytical Cycle Time by Using Monolithic C18 and Underivatized Silica Columns in High Flow-Rate LC-MS/MS;** Naidong Weng; Yu-Luan Chen; Wilson Shou; Shaolian Zhou; Xiangyu Jiang; *Covance Laboratories, Inc., Madison, WI*

WOCpm 3:40 **The Use of 2DLC-MS/MS in Proteome Characterization – Optimization of the LC Step;** Johan Axelman¹; Henrik Wadensten¹; Staffan Renlund¹; Anders Tangen¹; Hans-Rudolf Hoepker²; Axel Parbel²; ¹*Amersham Biosciences AB, Uppsala, Sweden;* ²*Amersham Biosciences Europe GmbH, Freiburg, Germany*

WOCpm 4:00 **Capillary Column of 50 m Inner Diameter Allows Dramatic Sensitivity Enhancement in Nano-LC-Nano-ESI-MS/MS Applied to Human Cancer Cell Proteomics;** Marianne Fillet²; Cecile Cren-Olive¹; Christian Rolando¹; ¹*Universit  des Sciences et Technologies de Lille, UMR CNRS 8009, LCOM, Villeneuve d'Ascq, France;* ²*Universit  de Liege, Laboratoire de Chimie M dicale, Liege, Belgique*

WOCpm 4:20 **Analysis of Beta Lactam Antibiotics Veterinary Drug Residues in Biological Matrices by Solid Phase Extraction and/or Supported Liquid Membrane-Liquid Chromatography-Electrospray Mass Spectrometry;** Prince Kolanyane; Titus A. M. Msagati; Mathew M. Nindi; *Department of Chemistry, University of Botswana, P. Bag UB 00704, Gaborone, Botswana*

WOCpm 4:40 **Chip-LC/MS: An Integrated Solution for Complex Proteomics Sample Analyses;** Hongfeng Yin; Kevin Killeen; Reid Brennen; Dan Sobek; Tom van de Goor; *Agilent Technologies, Palo Alto, CA*

DNA AND DNA COMPLEXES

WODpm 3:00 **Analysis of DNA by Mass Spectrometry: From Sequencing to Genotyping to Drug Discovery;** Steven A. Hofstadler; Lendell L. Cummins; Jared J. Drader; James C. Hannis; Yun Jiang; Sheri Manalili; Kristin A. Sannes-Lowery; *Ibis Therapeutics, A Division of Isis Pharmaceuticals, Carlsbad, CA*

WODpm 3:40 **High-Throughput Analysis of Oligonucleotides using Automated Electrospray Ionization Mass Spectrometry;** Mark E. Hail¹; Brian Elliott²; Jeffrey L. Whitney¹; David J. Detlefsen¹; Kerry Nugent³; Kerry Nugent³; ¹*Novatia, Princeton, NJ;* ²*Integrated DNA Technologies, Coralville, IA;* ³*Michrom BioResources, Auburn, CA*

WODpm 4:00 **A Method Using a Novel Linear Amplification Reaction with Mass Spectrometry for DNA Genotyping;** Martin Gilar¹; Kenneth J. Fountain¹; Jeffrey B. Graybill²; John C. Gebler¹; ¹*Waters Corp., Milford, MA;* ²*Ionian Technologies, Upland, CA*

WODpm 4:20 **Charge Dependent Fragmentation of Oligonucleotide Anions via Collision-Induced**

WODpm 4:40 **Dissociation and Ion/Ion Reactions; Jin Wu;** Scott A. McLuckey; *Purdue University, West Lafayette, IN*
Identification and Characterization of a Cross-link Lesion in d(CpC) upon UVA Irradiation in the Presence of 2-Methyl-1,4-Naphthoquinone; Zhenjiu Liu; Yinsheng Wang; *University of California, Riverside, CA*

ION THERMOCHEMISTRY

WOEpm 3:00 **Ion (and Neutral) Thermochemistry; John L. Holmes;** *University of Ottawa, Ottawa, Ontario*
 WOEpm 3:40 **Thermochemistry and Collision-Induced Dissociation of Energetic Azolide Anions in the Gas Phase; Shuji Kato;** Rebecca L. Hoenigman; W. Carl Lineberger; Veronica M. Bierbaum; *University of Colorado, Boulder, CO*
 WOEpm 4:00 **Synthesis and Characterization of Gas-Phase Oxy-Germanium Anions;** Luciano A. Xavier¹; Nelson H. Morgon²; **Jose M. Riveros¹;** *¹Instituto de Quimica, Universidade de Sao Paulo, Sao Paulo, Brazil; ²Instituto de Quimica, Universidade Estadual de Campinas, Campinas, Brazil*
 WOEpm 4:20 **Proton Bound Clusters of Aminoesters in the Gas Phase: Equilibrium Studies by High Pressure Mass Spectrometry and Quantum Chemical Calculations; Aude Simon;** Kevin C. Hadley; Terry B. McMahon; *University of Waterloo, Waterloo, Ontario*
 WOEpm 4:40 **Heads and Tails: The Coiling of Long Chains around Ionic Sites; John E. Bartmess;** *Dept. of Chemistry, University of Tennessee, Knoxville, TN*

ENVIRONMENTAL MS

WOFpm 3:00 **A Tandem Mass Spectrometric Study of the N-Oxides Quinoline N-Oxide, Carbadox, and Oluquinox Carried out at High Mass Accuracy Using Electrospray and Atmospheric Pressure Chemical Ionization Sources; Raymond E. March;** Xiu-Sheng Miao; Chris D. Metcalfe; *Trent University, Peterborough, Canada*
 WOFpm 3:20 **Analysis of Sulfadimethoxine in Fish-Hatchery Ponds by LC/MS (Time-of-Flight) and LC/MS/MS (Ion Trap and Quadrupole-Time-of-Flight); E. Michael Thurman¹;** Imma Ferrer²; Mark Benotti³; Curt E. Heine⁴; *¹U.S. Geological Survey, Lawrence, Kansas; ²U.S. Geological Survey, Denver, CO; ³Marine Sciences, SUNY, Stony Brook, NY; ⁴Waters Corporation, Beverly, MA*
 WOFpm 3:40 **Disinfection By-Products of Health Concern in Drinking Water: Results of a Nationwide Occurrence Study; Susan D. Richardson¹;** Alfred D. Thruston, Jr.¹; Stuart W. Krasner²; Howard S. Weinberg³; Russell Chinn²; Michael J. Sclimenti²; Salvador Pastor²; Gretchen D. Onstad³; *¹U.S. Environmental Protection Agency, National Exposure Research Lab, Athens, GA; ²Metropolitan Water District of Southern California, La Verne, CA; ³University of North Carolina, Chapel Hill, NC*
 WOFpm 4:00 **The Use of Creative ROOMS to Study the Trans-Pacific Atmospheric Transport of Semi-Volatile Organic Compounds; Staci L Simonich;** *Oregon State University, Corvallis, OR*
 WOFpm 4:20 **Real-Time Single Particle Mass Spectrometry at the Baltimore Supersite: What New Information Do Ultrafine Single Particle Measurements Give?; Murray Johnston¹;** Derek Lake¹; Michael Tolocka¹; Anthony Wexler²; *¹University of Delaware, Newark, DE; ²University of California, Davis, CA*

WOFpm 4:40 **Characterization of Crude Oil and Coal Derived Water-Soluble Organics by High Resolution ESI FT-ICR Mass Spectrometry; Ryan P. Rodgers¹;** Zhigang Wu²; Geoffrey C. Klein²; Lateefah A. Stanford²; Alan G. Marshall¹; *¹Ion Cyclotron Resonance Program, National High Magnetic Field Lab, Tallahassee, FL; ²Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL*

THURSDAY MORNING, June 12

PLENARY LECTURE

8:00 – 8:45 **Targeting Protein-Protein Interactions Using Synthetic Agents;** Andrew D. Hamilton, Yale University

INSTRUMENTATION: GENERAL

ThOAam 10:15 **Mapping the Properties of Center of Mass Collision Energy on a MALDI TOF/TOF Mass Spectrometer - Fundamentals and Applications;** Jennifer M. Campbell; *Applied Biosystems, Framingham, MA*
 ThOAam 10:35 **A New High Field Asymmetric Waveform Ion Mobility Spectrometer for Mass Spectrometric Analysis; Randy W. Purves;** Barbara Ells; Roger Guevremont; David A. Barnett; *Ionalytics Corporation, Ottawa, Canada*
 ThOAam 10:55 **Monitoring Enzyme Kinetics on the Millisecond Time Scale Using Electrospray Ionization Mass Spectrometry: A Novel, Non-stationary Capillary Mixing Technique; Derek J Wilson¹;** Fraser E. Marie²; Lars Konermann¹; *¹University of Western Ontario, London, Ontario, Canada; ²University of Calgary, Calgary, Alberta, Canada*
 ThOAam 11:15 **Preparative Separation of Mixtures by Mass Spectrometry; Philip S. Mayer¹;** Frantisek Turecek¹; Hak-No Lee¹; Adi A. Scheidemann¹; Terry A. Olney¹; Frank Schumacher¹; Petr Strop²; Martin Smrcina²; Marcel Patek²; Daniel Schirlin²; *¹University of Washington, Seattle, WA; ²Selectide-Aventis, Tucson, AZ*
 ThOAam 11:35 **Atmospheric Pressure Charged Particle Discrimination Interface for Low Flow Rate ESI-MS; Bradley B Schneider¹;** Manish Jugroot²; Clinton PT Groth²; Thomas R Covey¹; *¹MDS SCIEX, Concord, Ontario; ²University of Toronto Institute for Aerospace Studies, Toronto, Ontario*
 ThOAam 11:55 **Use of a Novel Array Detector for the Direct Analysis of Solid Samples by Laser Ablation Inductively Coupled Plasma Mass Spectrometry; James H. Barnes, IV¹;** Gregory D. Schilling¹; Roger Sperline²; M. Bonner Denton²; Charles J. Barinaga³; David W. Koppenaal³; Gary M. Hieftje¹; *¹Indiana University, Bloomington, IN; ²University of Arizona, Tucson, AZ; ³Pacific Northwest National Laboratory, Richland, WA*

FUNDAMENTALS OF PEPTIDE FRAGMENTATION

ThOBam 10:15 **Understanding, Prediction and Control of Peptide Ion Fragmentation; Simon J Gaskell;** Joanne Connolly; Shabaz Mohammed; Isabel Riba Garcia; Alexander Yates; *UMIST, Manchester, UK*
 ThOBam 10:55 **Fragmentation of Protonated Peptides: Fragment Structures and Mechanisms; Houssain El Aribi¹;** R. Natasha Grewal¹; Christopher F. Rodriguez²; Galina Orlova¹; Alan C. Hopkinson¹; **K.W. Michael Siu¹;**

- ¹*Dept. Chemistry & Centre for Research in MS, York University, Toronto, Ontario, Canada;* ²*Dept. of Chemistry, McNeese State University, Lake Charles, LA*
- ThOBam 11:15 **Dissociation of Deprotonated Peptide Ions Containing Aspartic Acid and Glutamic Acid Residues;** Carolyn J. Cassidy; Zhong Li; Sharon Webb; Talat Yalcin; *The University of Alabama, Tuscaloosa, AL*
- ThOBam 11:35 **Fundamentals of Peptide Fragmentation as a Function of Laser Fluence in a MALDI TOF-TOF Mass Spectrometer;** Alfred L Yergey¹; Jennifer M Campbell²; Paul S Blank¹; Marvin L Vestal²; ¹*NICHHD, NIH, Bethesda, MD;* ²*Applied Biosystems, Framingham, MA*
- ThOBam 11:55 **A Large-Scale Statistical Analysis of Peptide Dissociation Patterns;** Vicki H. Wysocki¹; Yingying Huang¹; Joseph M. Triscari²; Gordon A. Anderson³; Mary S. Lipton³; Ljiljana Pasa-Tolic³; Richard D. Smith³; ¹*University of Arizona, Tucson, AZ;* ²*Science Application International Corporation, Tucson, AZ;* ³*Pacific Northwest National Laboratory, Richland, WA*

METABONOMICS:
HUMAN NATURAL PRODUCT PROFILING

- ThOCam 10:15 **Human Natural Product Profiling;** Liz Want¹; Zhouxin Shen²; Martin Sonderegger²; Winnie Popovich¹; Gary Siuzdak¹; ¹*The Scripps Research Institute, La Jolla, CA;* ²*Mass Consortium Corporation, San Diego, CA*
- ThOCam 10:35 **Understanding the Deposition of Glycolipids in Fabry Disease;** John J. Thomas¹; Christa Beauregard¹; Helmut Kallwass²; Kate Zhang¹; ¹*Genzyme Corporation, Framingham, MA;* ²*Genzyme Corporation, Cambridge, MA*
- ThOCam 10:55 **Probing Biofluids Using Mass Spectrometry and Metabonomics;** John P. Shockcor¹; Andrew Nicholls¹; Henrik Antti¹; Jose Castro-Prez²; Hilary Major²; Rob Plumb³; ¹*Metabometrix Ltd., London, UK;* ²*MS Technologies Centre (Micromass UK Ltd.), Manchester, UK;* ³*Water Corp., Milford, MA*
- ThOCam 11:15 **Cerebrospinal Fluid Metabolomics: a Systems Approach for Biomarker Discovery;** Haihong Zhou; Gary Frenzel; Christopher H. Becker; *SurroMed, Inc., Mountain View, CA*
- ThOCam 11:35 **Fast Tracking the Drug Development Process by Using LC/MS(TOF) and Metabonomics;** Robert Plumb¹; Chris Stumpf¹; Marc Gorenstein¹; Jose Castro-Perez²; Hilary Major²; Steven Cohen¹; John Haselden³; Maria Anthony³; Gordon Dear³; ¹*Waters Corporation, Milford, MA;* ²*Water Corporation, Manchester, UK;* ³*GlaxoSmithKline, Ware, UK*
- ThOCam 11:55 **Metabonomic Profiling Associated with Hydrazine Toxicity Using LC/TOF-MS;** Brian T. Regg; Timothy R. Baker; Kenneth L. Morand; Karen H. Strader; Anne F. Russell; *Procter & Gamble Pharmaceuticals, Mason, OH*

STABILITY CONSTANTS OF PROTEIN LIGAND COMPLEXES: DETERMINATIONS FROM THE EQUILIBRIUM IN SOLUTION

- ThODam 10:15 **Soft Ionization Methods for Quantifying Noncovalent Binding Interactions;** Renato Zenobi; Jürg Daniel; Silke Wendt; Sandra Alves; *ETH Zürich, Zurich, Switzerland*
- ThODam 10:35 **Determination of Binding Energy and Location for RNA Complexes Using ESI-MS;** Richard H. Griffey;

- Kristin Lowery; Jared Drader; Steven Hofstadler; *Isis Pharmaceuticals, Carlsbad, CA*
- ThODam 10:55 **ESI MS-Based Diffusion Measurements for the Screening of Small Molecule Candidates for Binding to a Target Protein;** Sonya M. Clark; Lars Konermann; *University of Western Ontario, London, Canada*
- ThODam 11:15 **Influence of Solution and Gas Phase Processes on Protein-Carbohydrate Binding Affinities Determined by Nano ES-FT-ICR/MS;** Weijie Wang; Elena N. Kitova; John S. Klassen; *University of Alberta, Edmonton, Canada*
- ThODam 11:35 **Is the Determination of Stability Constants for Protein Complexes Compatible with the Mechanism of ESIMS?** Udo H. Verkerk; Michael Peschke; Paul Kebarle; *Department of Chemistry, Edmonton, Canada*
- ThODam 11:55 **Probing Non-Covalent Protein-Ligand Interactions of cGMP-Dependent Protein Kinase by Nanoflow ESI Orthogonal Time of Flight MS;** Ariën Scholten¹; Martijn WH Pinkse²; Claudia S Maier³; Albert JR Heck²; Wolfgang RG Dostmann¹; ¹*University of Vermont, Burlington, VT;* ²*Utrecht University, Utrecht, The Netherlands;* ³*Oregon State University, Corvallis, OR*

NON-COVALENT PROTEIN COMPLEXES

- ThOEam 10:15 **Dissociation and Association of Supramolecular Elephants (i.e. Protein Complexes) Studied by Mass Spectrometry;** Albert J R Heck; Kees Versluis; Nora Tahallah; Martijn W H Pinkse; Claudia S Maier; van den Bremer Ewald T J; *Utrecht University, Utrecht, The Netherlands*
- ThOEam 10:35 **Influence of Charge on the Structure and Stability of Gaseous Protein-Trisaccharide Complexes;** Elena N Kitova; John S Klassen; *University of Alberta, Edmonton, Canada*
- ThOEam 10:55 **The Origin of Asymmetric Noncovalent Complex Dissociation;** Evan Williams; John Jurchen; David Garcia; *University of California, Berkeley, CA*
- ThOEam 11:15 **Analysis of Large Supramolecular Protein Complexes by Mass Spectrometry and Gas Phase Mobility;** Joseph A. Loo¹; Stanley L. Kaufman²; Igor V. Chernushevich³; ¹*UCLA, Depts. of Biochemistry and Biol. Chem., Los Angeles, CA;* ²*TSI, Inc., St. Paul, MN;* ³*MDS Sciex, Concord, ON*
- ThOEam 11:35 **Conformation and Clustering Properties of the Alzheimers Peptides Abeta(40) and Abeta(42);** Summer Bernstein¹; Thomas Wytenbach¹; Michael T. Bowers¹; Gal Bitan²; David Teplow²; ¹*Department of Chemistry, University of California, Santa Barbara, CA;* ²*Center for Neurologic Diseases, Brigham and Womens Hospital, Harvard, Boston, MA*
- ThOEam 11:55 **Polydispersity of a Mammalian Chaperone - Mass Spectrometry Reveals the Population of Oligomers in α-Crystallin;** J. Andrew Aquilina¹; Justin L. Benesch¹; Orval O. Bateman²; Christine Slingsby²; Carol V. Robinson¹; ¹*Cambridge University, Cambridge, UK;* ²*Birkbeck College, London, UK*

PETROLEOMICS, INCLUDING BIOMARKERS, ORGANIC GEOCHEMISTRY

- ThOFam 10:15 **Petroleomics Based on Ultrahigh-Resolution Mass Spectrometry;** Alan G Marshall¹; Greg T Blakney¹; Helen J Cooper¹; Christopher L Hendrickson¹; Geoffrey C Klein²; John P Quinn¹; Ryan P Rodgers¹; Kuangnan Qian³; Tanner M Schaub²; Zhigang Wu²; ¹*NHMFL, Florida State University, Tallahassee, FL;*

- ²*Dept of Chemistry & Biochemistry, Florida State University, Tallahassee, FL;* ³*ExxonMobil Research and Engineering Company, Annandale, NJ*
- ThOFam 10:35 **Two-Dimensional Chromatography Using SFC and GC/MS to Investigate Refining Processes in the Preparation of Light Gas Oils and other Materials;** Louis Ramaley; Robert D. Guy; Genevieve Mercier; *Dalhousie University, Halifax, Canada*
- ThOFam 10:55 **Characterization of Chemical Constituents in Petroleum;** Yevgenia Briker; Zbigniew Ring; *National Centre for Upgrading Technology, Devon, Alberta, Canada*
- ThOFam 11:15 **Characterization of Polycyclic Aromatic Hydrocarbons in Heavy Petroleum Products or in Exhaust Combustion Products by Laser Desorption/Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Assisted by Charge Transfer Complexant;** Vincent Carre¹; Lionel Vernex-Loiset¹; Gabriel Krier¹; Jean-François Muller¹; Pascal Manuelli²; ¹*Laboratoire de Spectrometrie de Masse et de Chimie Laser, Metz, France;* ²*CReG, Totalfinalief, Harfleur, France*
- ThOFam 11:35 **Applications and Advantages of Exact Mass Orthogonal TOF (Time of Flight) Mass Spectrometry in the Petroleum Industry;** Steve Smith; Anthony Newton; David Douce; Martin Green; Peter Hancock; *Waters Corporation, Micromass UK Ltd, Manchester, UK*
- ThOFam 11:55 **The Coupling of Supercritical Fluid Chromatography and Field Ionization Time-of-Flight High Resolution Mass Spectrometry for Quantitative Analysis of Petroleum Middle Distillates;** Kuangnan Qian; John W. Diehl; Gary J. Dechert; Frank P. DiSanzo; *ExxonMobil Research Engineering Company, Annandale, NJ*

THURSDAY AFTERNOON

DEVELOPMENTS IN ION MOBILITY

- ThOApm 3:00 **Development of High-Sensitivity Ion Mobility Techniques for the Analysis of Complex Systems: from Gas-Phase Protein Ion Conformations to Proteomics;** David E. Clemmer; *Indiana University, Bloomington, IN*
- ThOApm 3:20 **Ion Mobility at High Fields (FAIMS): Fundamentals and Analytical Capabilities;** Richard A. Yost¹; Leonard C. Rorrer III¹; Michael W. Belford¹; Roger Guevremont²; ¹*University of Florida, Department of Chemistry, Gainesville, FL;* ²*Ionalytics Corporation, Ottawa, Canada*
- ThOApm 3:40 **Links between Gas-Phase and Solution-Phase Conformation of Tryptic Peptides: Rapid Screening for Protein Structural Elements Using Ion Mobility Mass Spectrometry;** Brandon T Ruotolo; David H Russell; *Texas A&M University, College Station, TX*
- ThOApm 4:00 **Studies of Protein Conformation Using Mass Spectrometry;** Jim H Scrivens¹; Mike Bowers²; Bob Bateman³; ¹*University of Warwick, Coventry, UK;* ²*UCSB, Santa Barbara, CA;* ³*Waters, Manchester, UK;* ⁴*Waters Corporation, Micromass UK Ltd., Manchester, UK*
- ThOApm 4:20 **Unique Detection Scheme for Ion Mobility Spectrometry Using Continuous Beam**

- Modulation;** Andrew W. Szumlas; Gary M. Hieftje; *Indiana University, Bloomington, IN*
- ThOApm 4:40 **Ion Focusing in FAIMS: Ion Distribution in the Annular Space between Cylindrical Analyzer Electrodes as the Basis for Calculation of Peak Shapes in a CV Spectrum;** Roger Guevremont¹; David A. Barnett¹; Barbara Ells¹; Randy W. Purves¹; G. Unny Thekkadath¹; Larry A. Viehland²; ¹*Ionalytics Corporation, Ottawa, Canada;* ²*Chatham College, Pittsburgh, PA*

MICROFLUIDIC DEVICES, MICROARRAYS AND MS DETECTION

- ThOBpm 3:00 **Micro and Nanofluidic Systems for Mass Spectrometry;** Harold Craighead; *Cornell University, Ithaca, NY*
- ThOBpm 3:40 **Microfluidics and Nanochemistry for MALDI-TOF MS;** Thomas Laurell¹; Simon Ekstrom¹; David Eriksson²; Tasso Miliotis²; Gyorgy Marko-Varga¹; ¹*Dept. Electrical Measurements, Lund Inst. Tech., Lund University, Lund, Sweden;* ²*Dept. Analytical Chemistry, Lund University, Lund, Sweden*
- ThOBpm 4:00 **Microfluidic Separation System with Integrated, Quantitative Fraction Collection and Mass Spectrometric Analysis;** Michal Spesny¹; Jakub Grym¹; Per Andersson²; Frantisek Foret¹; ¹*Institute of Analytical Chemistry, Brno, Czech Republic;* ²*Gyros AB, Uppsala, Sweden*
- ThOBpm 4:20 **Chip-Based BioAnalytical Determination of Small Molecule Drugs in Plasma from Human, Rat and Dog;** Jack Henion; James Kapron; Ellen Pace; Colleen K. Van Pelt; *Advion BioSciences, Inc., Ithaca, NY*
- ThOBpm 4:40 **Microchip Integrated Separation Systems for Proteomic Applications;** Iulia M. Lazar; Barry L. Karger; *Barnett Institute, Boston, MA*

PROTEIN PHOSPHORYLATION AND PHOSPHOPROTEOMICS

- ThOCpm 3:00 **The Critical Role of Mass Spectrometry in the Analysis of Phosphorylation-Dependent Cellular Pathways;** Roland S. Annan; Francesca Zappacosta; Michael J. Huddleston; Dean E. McNulty; Therese A. Sterner; Susan L. Chen; *GlaxoSmithKline, King of Prussia, PA*
- ThOCpm 3:40 **FT-ICR MSⁿ Approaches to the Characterization of Protein Phosphorylation;** Michael J Chalmers¹; Kristina Håkansson¹; John P Quinn¹; Greg T Blakney¹; Christopher L Hendrickson¹; Mark R Emmett¹; Robert Johnson²; Jianwei Shen²; Richard Smith²; Alan G Marshall¹; ¹*Ion Cyclotron Resonance Program, NHMFL, Florida State University, Tallahassee, FL;* ²*Abbott Laboratories, Abbott Park, IL*
- ThOCpm 4:00 **A Systematic, Hypothesis-Driven Multiple Stage Mass Spectrometric Approach towards Comprehensive Phosphopeptide Detection;** Emmanuel J Chang; Derek T McLachlin; Vincent Archambault; Andrew Krutchinsky; Brian T Chait; *The Rockefeller University, New York, NY*
- ThOCpm 4:20 **SHAVE & CONQUER: An IMAC/nLC-MS/MS Based Strategy for Identification and Characterization of Phosphorylated Membrane Proteins;** Allan Stensballe¹; Thomas Nuhse²; Scott Peck²; Ole N. Jensen¹; ¹*University of Southern Denmark, Odense, Denmark;* ²*Sainsbury Laboratory, Norwich, UK*

ThOCpm 4:40 **Time Course of EGF-Stimulated Phosphotyrosine Phosphorylation Studied via Triple Encoding with Stable Isotope Labeled Amino Acids in Cell Culture (SILAC);** Shao-En Ong; Blagoy Blagoev; Irina Kratchmarova; Matthias Mann; Jens S. Andersen; Matthias Mann; *Center for Experimental Bioinformatics, Uni Southern Denmark, Odense, Denmark*

Konaklieva¹; Jianghong Gu¹; Charles M. Guttman²; Stephanie J. Wetzel²; ¹*American University, Washington, DC*; ²*National Institute of Standards and Technology, Gaithersburg, MD*

ThOEpm 4:40 **Simplifying the Characterization of Complex Low Molecular Weight Polymers: SFC/MS and Image Analysis Tools;** J. David Pinkston; Michele L. Mangels; *The Procter & Gamble Company, Miami Valley Laboratories, Cincinnati, OH*

IMMUNOLOGY AND MASS SPECTROMETRY

ThODpm 3:00 **Mass Spectrometry and Immunology - An Introduction;** Kenneth Tomer; *National Institute of Environmental Health Sciences, Res. Tri. Pk., NC*

ThODpm 3:20 **Identification of a Peptide Antigen Recognized by Autoreactive, Cytotoxic T-Cells Involved in Type 1 Diabetes;** Anne M. Evans¹; Scott M. Lieberman²; Bingye Han³; Jeffrey Shabanowitz¹; Stanley G. Nathenson²; Pere Santamaria³; Teresa P. DiLorenzo²; Donald F. Hunt¹; ¹*University of Virginia, Charlottesville, VA*; ²*Albert Einstein College of Medicine, Bronx, NY*; ³*University of Calgary, Calgary, Canada*

ThODpm 3:40 **New Molecular Tools for Developing Vaccine Lead Structures Against Alzheimer's Disease by Mass Spectrometric Epitope Identification;** Michael Przybylski¹; Xiaodan Tian¹; Roxana Cecal¹; Andreas Marquardt¹; Marilena Manea¹; Gabor Mezo²; Ferenc Hudecz²; JoAnne McLaurin³; Peter St George-Hyslop³; ¹*University of Konstanz, Konstanz, Germany*; ²*Eötvös Loránd University, Budapest, Hungary*; ³*University of Toronto, Toronto, Canada*

ThODpm 4:00 **Proteomic Studies Profiling Surface Antigens on Th1 and Th2 Cells;** Kelly M. Loyet; Wenjun Ouyang; John T. Stults; Dan L. Eaton; *Genentech, Inc., South San Francisco, CA*

ThODpm 4:20 **Determination of the Epitope on the HIV env-Protein Recognized by the Neutralizing Monoclonal Antibody C4E10;** Christine M Hager-Braun¹; John P Moore²; Hermann Katinger³; Norbert Schuelke⁴; Kenneth B Tomer¹; ¹*National Institute of Environmental Health Sciences, Research Triangle Park, NC*; ²*Joan and Sanford I. Weill Medical College of Cornell University, New York, NY*; ³*University of Agriculture and Forestry, Vienna, Austria*; ⁴*Progenics Pharmaceutical Inc., Tarrytown, NY*

ThODpm 4:40 **Mass Spectrometry Based Immunoassays for the Detection of Cardiac Biomarkers;** Eric E. Niederkofler; Dobrin Nedelkov; Kemmons A. Tubbs; Urban A. Kiernan; Randall W. Nelson; *Intrinsic Bioprobes Inc., Tempe, AZ*

BIOANALYTICAL APPLICATIONS OF ICP-MS

ThOFpm 3:00 **The Use of ICP-MS in BioAnalysis, and Element-Tagged Immunoassay;** Scott D. Tanner; Zoe A. Quinn; Vladimir I. Baranov; Dmitry R. Bandura; *MDS SCIEX, Concord, Canada*

ThOFpm 3:40 **"I see P?" What a Biologist can use ICP-MS for;** Olga I Ornatsky¹; Linda Liao¹; Dmitry R Bandura²; Vladimir I Baranov²; ¹*MDS Proteomics Inc., Toronto, Canada*; ²*MDS SCIEX Inc., Toronto, Canada*

ThOFpm 4:00 **Potentially New Approaches for Immunoassay Applications Using ICP-MS;** Chao Zhang; Xinrong Zhang; *Tsinghua University, Beijing, P.R. China*

ThOFpm 4:20 **Detection of Phosphorus-31 and Sulfur-32 by ICP-MS in Peptides and Proteins - A New Tool for Protein Phosphorylation Analysis and for Element Proteomics;** Wolf D. Lehmann¹; Norbert Jakubowski²; Mathias Wind¹; ¹*German Cancer Research Center, Heidelberg, Germany*; ²*Institute for Spectrochemistry, Dortmund, Germany*

ThOFpm 4:40 **Selenoprotein Characterisation Studies in Human Serum via Gel Electrophoresis and ICP Mass Spectrometry;** Sarah Stokes¹; Renli Ma¹; Cameron W. McLeod¹; Erik Larsen²; ¹*University of Sheffield, Sheffield, UK*; ²*Danish Veterinary and Food Administration, Soborg, Denmark*

BIODEGRADABLE/BIOCOMPATIBLE POLYMERS

ThOEpm 3:00 **The Polymer Chemistry of Biodegradable, Biorenewable and Biocompatible Polymers;** Marc A Hillmyer; *University of Minnesota, Minneapolis, MN*

ThOEpm 3:40 **Case Study for PEG-Protein Characterization: PEG-Cyanovirin-N, a Potential Anti-HIV Agent;** Mary J. Bossard; M. Elizabeth Green; Michael Roberts; Richard Goodin; Yan Zhang; *Nektar Therapeutics, Huntsville, AL*

ThOEpm 4:00 **Poly lactides: Biodegradable Polymers with Broad Commercial Applications;** James R Valentine; *Cargill Dow LLC, Minnetonka, MN*

ThOEpm 4:20 **Characterization of Linear and Branched Polyethylenimine by ESI-MS, APCI-MS and MALDI-TOF-MS;** James E. Girard¹; Monica

MONDAY POSTERS

Monday posters should be set up 7:30 – 8:00 am on Monday and removed 7:30 – 8:00 pm on Monday. Authors of odd numbered posters (i.e., 001, 003, 005) present 8:45 – 10:15 am on Monday. Authors of even numbered posters (i.e., 002, 004, 006) present 1:30 – 3:00 pm on Monday.

ATOMIC/ELEMENTAL ANALYSIS

- MPA 001 **Measurement of Metals in Intact Cells by Perfusion Chromatography with ICP Mass Spectrometry**; Fumin Li; R. S. Houk; Bo Zhang; Dan Armstrong; *Ames Laboratory USDOE, Dept. of Chemistry, Iowa State University, Ames, IA*
- MPA 002 **Analysis of Elemental Composition by High Resolution Mass Spectrometry**; Junling Gao; Likang Zhang; Larry Heimark; Birendra Pramanik; *Schering-Plough Research Institute, Kenilworth, NJ*
- MPA 003 **Molecular Size Distribution Patterns of Several Elements of Toxicological and Nutritional Interest in Nuts by SEC-ICP-MS**; Sasi S. Kannamkumarath; Rodolfo G. Wuilloud; Jorgelina C.A. Wuilloud; Joseph A. Caruso; *University of Cincinnati, Cincinnati, OH*
- MPA 004 **The Identification of Bio-Inorganic Species in Biological Tissue CRMs by ES MS**; Shona McSheehy; Zoltan Mester; *National Research Council of Canada, Ottawa, Ontario, Canada*
- MPA 005 **The Speciation of Selenium in the Mushroom *Boletus edulis* by HPLC-ICP-MS and ES-MS**; Richard T Wilburn; Anne P Vonderheide; Rajiv S Soman; Joseph A Caruso; *University of Cincinnati, Cincinnati, OH*
- MPA 006 **Analysis of Pharmaceutical Tablets and Human Hair by Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)**; Rebecca Lam; Eric D. Salin; *McGill University, Montreal, Canada*
- MPA 007 **Metal Ion Detection with Electrospray Time-Of-Flight Mass Spectrometry at the Sub Parts-Per-Billion Level**; Shida Shen; Craig M. Whitehouse; Thomas P. White; *Analytica of Branford, Inc., Branford, Connecticut*

BIOINFORMATICS

- MPB 008 **An Integrated Bioinformatics Platform for Proteomics**; Martin Blueggel¹; Gerhard Koerting¹; Ralf Reinhardt¹; Daniel Chamrad¹; Jörg Glandorf²; Jens Vagts²; Herbert Thiele²; ¹*Protagen AG, Dortmund, Germany*; ²*Bruker Daltonik GmbH, Bremen, Germany*
- MPB 009 **New Developments in Statistically-Based Methods for Peptide Identification via Tandem Mass Spectrometry**; Kristin H. Jarman; William R. Cannon; Kenneth D. Jarman; Alejandro Heredia-Langner; *Pacific Northwest National Laboratory, Richland, WA*
- MPB 010 **Statistical Models for Protein Identification and Validation using Tandem Mass Spectral Data and Protein Databases**; Rovshan Sadygov; John Yates, III; *The Scripps Research Institute, La Jolla, CA*
- MPB 011 **Automated Validation of MS/MS Database Search Results Using A Novel Filter Algorithm**; James L Stephenson; Benjamin J Cargile; Jonathan L Bundy; *Research Triangle Institute, RTP, NC*
- MPB 012 **Comparison of the Capabilities of Peptide Sequencing Software from MS/MS Data**; Terry D. Cyr; Jean C. Ethier; Roger Sears; Jeremy Brazeau; Gary Liu; *Centre for Biologics Research, Ottawa, Ontario*
- MPB 013 **Peptidomics and Bioinformatics: Building Models Using a MALDI MS Dataset to Predict the Final Neuropeptide Products from Neuropeptide Genes**; Amanda B. Hummon; Jonathan V. Sweedler; *University of Illinois, Urbana, IL*
- MPB 014 **Analysis of Protein Sequence Databases and Their Use in Protein Identification by Database Searching of**

MS/MS Data; Toby J Mathieson; Jyoti Choudhary; *Cellzome AG, London, UK*

- MPB 015 **Correlating Fragment Ions to Reduce False Positives in Database Search for Peptide Identification via Tandem MS**; Yan Fu; Yiqiang Chen; Dequan Li; Wen Gao; *Institute of Computing Technology, Chinese Academy of Sciences, Beijing, P.R. China*
- MPB 016 **Data Mining Methods for MALDI-FTMS Data**; Parminder Kaur¹; Peter O'Connor¹; ¹*Boston University, Boston, MA*; ²*School of Medicine, Boston University, Boston, MA*
- MPB 017 **An Examination of the Coverage and Performance of Database Search Algorithms for Protein Identification**; Sean L Seymour; Lilian M. Phu; Wilfred H. Tang; Alpesh A. Patel; Christie L. Hunter; Lydia M. Nuwaysir; Tina A. Settineri; Daniel A. Schaeffer; *Applied Biosystems, Foster City, CA*
- MPB 018 **NCBI OMSSA : A Sequence Database Search Algorithm for High-Throughput Identification of Peptide Spectra Generated by Tandem Mass Spectrometry**; Lewis Y Geer¹; Ming Xu¹; Lukas Wagner¹; Jeffrey A Kowalak²; Jeri S Roth²; Dawn M Maynard²; Stephen H Bryant¹; Sanford P Markey²; ¹*NIH/NLM/NCBI, Bethesda, MD*; ²*NIH/NIMH/LNT, Bethesda, MD*
- MPB 019 **Limits of Resolution Required for MS Identification of Whole Yeast Proteins**; Brian D. Halligan¹; Lloyd M. Smith²; Michael S. Westphall²; Simon N. Twigger¹; Peter J. Tonellato¹; ¹*Medical College of Wisconsin, Bioinformatics Research Center, Milwaukee, WI*; ²*University of Wisconsin, Department of Chemistry, Madison, WI*
- MPB 020 **OLAV: General Applicability of Model-Based MS/MS Peptide Score Functions**; Alexandre Masselot; Jérôme Magnin; Marc Giron; Thierry Dessingy; Damien Ferrer; Jacques Colinge; *GeneProt Inc., Meyrin, Switzerland*
- MPB 021 **Mass Spec Searching Against A Highly Annotated Protein Database**; Chen Peng; Steven Potts; Lisa Yan; Sandor Szalma; *Accelrys Inc., San Diego, CA*
- MPB 022 **Estimation and Optimization of the Accuracy of Peptide Identifications Obtained by MS/MS Database Searching**; Wilfred H. Tang; Sean L. Seymour; Sean P. Keating; Ignat N. Shilov; Alpesh A. Patel; Christie L. Hunter; Daniel A. Schaeffer; *Applied Biosystems, Foster City, CA*
- MPB 023 **Statistical Model for Identifying Peptides by MS/MS and Database Search: Application to Diverse Datasets**; Alexey I. Nesvizhskii; Andrew Keller; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*

CARBOHYDRATES/OLIGOSACCHARIDES

- MPC 024 **Using MS Approaches to Study Heparan Sulfate and Its Biosynthesis**; Suzanne Thorp¹; Jinhua Chen¹; Kevin L. Carrick²; Jian Liu¹; R. Marshall Pope²; ¹*School of Pharmacy, Univ. of North Carolina, Chapel Hill, NC*; ²*Dept. of Biochemistry and Biophysics, Chapel Hill, NC*
- MPC 025 **Analysis of Isomeric Oligosaccharides by Reverse-Phase High-Performance Liquid Chromatography-Sonic Spray Ionization (SSI) Ion-Trap Mass Spectrometry**; Yasuhiro Takegawa³; Shinya Ito¹; Shinji Yoshioka²; Kisaburo Deguchi²; Hiroaki Nakagawa³; Kenji Monde³; Shin-Ichiro Nishimura³; ¹*Design and Manufacturing Group, Hitachi High-Technologies Corporation, Hitachinaka, Japan*; ²*Naka Customer Center, Hitachi Science Systems Corporation, Hitachinaka, Japan*; ³*Graduate School of Science, Hokkaido University, Sapporo, Japan*

- MPC 026 **N-Glycan Structural Analysis by Nanospray Ion Trap Mass Spectrometry**; Ten-Yang Yen; Bruce Macher; *San Francisco State University, San Francisco, CA*
- MPC 027 **Cyclodextrins as a Novel Class of Enzymes**; Martin Sadilek¹; Jasbir Kaur²; Paul Figueiredo de²; Eugen W. Nester²; ¹*Chemistry Department, University of Washington, Seattle, WA*; ²*Microbiology Department, University of Washington, Seattle, WA*
- MPC 028 **Analysis of Fungal Glycosphingolipids as Lithium Adduct Ions by MS, MS/CID-MS, and MSⁿ on hybrid ESI-Qq/oa-TOF and MALDI-QIT-TOF Instruments**; Steven B. Levery¹; Beau Bennion¹; Chaeho Park²; Marcos S. Toledo³; Anita H. Straus³; Helio K. Takahashi³; ¹*University of New Hampshire, Durham, NH*; ²*University of Georgia, Athens, GA*; ³*Universidade Federal de Sao Paulo, San Paulo, Brazil*
- MPC 029 **Evaluation of Multistage MS for Determination of Individual Sulfation Sites on Chondroitin Sulfate and Keratin Sulfate Oligosaccharides**; May Joy C. Miller; Jin Qian; Robert J. Seward; Xueqing Li; Catherine E. Costello; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- MPC 030 **Characterization and Measurement of Chondroitin Sulfate Biopolymer in Pet Food by Size Exclusion Chromatography, with Negative Ion Electrospray-Tandem Mass Spectrometry Detection**; Mike Quijano¹; Todd M. Branch¹; Sean X. Peng¹; Curt Schreier²; Roy L. M. Dobson¹; ¹*Procter & Gamble Pharmaceuticals, Mason, OH*; ²*The Iams Company, Lewisburg, OH*
- MPC 031 **Comparison of SIM and Precursor Ion Scanning Methods for Glycopeptide Detection in Complex Mixtures Using a Hybrid Quadrupole Ion Trap Mass Spectrometer**; Tina A. Settineri¹; Brian L. Williamson²; Christie L. Hunter¹; Feng Zhong³; ¹*Applied Biosystems, Foster City, CA*; ²*Applied Biosystems, Framingham, MA*; ³*Applied Biosystems|MDS Sciex, Toronto, ON, Canada*
- MPC 032 **A Strategy Empolyng Exoglycosidase, CID, and Structure Homology to Determine the Complete Structures of Mucin-type Oligosaccharides**; Jinhua Zhang¹; Jerry L. Hedrick²; Carlito B. Lebrilla¹; ¹*Department of Chemistry, Univ. of California, Davis, CA*; ²*Section of Molecular and Cellular Biology, Univ. of California, Davis, CA*
- MPC 033 **Structural Differentiation of an Isomeric Series of Underivatized Neutral Human Milk Hexasaccharides Using Electrospray Ionization Tandem Mass Spectrometry**; Patrick Martin²; Vincent Lequart²; Joseph Banoub¹; George Sheppard¹; ¹*Department of Fisheries and Oceans, St. John's, Canada*; ²*IUT Bethune, University of Artois, Bethune, France*
- MPC 034 **Analysis of Non-Covalent Carbohydrate-Based Interactions by Infrared Atmospheric Pressure MALDI**; Christopher E. Von Seggern; Robert J. Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*
- MPC 035 **Sequence Analysis of Oligosaccharides as Neoglycolipids by Negative-Ion Electrospray and MALDI Mass Spectrometry**; Wengang Chai¹; Yang Yang²; Yibing Zhang¹; Alexander M. Lawson¹; ¹*MRC Glycosciences Laboratory, Imperial College Faculty of Medicine, Harrow, Middx, UK*; ²*Analytical Development, AstraZeneca R&D, Södertälje, Sweden*
- MPC 036 **LC/MS of Low Molecular Weight Heparin**; Jens Henriksen¹; Peter Roepstorff¹; Lene Hoffmeyer Ringborg²; ¹*University of Southern Denmark, Odense, Denmark*; ²*LEO Pharma A/S, Ballerup, Denmark*
- MPC 037 **Evaluation of Metal Complexes for Sequencing of Heparin-Like Glycosaminoglycans Using Multistage MS**; Estee F Naggar; Catherine E Costello; Joseph Zaia; *Boston University, Boston, MA*
- MPC 038 **Synthesis of Mass-Differentiated Substrate Libraries and Development of ESI-MS-Based Assays for Discovering Nucleotidyltransferase and Glycosidase Chemical Functions**; Nicola L. Pohl; Kwang-Seuk Ko; Yang Yu; Corbin Zea; *Iowa State University, Ames, IA*
- MPC 039 **Electrspray Ionization Collision-Induced Dissociation of Ag⁺-Containing Molecular Ions of Oligosaccharides Yields Diagnostic Ring Cleavages**; Gottfried Pohlentz; Jasna Peter-Katalinic; *Institute for Medical Physics and Biophysics, Muenster, Germany*
- MPC 040 **Equilibrium Size Exclusion Chromatography for Determination of Carbohydrate-Protein Binding**; Estee Naggar; Biplab Das; Joseph Zaia; *Boston University, Boston, MA*
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- CLINICAL CHEMISTRY**
- MPD 041 **Simultaneous Measurement of Estradiol and Estrone in Human Serum by LC-MS/MS Following Derivatization with Dansyl Chloride**; Robert E. Nelson; Ravinder J. Singh; Dennis J. O'Kane; *Mayo Clinic, Rochester, MN*
- MPD 042 **A Direct Comparison of LC-ESI/MS to GC/MS in the Measurement of Stable Isotope Enrichment from a ²H₂-Glucose Metabolic Probe in T-cell Genomic DNA**; Stephen D. Fox; Richard A. Lempicki; Douglas A. Hosack; Timothy D. Veenstra; Haleem J. Issaq; *SAIC-Frederick, Inc., NCI-Frederick, Frederick, MD*
- MPD 043 **Quantitative Analysis of Urine Organic Acids Using Multiple Isotope-Labeled Internal Standards with Full-Scan Capillary Column Gas Chromatography/Mass Spectrometry**; Yan An; Steven L. Hillman; David S. Millington; *Duke University Medical Center, Durham, NC*
- MPD 044 **Physiological Amino Acid Analyses By Tandem Mass Spectrometry: Validation By Comparison With The Beckman Amino Acid Analyzer**; Lawrence J. Fisher¹; Betty A. Platt¹; Gulanaar Hassam¹; Mary A. Skomorowski¹; John W. Callahan¹; ¹*The Hospital for Sick Children, Toronto, Canada*; ²*University of Toronto, Toronto, Canada*
- MPD 045 **The Analysis of Vitamin D Analogues by Atmospheric Pressure Ionization Coupled to Triple Quadrupole Mass Spectrometry**; Frans Schoutsen¹; Sandra Rainbow²; Michael Baynham¹; Daniel Blake¹; Steve Lock¹; Darren Thomas¹; Paula Wiebkin¹; ¹*Applied Biosystems, Warrington, UK*; ²*Northwick Park Hospital, London, UK*
- MPD 046 **A Method for the Diagnosis of β -Hydroxysteroid- Δ^5 oxidoreductase Deficiency in Human Urine by Tandem Mass Spectrometry**; Andrea Mardegan¹; Mariella Zoppa¹; Lorena Gallo¹; Laura Riello¹; Franco Zacchello¹; Lucia Zancan¹; Giuseppe Giordano¹; ¹*Pediatrics department of Padova University, Padova, Italy*; ²*Department of Pediatrics of Padova University, Padova, Italy*
- MPD 047 **The Perfume of Medically Important Fungi**; Vaughan S. Langford¹; Paul F. Wilson¹; Jennifer M. Scotter²; Stephen T. Chambers²; Randall A. Allardyce²; Colin G. Freeman¹; Murray J. McEwan¹; ¹*Department of Chemistry, University of Canterbury, Christchurch, New Zealand*; ²*Christchurch School of Medicine and Health Sciences, Otago University, Christchurch, New Zealand*
- MPD 048 **High-Performance Liquid Chromatography/Tandem Mass Spectrometric Assay for the Rapid High Sensitivity Measurement of Amino Acids in Brain Fluid Samples**; Mark E P Hows; Ajit J Shah; Richard Foxton; Lee A Dawson; Andrew J Organ; *Glaxosmithkline, Harlow, UK*

- MPD 049 **A Novel Method for the Quantitative Analysis of Immunosuppressive Drugs in Whole Blood, Using Chromatography-Free Chip-Based Infusion Ion Trap Mass Spectrometry;** Neil V Leaver¹; Alistair E Sterling²; Mark J Baumert²; Mark H Allen²; Mark E Harrison³; Marlene L Rose¹; ¹Royal Brompton & Harefield NHS Trust, Harefield, UK; ²Advion Biosciences Ltd, Norwich, UK; ³Thermo Finnigan, Hemel Hempstead, UK
- MPD 050 **Electrospray LC/MS Method Using Single-Ion Monitoring and a Monolithic Silica Column for Quantitation and Preclinical Pharmacokinetics of a Novel Selective Androgen Receptor Modulator (SARM) in Rats;** Di Wu¹; Duane D. Miller²; James T. Dalton¹; ¹Division of Pharmaceutics, College of Pharmacy, Ohio State University, Columbus, OH; ²Department of Pharmaceutical Sciences, College of Pharmacy, UT, Memphis, TN
- MPD 051 **Automated Stable-Isotope Dilution LC/MS/MS Method for Foliates in Serum;** Zia Fazili; Christine Pfeiffer; Leslie McCoy; *Centers for Disease Control and Prevention, Atlanta, GA*
- MPD 052 **LC/MS Method for the Determination of Ritalin and Ritalinic Acid in Human Plasma;** Daryl Murry¹; Robert Classon²; ¹Purdue Univ, Dept of Pharmacy Practice, School of Pharmacy and Pharmac, Indianapolis, IN; ²Shimadzu Scientific Instruments, Columbia, MD
- MPD 053 **Application of Liquid Chromatography Tandem Mass Spectrometry for the Diagnosis of Endocrine Disorders;** Ravinder Singh; *Mayo Clinic, Rochester, MN*
- MPD 054 **Transport and Metabolism of ¹³C-Labeled Foliates by Human Intestinal Caco-2 Cell Monolayers Using LC-MS-MS;** Spiros D. Garbis; Yongmei Li; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*
- MPD 055 **A Novel Ion Trap LC/MSn Methodology for the Analysis of QYNAD, a Marker for Inflammatory Demyelinating Neurological Disease;** Christian Sauber¹; Peter Aulkemeyer³; Heinrich Brinkmeier³; Reinhardt Rüdell²; Friedrich Mandel¹; ¹Agilent Technologies, Waldbronn, Germany; ²Department of General Physiology, University of Ulm, Ulm, Germany; ³Institute of Pathophysiology, Ernst-Moritz-Arndt University Greifswald, Greifswald, Germany
- MPD 056 **Screening and Diagnosis of Three Pyrimidine Degradation Disorders by Urease-Pretreatment of Urine, Stable Isotope Dilution and Gas Chromatography-Mass Spectrometry;** Tomiko Kuhara; Morimasa Ohse; Chie Ohdoi; *Medical Research Institute, Kanazawa Medical University, Ishikawa, Japan*
- MPD 057 **Diagnostic Urinary Sulfatide Analysis by Tandem Mass Spectrometry;** Pranesh K Chakraborty¹; Lawrence J Fisher²; Marie Anne Skomorowski²; John W Callahan²; ¹Children's Hospital of Eastern Ontario, Ottawa, Ontario; ²The Hospital for Sick Children, Toronto, Ontario
- MPD 058 **Determination of Tobramycin in Human Serum Using Liquid Chromatography-Tandem Mass Spectrometry and Comparison with a Fluorescence Polarisation Assay;** Donald P Cooper¹; Steven Lockhart²; Brain G Keevil²; ¹Department of Clinical Biochemistry, Wythenshawe Hospital, Manchester, UK; ²Waters Corporation, MS Technologies Centre, Manchester, UK
- MPD 059 **Q-TOF Tandem Mass Spectrometric Analysis of Clinically Important Acyl Glycines and Related Organic Acids;** Su Chen¹; Jo Ellen Lee¹; Charls B Strom¹; Ka Wan Li²; ¹Quest Diagnostics Nichols Institute, San Juan Capistrano, CA; ²Free University, Amsterdam, The Netherlands
- MPD 060 **Polyamines by Gas-Chromatography/Negative CI;** Alek N. Dooley; Rita Kern; Nathan Kim; Richard L. Stevens; Stephen Cederbaum; Kym F. Faull; *University of California, Los Angeles, CA*
- MPD 061 **Simultaneous Screen of 23 Drugs of Abuse by LC-API-MS/MS;** Stephen Lock²; Helen Field¹; Daniel Blake²; Michael Baynham²; Darren Thomas²; ¹Leeds General Infirmary, Leeds, UK; ²Applied Biosystems, Warrington, UK
- MPD 062 **Analysis of Fungal Products in Growth Medium, Fungi and Human Blood;** Petra Miketova¹; Ludmila Khailova²; Karl H. Schram²; Michael L. Graham³; Tin Sein⁴; Thomas J. Walsh⁴; Ida (Ki) Moore¹; ¹College of Medicine, University of Arizona, Tucson, AZ; ²College of Nursing, University of Arizona, Tucson, AZ; ³College of Pharmacy, University of Arizona, Tucson, AZ; ⁴National Cancer Institute, National Institutes of Health, Bethesda, MD; ⁵National Cancer Institute, National Institutes of Health, Bethesda, MD
- MPD 063 **Hydrogen Laser Photoionization of Drugs of Abuse Isolated From Spiked Urine Samples;** Karl H. Schram¹; M. Bonner Denton²; Jeffrey W. Finch²; ¹University of Arizona, College of Pharmacy, Tucson, AZ; ²University of Arizona, Department of Chemistry, Tucson, AZ
- MPD 064 **Detection of Pergolide in Human Breast Milk and Plasma by LC-MS-MS;** Claudia A. Mueller¹; Marc Slawik²; Karl G. Petersen²; Wolfgang Weinmann¹; ¹Institute of Legale Medicine, Forensic Toxicology, University Hospital, Freiburg, Germany; ²Institute of Legale Medicine, Albert-Ludwigs-University, Freiburg, Germany
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- DRUG METABOLISM: HIGH THROUGHPUT**
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- MPE1 065 **Application of pH Gradient in the Analysis of Small Organic Acids by LC-MS/MS in Drug Discovery;** Inhou Chu; Tony Soares; Eliza Fung; *Schering-Plough research Institute, Kenilworth, NJ*
- MPE1 066 **High Throughput LC-MS/MS Method Using Monolithic Column Coupled with High Flow on-line Extraction for the Direct and Simultaneous Quantitation of Multiple Components in Human Plasma;** Zhongping John Lin; Asiya Wufer; Sheryl Skrenock; Linvee Shum; *Avantix Laboratories, Inc., New Castle, DE*
- MPE1 067 **Investigation of Infusion Nano-ESI Using a Silicon Chip for High Throughput Determination of Hepatic Metabolic Stability;** Jean-Marie Dethy¹; Francoise Brunelle¹; Annie Lavis¹; James Grace²; Bradley Ackermann²; ¹Eli Lilly and Company, Lilly Development Center S.A., Mont-Saint-Guibert, Belgium; ²Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN
- MPE1 068 **Quantitation of Fentanyl in Human Plasma by LC/MS/MS;** Allan Xu; Jing Ke; Sreedhara Chaganty; Catherine Leung; *SFBC Analytical Laboratories, Inc., North Wales, PA*
- MPE1 069 **Increased Throughput by Injection of Dual Batch on Dual Column (Parallel Chromatography);** Gerard Dussault; Manon Vrandeick; Alain Arsenaault; *MDS Pharma Services, Blainville, Canada*
- MPE1 070 **A Novel 6-Column Extraction System for High Throughput Analysis;** Claude R. Mallet; Jeff R. Mazzeo; *Waters Corporation, Milford, MA*
- MPE1 071 **Determination of Fentanyl by High Throughput On-Line LC/MS in Human Serum;** Genevieve Plante; Jacques Prevost; Rudolf Guilbaud; *MDS Pharma Services, Montreal, Quebec*
- MPE1 072 **A Comparison of ¹H-NMR and LC/MS(TOF) for a Metabonomics Evaluation of Rat Urine from a**

- Toxicological Study;** Chris L. Stumpf¹; Maria Anthony²; Robert S. Plumb¹; John N. Haselden²; Jennifer H. Granger¹; Jose Castro-Perez³; Hilary Major³; ¹Waters Corporation, Life Sciences R&D, Milford, MA; ²GlaxoSmithKline, Ware, UK; ³Waters Corporation, Manchester, UK
- MPE1 073 **Development of a High-Throughput Tandem SPE-LC/MS Method with +/- ESI/APCI Switching for in vitro Cocktail CYP Inhibition Analysis;** Saileta Prabhu¹; Elliot Jones²; Teresa Lac¹; Marc Evanchik¹; Louisette Basa²; Jeffrey Silverman¹; ¹Sunesis Pharmaceuticals, South San Francisco, CA; ²Applied Biosystems, Foster City, CA
- MPE1 074 **Application of a Novel Ultra-Low Elution Volume (μ Elution) Solid-Phase Extraction on the LC/MS/MS Determination of Drug Compounds in Human Urine;** Brad A. Roadcap; Don G. Musson; Jamie J. Zhao; *Merck Research Laboratories, West Point, PA*
- MPE1 075 **Utilization of Multiplexed Liquid Chromatography/Mass Spectrometry in the Purity and Accurate Mass Determination of Pharmaceutical Compound Libraries;** Lisa M. Nogle; Larry M. Mallis; *Wyeth Research, Collegeville, Pennsylvania*
- MPE1 076 **Determination of Plasma Protein Binding Using a New, Fully Automated, High-Throughput Ultrafiltration Method and Ballistic Gradient LC-MS;** The-Minh Tu¹; Denis Projean²; Helene Maurice¹; Sophie Dautreuil¹; Julie Ducharme¹; ¹AstraZeneca R&D Montreal, Montreal, Canada; ²University of Montreal, Montreal, Canada
- MPE1 077 **Development of Parallel LC/MS System for Quantitative ADME Analysis;** Lan Gao; Xueheng Cheng; Mark Schurdak; Lawrence Verneti; Ken Matuszak; David Burns; *Abbott Laboratories, Abbott Park, IL*
- MPE1 078 **Measurement of Drug-Protein Binding by Using Immobilized Human Serum Albumin LC/MS Method;** Ying Cheng; Elena Ho; Jun Shen; Xue Ge; Babu Subramanyam; Jih Lie Tseng; *Berlex Biosciences, Richmond, CA*
- MPE1 079 **Automated Online LC/MS Metabolic Study for Prodrug Conversion;** Frances Lai; Matthew J. Baumgardner; S. Cyrus Khojasteh; *Genentech Inc, S. San Francisco, CA*
- MPE1 080 **Quantitative, Low Cost, High Throughput Analysis of Free Carnitine in Dried Plasma Specimens using MS/MS;** Donald Chace¹; James DiPerna¹; Theodore Kalas¹; Allan Evans²; GianFranco Fornasini³; ¹Neo Gen Screening, Bridgeville, PA; ²University of South Australia, Adelaide, Australia; ³Sigma Tau Pharmaceuticals, Gaithersburg, MD
- MPE1 081 **An LC/MS/MS Dual Column Method to Support High Throughput Bioanalysis of In Vitro ADME Screening Samples;** Sascha Freiwald; Danielle Smith; Roger Winters; *Pfizer Global Research & Development, Ann Arbor, Michigan*
- MPE1 082 **An Investigation of Protein Binding Using Ultrafiltration and TFC-LC/MS/MS;** Kevin L Cook; Voon S Ong; William Brubaker; *Memory Pharmaceuticals, Montvale, NJ*
- MPE1 083 **The Use of Alternative SRM and Full scan MS/MS with Chip-based Infusion MS for High-Throughput Analysis in Biological Fluids with Improved Assay Selectivity;** Mark Allen²; Alistair Sterling²; Garry Williams²; Gerard Hopfgartner¹; ¹University of Geneva, School of Pharmacy, Geneva, Switzerland; ²Advion BioSciences, Norwich, United Kingdom
- MPE1 084 **LC-MSD as a Platform for the Fast Analysis of Inhalation Product Development Samples;** Ramili Menzeleev; Emmanuelle Schwob; Jean-Marc Bovet; Antony Hickey; *Cirrus Pharmaceuticals, Inc, Research Triangle Park, NC*
- MPE1 085 **Dual Channel Parallel On line Turbulent Flow Extraction LC/MS/MS Determination of Geometrical Isomers;** Sabrina Forni; Brad A. Roadcap; Wei Zeng; Amy Q. Wang; Jamie J. Zhao; Donald G. Musson; *Merck & Co Inc., West Point, PA*
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- DRUG METABOLISM: PHARMACOKINETICS**
- MPE2 086 **Development of a High Sensitivity LC-MS/MS Method for Fluticasone Propionate: Pharmacokinetic Application in Human Subjects Following Nasal Spray Administration;** Jinlin Shen¹; Juan He¹; Victoriano C Yeong¹; Gary Paul²; Kevin McHale²; Nicola C Hughes¹; ¹Biovail Contract Research, Toronto, Canada; ²Thermo Finnigan, Somerset, NJ
- MPE2 087 **Evaluation of Models of Blood-Brain-Barrier Transport Using HPLC/ESI-MS/MS: Quantitation of in vitro and in vivo Samples;** Paula M. Knight; Mary K. Dirr; Lily Dong; Martin E. Dowty; Cindy M. Obringer; Jennifer L. Hannah-Hardy; Charles A. Cruze; Timothy R. Baker; *Procter & Gamble Pharmaceuticals, Mason, OH*
- MPE2 088 **CapLC/LCQMS Method Development for Detection of Addition of 3,4-estrogen-quinone and Nucleosides;** Zhi Yang¹; Harald Koefeler¹; Shengxiang Qiu¹; Ercole L. Cavalieri²; Eleanor G. Rogan²; Michael L. Gross¹; ¹Chem. Dept., Washington University, Saint Louis, MO; ²Eppley Cancer Institute, Nebraska Medical Center, Omaha, NE
- MPE2 089 **LC-MS/MS and NMR Analysis of Acyl Glucuronides in Bile and Plasma in Early Drug Discovery;** James Jean; Sam Wainhaus; Hong Kim; Alexei Buevich; *Schering Plough Research Institute, Kenilworth, NJ*
- MPE2 090
- MPE2 091 **Time of Flight Mass Spectrometry For The Specific Identification of Low Level Metabolites and Trace Impurity Profiling;** Michael A McCullagh¹; Hilary Major¹; Jose Castro Perez¹; Ian Wilson²; Catherine Duckett³; Jeremy Nicholson³; John Lindon³; ¹Waters Corporation MS Technologies Centre (Micromass UK Ltd) Floats Rd, Manchester, United Kingdom; ²Department DMPK, AstraZeneca, Mereside, Alderley Park, Macclesfield, United Kingdom; ³Imperial College of Science, Technology and Medicine, South Kensington, London, United Kingdom
- MPE2 092 **High Sensitivity Chiral LC/MS/MS Assay for Quantitative Determination of the Enantiomers of Fadrozole in Plasma;** Timothy Bedman; Michael J Hayes; Francis L S Tse; *Novartis Institute for Biomedical Research, East Hanover, NJ*
- MPE2 093 **Plasma-Pooling Method to Determine Ultra-Low Drug Exposure Using LC/MS/MS;** Jinsong Ni; Josh Rowe; Hui Tang; Andrew Acheampong; Diane Tang-Liu; *Allergan, Irvine, CA*
- MPE2 094 **Comparative in-vivo Metabolic Profiling and Identification of Metabolites in Plasma in Relation to MIST (Metabolites in Safety Testing);** Ronald de Vries; Willy Lorreyne; Philip Timmerman; *Johnson & Johnson PRDBE, Beerse, Belgium*
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- DRUG METABOLISM: QUANTITATION**
- MPE3 095 **Development of a High Sensitivity LC/MS/MS Method for the Quantitation of DPC-A78445, a Novel Pharmacological Stress Agent, in Rodent, Canine and Human Blood;** Cathleen E. Gorman; David C. Onthank; Neal Williams; Simon Robinson; D. Scott Edwards; *Bristol-Myers Squibb Medical Imaging, N. Billerica, MA*
- MPE3 096 **Simple Means to Alleviate Sensitivity Loss by TFA-containing Mobile Phases in LC-ESI/MS/MS**

- MPE3 097 **Bioanalysis; Wilson Z. Shou**; Angela Eerkes; Naidong Weng; *Covance Laboratories Inc, Madison, WI*
Simultaneously Determination of the Enantiomers of Ketorolac As Well As XBL011003 in Human Plasma with LC/MS; Yong-Xi Li; Eckhardt Schmidt; Mei Hou; Guangchun Zhou; Jinn Wu; Dawei Zhou; *XenoBiotic Laboratories, Inc., Plainsboro, NJ*
- MPE3 098 **Direct Analysis of Plasma by LC/MS/MS: The Use of Fast Gradient HPLC; Patricia A Wright**; Michelle Gleave; Richard M Mitchell; *Pfizer Global R and D, Sandwich, UK*
- MPE3 099 **Dealing With Linear Dynamic Range Limitations in Electrospray for Bioanalytical Assays; Katty X. Wan**; Jill E. Polzin; Matthew J. Rieser; *Abbott Laboratories, Abbott Park, IL*
- MPE3 100 **Determination of α -Tocopherol in Rat Tissues by LC-MS/MS for Pre-Clinical Drug Development; Nick Deagon**; Jeffry Plomley; Tim Samuels; Alan Bartlett; Melanie Chapleau; Daniel Lemieux; Frederick de Liniers; *CTBR, Senneville, Quebec*
- MPE3 101 **Simultaneous Determination of Simvastatin and Simvastatin Acid in Human Plasma by Automated Liquid-Liquid Extraction on Diatomaceous Earth Packed in 48-well Plates and LC/MS/MS; Lida Liu**; Robert Valesky; Donald Musson; Jamie Zhao; *Merck Research Laboratories, West Point, PA*
- MPE3 102 **Quantification of 1- α -Hydroxyvitamin D₃ in Rat Plasma And Tissues Using LC-MS; Huaping Wu**¹; Michael E. Hawthorne²; Rajendra G. Mehta²; Richard B. van Breemen¹; ¹University of Illinois College of Pharmacy, Chicago, IL; ²University of Illinois College of Medicine, Chicago, IL
- MPE3 103 **Development of an HPLC/MS/MS Method for the Quantitative Bioanalysis of Vancomycin from Plasma: A Lesson Learned When Conventional Methods are Unsuccessful; Michael T Pearson**¹; Shane R. Needham¹; Kay Huh²; ¹Alturas Analytics, Inc., Moscow, ID; ²Chiron, Seattle, WA
- MPE3 104 **Determination of Clavulanic acid by using High Throughput On-line LC/MS in Human Plasma; Chenier Dodard; Rudolf Guilbaud**; Othman Akram; *MDS Pharma services, Montreal, Canada*
- MPE3 105 **Direct Plasma Injection and Analysis Using a Thermally Controlled High-Throughput Parallel LC/MS/MS system Based on Post-Column Bypass Effluent Diversion; Emily G Farrow**; Kenneth J Ruterbories; *Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN*
- MPE3 106 **Development and Validation of a 96-Well Method for the Analysis of ABT-202 in Plasma Samples on Two LC/MS/MS Platforms; Naxing Xu**; Eun Kim; Jun Zhang; Azza M Wagdy; Brendan A Swaine; Min S Chang; Tawakol El-Shourbagy; *Abbott Laboratories, Abbott Park, IL*
- MPE3 107 **A Comparison Of Concentrations Collected From Perfused Rat And Non-Perfused Rat Brain. Determination Of Brain To Plasma Ratios In Rodents By LC-MS/MS; Qianping Peng**; Constantine Tamvakopoulos; Xiaolan Shen; Judy Fenyk-Melody; Kenneth Vakerich; Zuliang Yao; Zhixiong Ye; Ravi Nargund; Christian Nunes; Lawrence Colwell; James Pivnichny; *Merck Research Laboratories, Rahway, NJ*
- MPE3 108 **High Performance Liquid Chromatography Inductively Coupled Mass Spectrometry - a New Opportunity in Bioanalysis for Sulphur and Phosphorus Containing Compounds; Christopher J Smith**; Richard Payne; Ian D Wilson; Elizabeth Thomas; Timothy P Sangster; *AstraZeneca Pharmaceuticals, Macclesfield, England*
- MPE3 109 **Development of LC/MS/MS Assay for Quantification of SCIO-323 and its Selected Metabolites in Cynomolgus Monkey, Rat, and Human Plasma; James Tovera**; Jin Shu; Jennifer Amundson; Beth Fernandez; Maurice Standlee; Vinh Tran; Rodney Jue; Yang Wang; *Scios, Inc., Sunnyvale, CA*
- MPE3 110 **Quantitation of Leuprolide in Human Plasma via HPLC with MS/MS Detection; Sid Bhoopathy**; Zong-Ping Zhang; Michael Waldron; Bruce Hidy; *PPD Development, Richmond, VA*
- MPE3 111 **A Sensitive and Selective LC-MS/MS Method for the Determination of Anandamide, Arachidonic Acid, Prostaglandins D₂, E₂ and F_{2 α} and Prostaglandin-1-Ethanolamides D₂, E₂ and F_{2 α} in Biological Matrices; Jinsong Ni; Andrew Acheampong; Lisa Borbridge; Josh Rowe**; David Woodward; Diane Tang Liu; *Allergan, Irvine, CA*
- MPE3 112 **LC/MS Analysis of Diazepam and its Metabolites in Rat Liver Microsome Incubations Using a Linear Ion Trap Mass Spectrometer; Julian J Phillips**; Tania A Sasaki; Gargi Choudhary; *Thermo Finnigan, San Jose, CA*
- MPE3 113 **Highly Automated Process for the Quantitation of Samples from Animal Pharmacokinetic Studies Using a Linear Ion Trap Mass Spectrometer; Mark Sanders**¹; Jonathan L. Josephs²; Jian Wang¹; Julian Phillips³; Iain Mylchreest³; ¹Bristol-Myers Squibb, Princeton, NJ; ²Bristol-Myers Squibb, Hopewell, NJ; ³ThermoFinnigan, San Jose, CA
- MPE3 114 **Stability Studies for Cabergoline Using a Triple Quadrupole Mass Spectrometer with Accurate Mass Measurement Capability; Gary Paul**¹; Witold Winnik¹; Scott Peterman¹; Nicola Hughes²; ¹BioVail Contract Research, Toronto, Ontario; ²Thermo Finnigan, Somerset, NJ
- MPE3 115 **Flow-Injection LC-MS-MS Method for Simultaneous Quantitation of N¹-Acetylspermidine and N⁸-Acetylspermidine in the Differentiation Process of Murine Erythroleukemia (MEL) Cells; Jing Yuan**¹; Xiaoyi Hu¹; Vanishree Rajagopalan²; O.David Sparkman¹; Jim Blankenship²; Patrick R. Jones¹; ¹Chemistry Department, University of the Pacific, Stockton, CA; ²TJ Long School of Pharmacy, University of the Pacific, Stockton, CA
- MPE3 116 **Sensitive LC/MS Method for the Determination of Clavulanic Acid in Human EDTA K3 Plasma; Gilles Provencher**; *Anapharm Inc., Québec, Canada*
- MPE3 117 **Determination of Fexofenadine in Human Plasma Using 96-well Solid Phase Extraction and HPLC-MS/MS; Irong Fu**; Eric J. Woolf; Bogdan K. Matuszewski; *Merck Research Laboratories, West Point, PA*
- MPE3 118 **Quantitative Analysis of Glimepiride in Human Plasma by LC-MS/MS; Hohyun Kim**¹; Hyeongjin Roh²; Sang Beom Han¹; Kyung Ryul Lee¹; ¹Seoul Medical Science Institute, Seoul Clinical Laboratories (SCL), Seoul, South Korea; ²BioCore Co. Ltd., Seoul, South Korea
- MPE3 119 **Determination of Phloroglucinol in Human Plasma by LC-MS and LC-MS/MS; Hohyun Kim**¹; Hyeongjin Roh²; Hee Joo Lee¹; Sang Beom Han¹; Kyupum Lee¹; ¹Seoul Medical Science Institute, Seoul Clinical Laboratories (SCL), Seoul, South Korea; ²BioCore Co. Ltd., Seoul, South Korea
- MPE3 120 **Quantitative Analysis of Antisense Oligonucleotides by Reversed-phase LC-MS/MS; Keyang Xu**¹; Elizabeth A. Williams¹; Shekman Wong¹; Krys J. Miller¹; Richard S. Geary²; Rosie Z Yu²; ¹Amgen, Thousand Oaks, CA; ²ISIS Pharmaceuticals, Carlsbad, CA
- MPE3 121 **Automated Nanoelectrospray MS/MS, Without Chromatography, for the Rapid Determination of**

- Midazolam in Human Plasma**; James T. Kapron; Ellen Pace; Colleen K. Van Pelt; Jack Henion; *Advion BioSciences, Ithaca, NY*
- MPE3 122 **Rapid Method for Identification and Quantification of Nineteen Nonsteroidal Anti-Inflammatory Drugs in Serum Using LC/MS**; Rebecca A. Shepard; Daniel S. McKemie; Wayne S. Skinner; Scott D. Stanley; *University of California, Maddy Equine Analytical Lab, Davis, CA*
- MPE3 123 **Measuring Antibody Drugs in Serum in the Presence of Anti-Drug Antibodies**; Baojen Shyong¹; Victor T Ling¹; Bryan Sandlund¹; Valerie Quarmby¹; Jonathan McNally²; Yan Chen²; ¹Genentech, Inc., S. San Francisco, CA; ²ThermoFinnigan, San Jose, CA
- MPE3 124 **Efficient Data Processing for Parent and Metabolite LC-MS/MS Quantitation using Watson LIMS System**; Gregory B. Tucker; Samuel Wainhaus; James Jean; Xiaoying Xu; *Schering Plough Research Institution, Kenilworth, NJ*
- MPE3 125 **The Use of Post Column Addition to Improve Signal Response and Reduce Matrix Effects in Bioanalytical LC/MS/MS Assays**; Ria Selinotakis; Amal H. Hage; Natalie E. Hebert; Themis Flarakos; Mark L.J. Reimer; *MDS Pharma Services, Montreal, Canada*
- MPE3 126 **Sensitive Determination of Felodipine in Human and Dog Plasma by LC-MS/MS for Pharmacokinetic Study**; Hohyun Kim¹; Hyeongjin Roh²; Seung-Bock Yeom²; Hee Joo Lee¹; Sang Beom Han¹; ¹Seoul Medical Science Institute, Seoul Clinical Laboratories (SCL), Seoul, South Korea; ²BioCore Co. Ltd., Seoul, South Korea
- MPE3 127 **Stabilizing Analytes via Derivatization, Enzyme Inhibitors, and pH Modifiers in the Development and Validation of a Bioanalytical Assay for the Quantification of a Prodrug and its Active Metabolite in Animal Plasma using TurboIonSpray LC/MS/MS**; Andre S. Negahban; Emily G. Farrow; Boris A. Czeskis; Elizabeth M. Peck; Diane L. Phillips; Kenneth J. Ruterbories; John H. Mullen; *Eli Lilly and Company, Indianapolis, IN*
- MPE3 128 **A Preliminary Evaluation of the Applied BioSystems MDS SCIEX API-3000, API-4000 and ThermoFinnigan Quantum**; Patrick M. Jeanville¹; Susan E. Fernandez²; Kamel M. Amin¹; Kevin Colizza¹; ¹Pfizer Inc., PGRD Groton Laboratories, Groton, CT; ²University of Michigan, Ann Arbor, MI
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- ENVIRONMENTAL**
- MPF 129 **The Determination of Mercury and Selenium in Shark Tissue**; Mitchell C. Paul; Robert Toia; Ellak I. von Nagy-Felsobuki; *The University of Newcastle, Callaghan, Australia*
- MPF 130 **Determination of Microcystins in Surface Water by HPLC-MS/MS**; Christian DeBlois¹; Annie Laverdiere¹; Francois Houde¹; ¹Ministry of Environment, Centre d'expertise en analyse environnementale, Quebec, Canada; ²Ministry of Environment, Quebec, Canada
- MPF 131 **Extraction, Hydrolysis, and Analysis of Pesticides and Pesticide Metabolites in Urine Samples by LC-MS/MS**; Michael S. Gardner; James H. Raymer; Thomas W. Marrero; *RTI International, Research Triangle Park, NC*
- MPF 132 **A Multi-residue LC-MS/MS Method for the Determination of Sulfonamides in Total Diet Samples**; Benjamin P.-Y. Lau; Cathie Menard; *Food Research Div., Health Products and Food Branch, Health Canada, Ottawa, Ontario, Canada*
- MPF 133 **Pattern of Coplanar PCBs in Korean Fish by HRGC/HRMS**; Soojung Hu; Jungmyuck Suh; Jungmi Kim; Kyungku Choi; Dongmi Choi; Mooki Hong; *Korea Food & Drug Administration, Seoul, Korea*
- MPF 134 **Quantitation and Distribution of Individual Polychlorinated Biphenyl Congeners in the Black-footed Albatross (*Phoebastria nigripes*) from Midway Atoll, North Pacific Ocean**; Sarah A.L. Caccamise¹; Liejun Wu¹; Lee Ann Woodward²; Qing X. Li¹; ¹University of Hawaii at Manoa, Honolulu, Hawaii; ²U.S. Fish and Wildlife Service, Honolulu, HI
- MPF 135 **Determination of Deltamethrin from Rat Plasma by LC-MS**; Yan Ding; James Bruckner; Michael Bartlett; *University of Georgia, Athens, GA*
- MPF 136 **A GC/HRMS Method for Determination of Triclosan in Fish Plasma from Detroit River**; Mehran Alaei¹; Ivy D'Sa¹; Quade Sue¹; Erin Bennett²; Robert Letcher²; ¹National Water Research Institute, Burlington, Ontario; ²Great Lakes Institute for Environmental Research, Windsor, Ontario
- MPF 137 **Proteomic Analysis of Allergens from *Metarhizium Anisopliae***; Maura J. Donohue¹; Jody A. Shoemaker²; MaryJane Selgrade²; Marsha D. Ward³; Lisa Copeland³; ¹Oakridge Institute for Science and Education, Oakridge, TN; ²U.S. Environmental Protection Agency, Cincinnati, OH; ³U.S. Environmental Protection Agency, Research Triangle Park, NC
- MPF 138 **Development of a Rapid and Sensitive SPE-LC-ESI MS/MS Method for the Determination of Chloramphenicol in Seafood**; Despina Tsipi²; Pigi Kormali²; Evangelos Gikas¹; Anthony Tsarboboulos¹; ¹gaia Research Center, Kifissia-Athens, Greece; ²general Chemical State Laboratory, Athens, Greece
- MPF 139 **Analysis of Acrylamide- and Glycidamide-Hemoglobin Adducts by LC-MS/MS**; Maria Ospina; Hermes Licea-Perez; Hubert Vesper; Gary Myers; *Centers for Disease Control, Atlanta, GA*
- MPF 140 **A Photodegradation Study of Pharmaceuticals Using LC-ESCI<TM>-MS-MS**; Monica W Lam¹; Michael P Balogh²; Scott A Mabury¹; ¹University of Toronto, Toronto, Ontario; ²Waters, Milford, MA
- MPF 141 **Structural Characterization of Microcystins by ESMS Using In-source CID**; Cariton Kubwabo; Natalia Vais; Frank M Benoit; *Health Canada, Ottawa, Canada*
- MPF 142 **Mass Spectrometric Determination of Organic Wastewater Contaminants Between Water and Sediment in Surface-Water Samples of the United States**; Edward T. Furlong¹; Imma Ferrer¹; Susan Glassmeyer³; Jeffery D. Cahill¹; Steven D. Zaugg¹; Stephen L. Werner¹; Dana W. Kolpin²; Chad A. Kinney¹; David Kryak³; ¹U.S. Geological Survey, Denver, CO; ²U.S. Geological Survey, Iowa City, IA; ³U.S. Environmental Protection Agency, Cincinnati, OH
- MPF 143 **Mass Spectrometric Characterization of the Protein Matrix of Cod Otoliths**; Matthew B. Miller; Richard W. Vachet; *University of Massachusetts-Amherst, Amherst, MA*
- MPF 144 **Total Mercury Analysis of Crabmeat by ICP MS**; Marc E Engel; *Florida Dept of Agriculture and Consumer Services Food Laboratory, Tallahassee, FL*
- MPF 145 **Optimizing the Analysis of Acrylamide in Food by Quadrupole GC/MS**; Trisa C Robarge; Eric Phillips; Matt Lasater; Meredith Conoley; *ThermoElectron Scientific Instruments Division, Austin, TX*
- MPF 146 **Determination of Algal Toxins in Surface Waters by Solid Phase Extraction (SPE) and Liquid Chromatography - Tandem Mass Spectrometry (LC-MS/MS)**; Steve W. D. Jenkins; Patrick W. Crozier; Vince Y. Taguchi; Jennifer L. Newman; *Ontario Ministry of the Environment, Etobicoke, Canada*
- MPF 147 **Determination of Cholesterol-Lowering Statin Drugs in Aqueous Samples Using Electrospray Liquid**

- Chromatography-Tandem Mass Spectrometry; Xiu-Sheng Miao**; Chris D. Metcalfe; *Water Quality Centre, Trent University, Peterborough, ON, Canada*
- MPF 148 **Use of LC/MS/MS Technic for the Analysis of Acrylamide in Food; Serge Dragana**; Chantadary Inthavong; Laurent Maurice; Francois Bordet; *AFSSA, Maisons-Alfort, France*
- MPF 149 **Identification by GC/MS of Chemicals from Human and Avian Hosts that Attract Mosquitoes; Samaret M Otero**¹; Ulrich R Bernier²; Daniel L Kline²; Donald R Barnard²; Richard A Yost¹; ¹*University of Florida, Gainesville, FL*; ²*USDA/ARS, Gainesville, FL*
- MPF 150 **Identification of Antihistamine Agents by Ion Trap/MS/MS and Time-of-flight/MS/MS in Environmental Samples; Imma Ferrer**; Curtis E. Heine²; E. Michael Thurman³; ¹*Joint Research Centre, Ispra, Italy*; ²*Waters Corp., Beverly, MA*; ³*US Geological Survey, Lawrence, KS*
- MPF 151 **LC/ESI/MS-MS Analysis of Waterborne Veterinarian Antibiotics; Linda Lissemore**¹; Chunyan Hao²; Paul Yang²; Gary Impney³; Jean-François Alary³; Tony Ho²; Keith Solomon¹; Peter Seto⁴; Bick Nguyen²; ¹*Centre for Toxicology, Environmental Biology, University of Guelph, Guelph, Ontario, Canada*; ²*Ontario Ministry of Environment, Etobicoke, Ontario, Canada*; ³*Applied Biosystems/MDS Sciex, Concord, Ontario, Canada*; ⁴*Environmental Canada, Burlington, Ontario, Canada*
- MPF 152 **Biomonitoring of Polycyclic Aromatic Hydrocarbons Metabolites And Diesel Exhaust Biomarkers in Human Urine by Gas Chromatography/High-Resolution Mass Spectrometry; Zheng Li**; Selvin H Edwards; Courtney D Sandau; James Grainger; Donald G Patterson Jr; *Centers for Disease Control and Prevention, Atlanta, GA*
- MPF 153 **Analysis of Domoic Acid in Marine Mammal Tissues by LC-MS/MS Utilizing Monolithic Support Chromatography; Mark Busman**; *NOAA-NOS, Charleston, SC*
- MPF 154 **Determination of Chlorpyrifos and the Major Metabolite 3,5,6-Trichloro-2-Pyridinol in Blood and Saliva of Exposed Rats; James A. Campbell**; Eric W. Hoppe; Hong Wu; Torka S. Poet; Charles Timchalk; *Battelle, Pacific Northwest Division, Richland, WA*
- MPF 155 **Investigation of Cyanobacteria Toxins in Water; William L. Budde**¹; Mila Maizels²; ¹*U. S. Environmental Protection Agency, Cincinnati, Ohio*; ²*Oak Ridge Institute for Science and Education, Cincinnati, OH*
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- ESI, NANOSPRA Y SAMPLE PREPARATION**
- MPG 156 **Effect of Flow Rate, Source Temperature, and HPLC Chromatographic Parameters on Electrospray Response - Concentration vs. Mass-Flow Dependency; Mohammed Jemal**; Zheng Ouyang; Iffaz Salahudeen; *Bristol-Myers Squibb, New Brunswick, NJ*
- MPG 157 **Electrospray Ionization Using Pointed Fibers; Jian Liu**; Daniel R. Knapp; *Medical University of South Carolina, Charleston, SC*
- MPG 158 **Nanoflow Electrospray of Tryptic Digests from Gels Containing Ammonium versus Sodium Dodecyl Sulfate; Kevin A. Dixon**; Brian T. Cooper; *University of North Carolina at Charlotte, Charlotte, NC*
- MPG 159 **Effect of Capillary-Heater Temperature and Spray Voltage on the Stability of S-Nitrosothiols in ESI-MS; Andrea A Romeo**; Ann M English; John A. Capobianco; *Concordia University, Montreal, Quebec*
- MPG 160 **Unusual Adduct Ion to Neutral Sample Molecules in (-) ESIMS --- Entity of C₄H₉O₂; Yoko Ohashi**¹; Herbert Budzikiewicz²; Masaki Nakazato¹; Takashi Hirano¹; Shojiro Maki¹; Haruki Niwa¹; ¹*The University of Electro-*
- Communications, Chofu, Tokyo, Japan*; ²*University of Koeln, Koeln, Germany*
- MPG 161 **Study on Caffeic Acid Oxidation using On-line Electrospray Ionization Mass Spectrometry combined with a Micro-flow Rate Electrolytic Cell; Ryuichi Arakawa**¹; Masashi Yamaguchi¹; Hiroki Hotta²; Toshiyuki Osakai²; Takashi Kimoto³; ¹*Department of Applied Chemistry, Kansai University, Suita, Japan*; ²*Department of Chemistry, Faculty of Science, Kobe University, Kobe, Japan*; ³*Research Institute of Oceano-Chemistry, Osaka Office, Osaka, Japan*
- MPG 162 **Chip-Based P450 Enzymatic Metabolism with ESI-MS Detection; Saleta Benetton**¹; Jun Kameoka²; Aimin Tan¹; Timothy Wachs¹; Harold Craighead²; Jack Henion¹; ¹*Analytical Toxicology - College of Vet. Medicine, Cornell University, Ithaca, NY*; ²*School of Applied and Engineering Physics, Cornell University, Ithaca, NY*
- MPG 163 **Automated Nanospray using Chip-Based Emitters for the Quantitative Analysis of Pharmaceutical Compounds; Leonard J. Corkery**¹; Bradley B. Schneider³; K.W. Michael Siu¹; Thomas R. Covey³; ¹*York University, Toronto, Canada*; ²*Eli Lilly Canada, Toronto, Canada*; ³*MDS SCIEX, Toronto, Canada*
- MPG 164 **High-Throughput Protein Identification via Nano-ESI/MS/MS with On-Line Desalting; Jason G. Williams**; Maribel Bruno; Jennifer Madenspacher; Barbara Wetmore; B. Alex Merrick; Kenneth B. Tomer; *National Institute of Environmental Health Sciences, Research Triangle Park, NC*
- MPG 165 **Volatile Cyclic Silicones in the Ambient Laboratory Air Identified as Source of Extreme Background Signals in Electrospray Mass Spectrometry; Andreas Schlosser**; *Charite, Medical Immunology, Berlin, Germany*
- MPG 166 **Proteomic Survey of Tyrosine Kinase Interacting Proteins by Immunoprecipitation and Mass Spectrometry; David K. Crockett**¹; Zhaosheng Lin¹; Kojo S.J. Elenitoba Johnson²; Megan S. Lim²; ¹*ARUP Institute for Clinical and Experimental Pathology, Salt Lake City, UT*; ²*Department of Pathology, University of Utah School of Medicine, Salt Lake City, UT*
- MPG 167 **A High Density Fully Microchip-Based Nanospray Device with Integrated Solid Phase Extraction Capabilities; Thomas N. Corso**; Jie Li; Xian Huang; Robert E. Murphy; Ninad A. Shinde; Christopher G. Alpha; Barry L. Smith; Gary S. Sheldon; Gary A. Schultz; *Advion BioSciences, Inc., Ithaca, NY*
- MPG 168 **Nib-Like Microfabricated Two-Dimensional Nano-ESI Tips; Severine Le Gac**¹; Steve Arscott²; Cecile Cren-Olive¹; Christian Rolando¹; ¹*Universite des Sciences et Technologies de Lille, UMR CNRS 8009, LCOM, Villeneuve d'Ascq, France*; ²*Université des Sciences et Technologies de Lille, UMR CNRS 8009, LCOM, Villeneuve d'Ascq, France*
- MPG 169 **Reduction and Oxidation Reactions in Nanospray of Proteins; Cheng Zhao**; Troy Wood; Stanley Bruckenstein; *University at Buffalo, State University of New York, Buffalo, NY*
- MPG 170 **Chip-Based Solid-Phase Extraction Pretreatment for Direct Electrospray Mass Spectrometry Analysis Using an Array of Monolithic Columns in a Polymeric Substrate; Aimin Tan**; Saleta Benetton; Jack D. Henion; *Analytical Toxicology, Cornell University, Ithaca, NY*
- MPG 171 **A Novel Method for Desalting and Purification of Peptide Samples Prior to Nano-ESI-MS Analysis; Santiago Vazquez**; Jeffrey W. Finch; John C. Gebler; Steven A. Cohen; *Waters Corporation, Milford, MA*

FOSSIL FUELS

- MPH 172 **Does Electrospray Ionization Mix with Petroleum Industry?** Michael T. Cheng; James D. Hudson; *ChevronTexaco Research, Richmond, CA*
- MPH 173 **Coupling GCxGC Chromatography with Time-of-Flight Mass Spectrometry for More Complete Characterization of Petroleum Products;** Tincuta Veriotti; Frederic Glisson; Olivier Niquette; *LECO Corporation, St. Joseph, MI*
- MPH 174 **Mass Spectrometric Development for Petroleum Compositional Analysis;** Chang S Hsu; *ExxonMobil Research and Engineering Co., Baton Rouge, LA*
- MPH 175 **Probing the Molecular Weight Distributions of Nonboiling Petroleum Fractions by Ag⁺ Electrospray Ionization Mass Spectrometry;** Stilianos G. Roussis; Richard Proulx; *Imperial Oil, Sarnia, Ontario, Canada*
- MPH 176 **Petroleomics: ESI FT-ICR MS Determination of Hydrotreatment-Resistant Neutral and Acidic Nitrogen Species in Crude Oil;** Geoffrey C. Klein¹; Ryan P. Rodgers²; Vince Nowlan³; Alan G. Marshall²; ¹*Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL*; ²*NHMFL, Tallahassee, Florida*; ³*Sycrude Canada Ltd., Edmonton, Alberta*
- MPH 177 **Effects of Thermal Maturity on the Distribution of Neutral Polars in Crude Oils as Revealed by Negative Ion ESI FT-ICR-MS;** Christine A. Hughey¹; Clifford Walters²; Kuangnan Qian²; Ryan P. Rodgers³; Alan G. Marshall³; ¹*Department of Physical Sciences, Chapman University, Orange, CA*; ²*ExxonMobil Research and Engineering Company, Annandale, NJ*; ³*National High Magnetic Field Laboratory, Tallahassee, FL*
- MPH 178 **Graphical Methods for Analysis of Coal and Crude Oil: Van Krevelen Diagrams and Kendrick Mass Plots;** Zhigang Wu²; Geoffrey C Klein²; Ryan P Rodgers¹; Alan G Marshall¹; ¹*NHMFL, Tallahassee, FL*; ²*FSU, Tallahassee, FL*
- MPH 179 **Advantages of High Resolution in the Study of Hydrocarbon Mixtures;** Dean V. Davis; Wayne V. Rimkus; Ken L. Gallaher; *Siemens Applied Automation, Bartlesville, OK*

FTMS

- MPI 180 **Mapping of O-Glycosylated Amino Acids Related to Schindler's Disease by Negative Ion NanoESI FT-ICR MS and SORI-CID at 9.4 T;** Martin Froesch; Alina Zamfir; Jasna Peter-Katalinic; *Institute for Medical Physics and Biophysics, University of Muenster, Muenster, Germany*
- MPI 181 **An External Octopole Mass Filter to Enhance Sensitivity for Low Abundance Ions in Elemental Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Keith D Zientek; John R Eyler; *University of Florida, Gainesville, FL*
- MPI 182 **Fully Automated High-Throughput Accurate Mass Determination using FT-ICR Mass Spectrometry;** Jens Griep-Raming¹; Wolfgang Metelmann-Strupat¹; Stevan Horning¹; Shiao-Lin Wu²; Helmut Muenster¹; ¹*Scientific Instruments Division of Thermo Electron, Thermo Finnigan MAT, Bremen, Germany*; ²*Scientific Instruments Division of Thermo Electron, Thermo Finnigan, San Jose, CA*
- MPI 183 **Identification of Unknown Components in Bromothymol Blue with Accurate Mass Measurements from LC/FTMS;** Kevin C Crellin; Aaron Fountain; R. T. McIver, Jr; *IonSpec Corporation, Lake Forest, CA*
- MPI 184 **Use of All ¹²C and ¹⁴N Culture Media for Analysis of Whole Cell Bacteria by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight and Fourier Transform Mass Spectrometry;** Michael J Stump; Jeffrey

- J Jones; Richard C Fleming; Jackson O Lay; Charles L Wilkins; *University of Arkansas, Fayetteville, AR*
- MPI 185 **In vitro and In vivo Analysis of Yersiniabactin and Pyochelin Synthetases Using Preparative PAGE and Quadrupole FTMS;** Shaun M. McLoughlin; Matt T. Mazur; Leah M. Miller-Chatterjee; Leslie M. Hicks; Neil L. Kelleher; *University of Illinois, Urbana-Champaign, IL*
- MPI 186 **Gated Trapping, RF-Only Mode, and Compensation for In-Field MALDI FTMS: Different Combinations;** Jonathon K. Gooden; Don L. Rempel; Michael L. Gross; *Washington University, St. Louis, MO*
- MPI 187 **Exact Masses of Isotopic Peaks;** Alan L. Rockwood¹; Jordan Van Orman²; David V. Dearden²; ¹*ARUP Institute for Clinical and Experimental Pathology, Salt Lake City, UT*; ²*Brigham Young University, Department of Chemistry and Biochemistry, Provo, UT*
- MPI 188 **Ion Chemistry of Trimethyl Gallium and Sulfur Hexafluoride in a Multisection Nested ICR Cell;** Niels L. Tobias; Karl Peter Wanczek; *University of Bremen, Bremen, Germany*
- MPI 189 **Automated Protein Identification Using Data-Dependent Q-FTMS;** Ryan M. Danell; Michael Easterling; Steve Van Orden; Christian B. Berg; James Anderson; Joseph Meier; Paul Speir; *Bruker Daltonics, Billerica, MA*
- MPI 190 **Fragmentation Pathways of Cisplatin Adducts to Dinucleotides Determined by FT-ICR-MS;** Timo Hagemeyer¹; Andreas Wieghaus²; Wolfgang Metelmann-Strupat²; Jens Griep-Raming²; Michael W. Linscheid¹; ¹*Department of Chemistry, Humboldt University Berlin, Berlin, Germany*; ²*Thermo Finnigan MAT GmbH, Bremen, Germany*
- MPI 191 **3-Hydroxypicolinic Acid: A;** Elizabeth A. Stemmler; Maureen Guiney; Jeffrey Cook; *Bowdoin College, Brunswick, ME*
- MPI 192 **Accelerating Structure Elucidation: A Comparison of High Resolution Mass Spectrometry Tools;** George L. Perkins¹; Sally-Ann Fancy¹; Frank S. Pullen¹; Don Richards²; Christine M. Thompson²; Catriona Thom²; ¹*Pfizer Global Research & Development (Discovery), Sandwich, UK*; ²*Pfizer Global Research & Development (Development), Sandwich, UK*
- MPI 193 **A Novel Dual ESI Source for Generation of Confident Accurate Mass Tags and for Multiplexing LC-MS for Comparative Proteomics;** David C. Muddiman¹; Angelito I. Nepomuceno¹; H. Robert Bergen III¹; Micheal J. Burke²; James R. Craighead²; Patrick E. Caskey²; Jonathan A. Allan²; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN*; ²*Division of Engineering, Mayo Clinic, Rochester, MN*
- MPI 194 **Utility of a Quadrupole Interface on an FT-ICR Mass Spectrometer for Quantification of Proteolytic Peptides;** Michael Easterling²; David R. Barnidge¹; David C. Muddiman¹; Ryan M. Danell²; Christian B. Berg²; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN*; ²*Bruker Daltonics, Billerica, MA*

INSTRUMENTATION: ION SURFACES (MALDI)

- MPJ 195 **Sensitivity Increase Resulting from Design Improvements for a High Pressure MALDI Source on an FTMS;** Susanne C. Moyer¹; Bogdan A. Budnik²; Parminder Kaur²; Catherine E. Costello¹; Peter B. O'Connor¹; ¹*Mass Spectrometry Resource, Boston University School of Medicine, Boston, MA*; ²*Cardiovascular Proteomics Center, Boston University School of Medicine, Boston, MA*
- MPJ 196 **Off-Resonance Mid-IR Laser Desorption / Ionization Tandem Mass Spectrometry;** Pete Tornatore¹; Scot

- Weinberger¹; Robert S Brown²; Andreas Hieke¹;
¹Ciphergen Biosystems, Inc., Fremont, CA; ²Utah State University, Logan, UT
- MPJ 197 **Zoom optics for MALDI MS with improved sensitivity;** Mark D. Mills; Victor C. Parr; Stephen P. Thompson; *Scientific Analysis Instruments, Manchester, England*
- MPJ 198 **A Laser Desorption Atmospheric Pressure Chemical Ionization Source for Mass Spectrometry;** Kevin P. Turney; W. W. Harrison; *University of Florida, Gainesville, FL*
- MPJ 199 **Desorption/Ionization by Backside Electron Beam Injection into Metal or Semiconductor Targets With and Without Front Side Laser Irradiation;** Oleg Tsybin¹; Youri O. Tsybin²; Cristian Santacruz²; Nadezda Sargaeva¹; Per Hakansson²; ¹*Physical Electronics Department, State Polytechnical University, Saint-Petersburg, Russia*; ²*Division of Ion Physics, Uppsala University, Uppsala, Sweden*
- MPJ 200 **Testing Atmospheric Pressure Desorption/Ionization On Silicon (AP-DIOS) For Analysis Of Pharmaceutical Compounds;** Katri Huikko¹; Pekka Ostman¹; Christian Sauber²; Friedrich Mandel²; Kestas Grigoras³; Sami Franssila³; Tapio Kotiaho¹; Risto Kostainen⁴; ¹*Viikki DDTC, Department of Pharmacy, University of Helsinki, Helsinki, Finland*; ²*Agilent Technologies, Waldbronn, Germany*; ³*Microelectronics Centre, Helsinki University of Technology, Espoo, Finland*; ⁴*Division of Pharmaceutical Chemistry, Department of Pharmacy, UHE, Helsinki, Finland*
- MPJ 201 **Meso-Porous Material as Matrix for Laser Desorption/Ionization Time-Of-Flight Mass Spectrometry;** Guoan Zhang¹; Minjia Yuan¹; Feng Liu²; Pengyuan Yang¹; Bo Tu¹; Dongyuan Zhao¹; Zheguang Han²; ¹*Department of Chemistry, Fudan University, Shanghai, China*; ²*Chinese National Human Genome Center at Shanghai, Shanghai, China*
- MPJ 202 **Construction of a MALDI Ion Source for a Multi-Turn Time-of-Flight Mass Spectrometer;** Daisuke Okumura¹; Michisato Toyoda¹; Morio Ishihara¹; Itsuo Katakuse¹; ¹*Osaka university, Toyonaka, Japan*; ²*Osaka University, Toyonaka, Japan*
- MPJ 203 **Reduction of Chemical Background from Matrix-Assisted Laser Desorption Ionization with High-Field Asymmetric Waveform Ion Mobility Spectrometry on a Quadrupole Ion Trap Mass Spectrometer;** Michael W. Belford; Richard A. Yost; *University of Florida, Gainesville, FL*
- MPJ 204 **Tunable VUV Free Electron Laser Ionization and Analysis with a Novel Time of Flight Spectrometer;** J. F. Moore¹; W.F. Calaway¹; C.Y. Chen⁴; P. DenHartog¹; Bruce King²; J.W. Lewellen¹; Y. Li¹; S.V. Milton¹; E.R. Moog¹; M.J. Pellin¹; M. Petravic³; I.V. Veryovkin¹; ¹*Argonne National Laboratory, Argonne, IL*; ²*University of Newcastle, Newcastle, Australia*; ³*Australian National University, Canberra, Australia*; ⁴*Earth Science Institute, Taipei, Taiwan*
- MPJ 205 **Direct Analysis of Polyacrylamide Gels Using Laser Desorption-Atmospheric Pressure Chemical Ionization-Mass Spectrometry (LD-APCI-MS);** Joshua J. Coon; Heather A. Steele; Philip J. Laipis; Willard W. Harrison; *University of Florida, Gainesville, FL*
- MPJ 206 **Simultaneous Exposure of Nitrogen Laser and Infrared Free Electron Laser for Matrix Assisted Laser Desorption Ionization;** Yasuhide Naito; Kunio Awazu; *Osaka University, Osaka, Japan*
- MPJ 207 **MALDI Mass Spectrometry with a Tunable Wavelength Mid-infrared Laser;** Vadym Berkout¹; Mikhail Yakshin²; Vladimir Doroshenko¹; Coorg Prasad²; ¹*Mass Tech, Inc., Burtonsville, MD*; ²*SESI, Burtonsville, MD*
- MPJ 208 **Infrared Atmospheric Pressure MALDI using a Tunable (2.85-3.1µm) OPO Laser;** Victor V. Laiko¹; Phillip V. Tan¹; Nelli I. Taranenko¹; Mikhail A. Yakshin²; Coorg R. Prasad²; Vladimir M. Doroshenko¹; ¹*MassTech Inc., Burtonsville, MD*; ²*Science and Engineering Services Inc., Burtonsville, MD*
- MPJ 209 **Two-laser IR/UV MALDI;** Mark W. Little; Jac-Kuk Kim; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
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- INSTRUMENTATION: NEW CONCEPTS**
- MPK 210 **Wavelength Resolved Fluorescence Emission from Ions Trapped in an Ion Cyclotron Resonance (ICR) Cell;** Jochen Friedrich¹; Brant Cage²; Yi-Sheng Wang³; Reginald B. Little⁴; Christopher L. Hendrickson¹; Alan G. Marshall¹; ¹*ICR Program, National High Magnetic Field Laboratory, FSU, Tallahassee, FL*; ²*National Institute of Standards and Technology, Boulder, CO*; ³*Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan*; ⁴*Department of Chemistry, Florida A&M University, Tallahassee, FL*
- MPK 211 **Combined Spray / Liquid Injection Field Desorption Ionization source;** H. Bernhard Linden; *Linden CMS, Leeste, Germany*
- MPK 212 **2-D Quadrupole Ion Traps with Added Octopole Fields;** Donald J Douglas¹; Michael Sudakov²; ¹*University of British Columbia, Vancouver, Canada*; ²*Ryazan State Pedagogical University, Ryazan, Russia*
- MPK 213 **Multichannel TDC Data Recording with Saturation and Dead-Time Corrections in Time-Of-Flight Mass Spectrometry;** Valeri V. Rznikov; Thomas Egan; Katrin Fuhrer; Marc Gonin; Michael McCully; Michael Ugarov; Val Vaughn; John Albert Schultz; *Ionwerks, Inc., Houston, TX*
- MPK 214 **MALDI-TOF MS with 2-kHz Laser for Quantitative Analysis of Differentially Expressed Proteins;** Eugene Moskovets; Tomas Rejtar; Viktor Andreev; Hsuen-Shen Chen; Anna Pashkova; Barry L. Karger; *Barnett Institute and Department of Chemistry, Northeastern University, Boston, MA*
- MPK 215 **Fluorescence Emission Spectroscopy of Trapped Molecular Ions;** Ken C. Wright; Mike W. Blades; *University of British Columbia, Vancouver, Canada*
- MPK 216 **Ion Interface for Deposition of ESI Ions on UHV Surfaces;** Frank Stadler¹; Sergei Koltsov²; Giovanni Costantini¹; Anatoly Verenchikov²; Klaus Kern¹; ¹*Max Planck Institute for Solid State Research, D-70569 Stuttgart, Germany*; ²*Institute for Analytical Instrumentation, St. Petersburg, Russia*
- MPK 217 **Neutralization-Reionization of Ions Produced by Electropray: Instrument Design and Initial Data;** Erik A. Syrstad; Jennifer L. Seymour; Charley C. Langley; Frantisek Turecek; *University of Washington, Seattle, WA*
- MPK 218 **Evaluation of Linear Quadrupole Ion Traps with Added Octopole Fields Combined with Time of Flight Mass Spectrometry;** Aaron J. Frank; Donald J. Douglas; *University of British Columbia, Vancouver, Canada*
- MPK 219 **An FT-ICR-Free Electron Laser User Facility for the Determination of IRMPD Spectra of Gas Phase Ions;** Jose J. Valle¹; John R. Eyerl¹; Christopher Hendrickson²; Greg Blakney²; Alan G. Marshall²; David Moore³; Jos Oomens³; Gert von Helden³; Gerard Meijer³; ¹*University of Florida, Department of Chemistry, Gainesville, FL*; ²*University of Florida, Gainesville, FL*; ³*National High Magnetic Field Laboratory, Tallahassee, FL*; ⁴*FOM Institute for Plasma Physics, Nieuwegein, The Netherlands*

- MPK 220 **Development and Performance of Radio Frequency Circuitry for an Electrically Tunable Compensated Cylindrical Ion Trap Mass Spectrometer;** Desmond A. Kaplan; Gary L. Glish; *The University of North Carolina, Chapel Hill, NC*
- MPK 221 **Design and Performance of a New Hybrid LC-QIT-TOF Mass Spectrometer;** Kozo Miseki¹; Eizo Kawatoh¹; Hiroto Itoi¹; Shin-ichi Yamaguchi¹; Jun-ichi Taniguchi¹; Junko Iida¹; Neil Loftus²; Shaun Bilborough²; Matthew Openshaw²; Kozo Shimazu¹; ¹*Shimadzu Corporation, Kyoto, Japan*; ²*Shimadzu Corporation, Manchester, UK*
- MPK 222 **A Comparison Between the Conventional Analytical Scan and the Reverse Scan for Low Molecular Weight Biological Species Using ESI-ITMS;** Gareth Dobson¹; Jason Murrell²; Dominique Despeyroux²; Frank Wind³; Jean-Claude Tabet¹; ¹*Laboratoire de chimie structurale organique et biologique, Paris, France*; ²*DSTL, Detection Department, Porton Down, Salisbury, England*; ³*Centre d'Etudes du Bouchet, Vert Le Petit, France*
- MPK 223 **MS to MS/MS Automatic Switching for Glycoscreening in Congenital Disorders of Glycosylation;** Sergey Vakhhrushev; Alina D. Zamfir; Jasna Peter-Katalinic; *Institute for Medical Physics and Biophysics, Muenster, Germany*
- MPK 224 **IRMPD Spectroscopy of Proton-Bridged Cationic Species using the FTICR Mass Spectrometer at FELIX;** David T. Moore¹; Jos Oomens¹; Gerard Meijer¹; Gert von Helden¹; Lex van der Meer¹; Jose Valle⁴; John R. Eyler⁴; Alan G. Marshall⁵; ¹*FOM Institute for Plasma Physics, Nieuwegein, The Netherlands*; ²*FOM Institute for Plasma Physics "Rijnhuizen", Nieuwegein, The Netherlands*; ³*Dept. of Molecular and Laser Physics, University of Nijmegen, Nijmegen, The Netherlands*; ⁴*Fritz-Haber Institut der Max Planck Gesellschaft, Berlin, Germany*; ⁵*University of Florida, Gainesville, Florida*; ⁶*National High Magnetic Field Laboratory, Tallahassee, FL*
- MPK 225 **Multistage External Pre-selection of Ions for Increased Sensitivity of LC-FTICR MS;** Andrey N. Vilkov; Ljiljana Pasa-Tolic; Bogdan Bogdanov; Seonghee Ahn; Dave C. Prior; Gordon A. Anderson; Christophe D. Masselon; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- MPK 226 **Travelling Wave Ion Propulsion in Collision Cells;** Kevin Giles; Steven D Pringle; Kenneth R Worthington; Robert H Bateman; *Waters Corporation, Manchester, UK*
- MPK 227 **Electron Capture Dissociation coupled with a Linear Radio-Frequency-Quadrupole Ion Trap - Time-of-Flight Mass Spectrometer;** Takashi Baba; David Black; Gary L. Glish; *University of North Carolina, Chapel Hill, NC*
- MPK 228 **High-Throughput Miniature Cylindrical Ion Trap Array Mass Spectrometry;** Amy M. Tabert¹; Jens Griep-Raming²; Andrew J. Guymon¹; R. Graham Cooks¹; ¹*Purdue University, Department of Chemistry, West Lafayette, IN*; ²*Thermo Finnigan, MAT GmbH, Bremen, Germany*; ³*Scientific Instruments Division of Thermo Electron, Thermo Finnigan MAT, Bremen, Germany*
- MPK 229 **A Microfluidic Chip MALDI Interface Using a Rotating Ball;** Damien A. Narcisse; Harrison K. Musyimi; Xia Zhang; Steven A. Soper; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
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- ISOTOPE RATIO MS**
- MPL 230 **Curve-fitting is Less Sensitive to Quantization Errors in Reduction of Continuous Flow Isotope Ratio Mass Spectrometry (IRMS) Data;** Chris Wolyniak; Gavin L. Sacks; J. Thomas Brenna; *Cornell University, Ithaca, NY*
- MPL 231 **Measure of Nitrogen and Carbon Isotope Ratios in Subcellular Compartments;** Ralph Peteranderl; Claude P. Lechene; *Harvard Medical School/Brigham and Women's Hospital, Boston, MA*
- MPL 232 **Determination of Phenylalanine Isotope Ratio Enrichment by LC/Time-of-Flight Mass Spectrometry;** Zhanpin Wu¹; Robert Cody¹; Xiao-Jun Zhang²; Robert Wolfe²; ¹*JEOL USA, Inc., Peabody, MA*; ²*University of Texas Medical Branch, Galveston, TX*
- MPL 233 **Use of Isotope Labelled Proteins and Limited Proteolysis Combined with Quantitative MS for Investigating Protein-Surface Interactions;** Chris JB McDonald; Liang Li; *University of Alberta, Edmonton, Canada*
- MPL 234 **Stable Isotopic Characterization of Active Pharmaceutical Ingredients (APIs);** John P Jasper¹; Moheb Nasr²; Lucinda Buhse²; Benjamin Westenberger²; John Spencer²; ¹*Molecular Isotope Technologies, LLC, Niantic, CT*; ²*FDA, Center for Drug Evaluation & Research, St. Louis, MO*
- MPL 235 **High Precision Measurement of Relative Position-Specific Carbon Isotope Ratios in Leucine and Methionine Analogues;** Gavin L. Sacks; J. Thomas Brenna; *Cornell University, Ithaca, NY*
- MPL 236 **Methods and Application of Accelerator Mass Spectrometry (AMS) for Highly Accurate Bone Resorption Determination Utilizing ⁴¹Ca;** Darren J. Hillegonds¹; Yumei Lin²; Erik Gertz²; Robert Fitzgerald³; John S. Vogel¹; ¹*Lawrence Livermore National Laboratory, Livermore, CA*; ²*University of California, Davis, CA*; ³*University of California, San Diego, CA*
- MPL 237 **Gas-phase Chemistry of Complexes Containing UO₂²⁺;** Michael J. Van Stipdonk¹; Dorothy Hanna²; Victor Anbalagan¹; Winnie Chien¹; Gresham Gary³; Gary Groenewold³; ¹*Wichita State University, Wichita, KS*; ²*Kansas Wesleyan University, Salina, KS*; ³*Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID*
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- LIPIDS: SIGNALING**
- MPM 238 **LC-MS/MS Analysis of Sphinganine Analog Metabolism and Effects on Endogenous Sphingolipids *in vivo*;** Sarah Trotman-Pruett¹; M. Cameron Sullards²; Holly Symolon⁴; Dirk Dillehay³; Aiming Sun¹; Anitoly Bushnev¹; Dennis Liotta¹; Alfred H. Merrill²; ¹*Department of Chemistry, Emory University, Atlanta, GA*; ²*School of Biology, Georgia Institute of Technology, Atlanta, GA*; ³*Department of Pathology and Animal Resources, Emory University, Atlanta, GA*; ⁴*Division of Biological and Biomedical Sciences, Emory University, Atlanta, GA*
- MPM 239 **Characterization of Sulfatides and Ganglioside-Derived AsialoGM1 Expressed in Mouse Brain by Electrospray-Tandem Mass Spectrometry;** Benoit Colsch¹; Carlos Afonso³; Jacques Portoukalian²; Françoise Fournier³; Jean Claude Tabet³; Nicole Baumann¹; ¹*INSERM, U495 Laboratoire de Neurochimie, Paris, France*; ²*INSERM, U346 Laboratoire de Dermatologie, Lyon, France*; ³*CNRS, UMR 7613 Laboratoire de Chimie Structurale, Paris, France*
- MPM 240 **Rapid Quantitative Determination of Lysophosphatidylcholine by Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS);** Jean M Lacey; Mark J Magera; Dietrich Matern; John F O'Brien; Joseph P McConnell; *Biochemical Genetics Laboratory, Mayo Clinic, Rochester, MN*
- MPM 241 **Quantification of Individual Phosphatidylcholine Species in Total Lipid Extracts by a Combination of Quadrupole TOF MS and Ion Trap MS;** Kim Ekroos¹;

- Christer Ejsing¹; Ute Bahr²; Michael Karas²; Kai Simons¹; Andrej Shevchenko¹; ¹Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany; ²Johann Wolfgang Goethe University, Frankfurt am Main, Germany
- MPM 242 **Analysis of Phosphatidylcholine and Sphingomyelin Molecular Species from Brain Extracts Using Capillary Liquid Chromatography Electrospray Ionization Mass Spectrometry**; Giorgis Isaac¹; Dan Bylund¹; Jan-Eric Månsson²; Karin E. Markides¹; Jonas Bergquist¹; ¹Department of Analytical Chemistry, Uppsala University, Uppsala, Sweden; ²Institute of Clinical Neuroscience, Göteborg University, Mölndal, Sweden
- MPM 243 **Quantification of Phospholipids in osteoblastic MC3T3-E1 cells by Nano-Electrospray Triple Quadrupole Mass Spectrometry**; Harald C. Köfeler¹; Gerald N. Rechberger²; Günter Fauler²; Werner Windischhofer²; Hans-Jörg Leis²; ¹Washington University Mass Spectrometry Resource, St. Louis, Missouri; ²Karl Franzens Universität, Graz, Austria
- MPM 244 **Metabolomics Focusing on Oxidative Phospholipid by nanoESI-FTICR/MS**; Ryo Taguchi¹; Mayuko Ishida²; Toshiaki Houjou²; Toshiyuki Yamazaki²; Masayoshi Imagawa²; ¹Dept. of Metabolome, Graduate School of Medicine, Tokyo Univ., Tokyo, Japan; ²Graduate School of Pharmaceutical Sciences, Nagoya City University, Nagoya, Japan
- MPM 245 **LC-MS/MS for Monitoring Sphingolipid Metabolism Using the Biosynthetic Precursor [¹³C]Palmitate**; Jeremy C. Allegood¹; Cameron Sullards¹; Elaine Wang¹; Alfred Merrill¹; Jill M. Carton²; David J. Uhlinger²; ¹School of Biology Georgia Institute of Technology, Atlanta, GA; ²Johnson & Johnson Pharmaceutical Research & Development, Raritan, NJ
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- MALDI: SAMPLE PREPARATION**
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- MPN 246 **Sample Preparation Methods for MALDI Analysis of Small Molecule Metabolites**; Michael P Donegan; Srinivasan Krishnan; Steve Hattan; Juhasz Peter; Martin Steve; *Applied Biosystems, Framingham, MA*
- MPN 247 **Magnetic Bead Based Sample Preparation for Clinical Proteomic Profiling Studies**; Thomas Elssner; Kristina Fahr; Dirk Peters; Isabell Thomas; Markus Kostrzewa; *Bruker Daltonik GmbH, Leipzig, Germany*
- MPN 248 **Optimizing MALDI Matrix Formulation: A Strategy to Improve Protein Identification via Peptide Mass Fingerprinting**; Neerav D. Padliya; Troy D. Wood; *State University of New York, University at Buffalo, Buffalo, NY*
- MPN 249 **MALDI Sample Preparation: A Novel Reactive Matrix for Small Molecules and a Removable Hydrophobic Coating for Targets**; Stacey Owen; Stephan Brombacher; Dietrich A. Volmer; *Institute for Marine Biosciences, Halifax, Nova Scotia, Canada*
- MPN 250 **Qualitative and Quantitative Analysis of Small Molecules by Laser Desorption Ionization Mass Spectrometry through Charge Derivatization**; Peter J. Lee; Weibin Chen; John C. Gebler; *Waters Corporation, Milford, MA*
- MPN 251 **Self-Assembled Monolayers as Substrates for Laser Desorption: Analysis of Soft-Landed Proteins**; Bogdan Gologan; Zoltan Takats; Thomas Blake; Zheng Ouyang; V. Jo Davisson; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- MPN 252 **MALDI MS, MALDI MS/MS and Off-Line CZE/MALDI of Low Molecular Mass Samples Prepared on a Hydrophobic One-Way Surface Foil**; Justyna Rechthaler¹; Alexander Plemat²; Andreas Rizzi²; Chris Sutton³; Guenter Allmaier¹; ¹Inst. of Chem. Technologies and Analysis, Technical University of Vienna, Vienna, Austria; ²Inst. for Analytical Chemistry, University of Vienna, Vienna, Austria; ³Shimadzu Biotech-Kratos Analytical, Manchester, UK
- MPN 253 **Optimisation of a Database for Rapid Identification of Intact Bacterial Cells of *Escherichia coli* by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry**; Diane J Dare¹; Helen E Sutton¹; Carrina J Keys²; Haroun N Shah²; Graeme Wells³; Mark A McDowell³; ¹Manchester Metropolitan University, Manchester, UK; ²PHLS Central Public Health Laboratory, London, UK; ³Water Corporation, MS Technology Centre, Manchester, UK
- MPN 254 **On-glass Chip Digestion of Proteins for Sol-Gel Assisted Laser Desorption/Ionization (SGALDI) Mass Spectrometry**; Chin-Hsiung Yang; Ya-Shiuan Lin; Yu-Chie Chen; *Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan*
- MPN 255 **The Application of Ionic Liquids as Matrices for MALDI-TOF MS in Proteomic**; Ying Li; Michael L. Gross; *Washington University, Saint Louis, MO*
- MPN 256 **Antibiotic-Based Affinity Capture for MALDI-MS Analysis of Bacteria**; Ya-Shiuan Lin; Yu-Chie Chen; *Department of Applied Chemistry, National Chiao Tung University, Hsinchu 300, Taiwan*
- MPN 257 **Ready-Made MALDI Target Plates Containing High-Density Arrays of Vacuum-Deposited Matrix Spots on Ultraphobic Surfaces**; Karsten Reihls¹; Joachim Engelking¹; Philipp Harder¹; Eckhard Nordhoff²; Holger Röhl¹; Siegmund Rudakowski¹; Kerstin Vorberg¹; Joachim Wesener³; ¹SuNyx Surface Nanotechnologies GmbH, Cologne, Germany; ²Scienion AG, Berlin, Germany; ³Bayer Industry Services, Leverkusen, Germany
- MPN 258 **Enhanced Sensitivity of MALDI via Surfactant Addition**; Patricia M. Peacock; *Dupont Company, Wilmington, DE*
- MPN 259 **Improvement of Mass Spectral Quality of Oligonucleotides in MALDI-MS Using Diaminobenzoic Acid/Sol-Gel Hybrid Material as the Sample Substrate**; Wei-Yu Chen; Yu-Chie Chen; *Department of Applied Chemistry, National Chiao Tung University, Hsinchu 300, Taiwan*
- MPN 260 **Coupling Thin Layer Chromatography with MALDI-FTMS**; Vera Ivleva¹; Isamu Matsunaga²; Eric A. Berg¹; D. Branch Moody²; Peter B. O'Connor¹; Catherine E. Costello¹; ¹Boston University School of Medicine, Boston, MA; ²Harvard Medical School, Boston, MA
- MPN 261 **Comparison of Two Novel Prototype MALDI Mass Spectrometers for Quantitative Analysis of Small Pharmaceutical Drugs**; Stephan Brombacher¹; Jay Corr²; Peter Kovarik²; Dietrich A. Volmer¹; ¹Institute for Marine Biosciences, Halifax, Nova Scotia, Canada; ²MDS-Sciex, Concord, Ontario, Canada
- MPN 262 **Improved MALDI Imaging of Tissue Using Automated Deposition of Picoliter Matrix Droplets**; Annette R. Erskine¹; Hans-Rudolf Aerni¹; Michelle L. Rezyer¹; Dale S. Cornett¹; David Lee²; Mitchell Mutz²; Richard M. Caprioli¹; ¹Vanderbilt University, Nashville, TN; ²Picoliter Inc., Sunnyvale, CA
- MPN 263 **Desorption/Ionization On Silicon Mass Spectrometry (DIOS MS) of Small Molecules and Peptides: Sample Handling, Preparation and Storage Effects on Performance**; Grace M. Credo¹; Hillary B. Hewitson¹; Chris L. Stumpf¹; Santiago Vazquez¹; Jeffrey W. Finch¹; Chris C. Benevides¹; Edouard S.P. Bouvier¹; Bruce Jon Compton¹; Zhouxin Shen²; Gary Siuzdak³; ¹Waters Corp., Milford, MA; ²Mass Consortium Corp., San Diego, CA; ³The Scripps Research Inst., La Jolla, CA

- MPN 264 **Wall-less Sample Preparation for MALDI-TOF-MS;** Michael J. Bogan; George R. Agnes; *Simon Fraser University, Burnaby, Canada*
- MPN 265 **Matrix-free Infrared Desorption/Ionization on Silicon and Metal Targets;** David J. Rousell; Sucharita M. Dutta; Gervas E. Assey; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
- MPN 266 **Polymeric Substrates for Matrix-Free Laser Desorption/Ionization Mass Spectrometry;** Bathsheba Chong-Conklin¹; David A. Weil¹; Ken B. Wood¹; Patricia Biessner¹; Ray Johnston¹; Casey Dwyer²; ¹*3M Company, Saint Paul, MN*; ²*MIT, Cambridge, MA*
- MPN 267 **DIOS-TOF Mass Spectrometry: Analyte Functional Group and DIOS Efficiency;** Danielle F. Anderson; David H. Powell; Benjamin W. Smith; James D. Winefordner; *Department of Chemistry, University of Florida, Gainesville, FL*
- MPN 268 **Improved Sensitivity in Matrix-assisted Laser Desorption/Ionization Mass Spectrometry by Using a Ceramic Carbon Plate;** Hirovuki Fukuda¹; Mayumi Shindo¹; Takashi Nonaka²; Satoshi Fujita³; Yoshinori Tamura³; Toshifumi Takao⁴; ¹*Applied Biosystems Japan, Tokyo, Japan*; ²*Institute of Medical Science, the University of Tokyo, Tokyo, Japan*; ³*Asahi Technion Co. Ltd., Moji, Japan*; ⁴*Institute for Protein Research, Osaka University, Suita, Japan*
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- METABOLISM: XENOBIOTICS**
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- MPO 269 **HPLC with Parallel Coulometric Array Electrochemical and MS Detection for Metabonomic Toxicity Studies;** Paul H. Gamache¹; Timothy J. Maher²; Gary J. Van Berke³; Ian N. Acworth¹; ¹*ESA Inc., Chelmsford, MA*; ²*Massachusetts College of Pharmacy, Boston, MA*; ³*Oak Ridge National Laboratory, Oak Ridge, TN*
- MPO 270 **Rapid Screening and Identification of Polyphenol Metabolites using HPLC-Ion Trap Mass Spectrometry and MetaboliteTools Software;** Helen U. Muccitelli²; Heidrun B. Gross¹; John F. Hammerstone³; ¹*School of Vet Med, University of California at Davis, Davis, CA*; ²*Bruker Daltonics, Inc., Billerica, MA*; ³*MasterFoods, Hackettstown, NJ*
- MPO 271 **Identification of in vitro and in vivo Metabolites of an Emisphere Delivery Agent, LY444657, by LC/MS/MS, LC/NMR and LC/UV;** Kenneth C Cassidy; Trent Abraham; Ping Yi; Melinda Gadberry; David A Jackson; Michelle M He; *Eli Lilly and Company, Indianapolis, IN*
- MPO 272 **Determination of Phase I Metabolites of Glyburide, Using a Hybrid Triple Quadrupole, Linear Ion Trap MS;** Elliott Jones; Louisette Basa; Alicia Du; *Appliedbiosystems, Foster, City, Ca*
- MPO 273 **Characterization of the Metabolic Products of Tamoxifen from Cytochrome P450 Enzymes by HPLC, Nanoelectrospray MS and MS/MS Techniques;** Robert A. Rieger; Sung Yeon Kim; Shinya Shibutani; Charles R. Iden; *State University of New York at Stony Brook, Stony Brook, NY*
- MPO 274 **Trapping and Identification of Biological Reactive Intermediates From Thiophene and Furan Containing Compounds in Drug Discovery;** Jim Wang; Margaret Davis; Rasmy Talaat; *Wyeth Research, Collegeville, PA*
- MPO 275 **Identification of Novel Electrophilic Metabolites of Piper methysticum Forst. Using Ultrafiltration LC-MS-MS;** Benjamin M. Johnson¹; Sheng-Xiang Qiu²; Shide Zhang²; Fagen Zhang¹; Joanna E. Burdette¹; Linning Yu¹; Judy L. Bolton¹; Richard B. van Breemen¹; ¹*University of Illinois at Chicago, Chicago, IL*; ²*Herbstandard, Inc., Chesterfield, MO*
- MPO 276 **Metabolite Identification Using a Triple-Quadrupole Mass Spectrometer with High Resolution and Accurate Mass Capability;** Mohammed Jemal¹; Zheng Ouyang¹; Weiping Zhao²; Mingshe Zhu²; ¹*Bristol-Myers Squibb, New Brinswick, NJ*; ²*Bristol-Myers Squibb, Princeton, NJ*
- MPO 277 **A Rapid In-ESI Source LC-MS Method to Measure Drug-Protein Binding;** Dil Peiris; *Rider University, Lawrenceville, NJ*
- MPO 278 **MS Strategies for Metabolite Identification of Spiroside Toxins;** Lekha Sleno; Anthony Windust; Dietrich A. Volmer; *Institute for Marine Biosciences, Halifax, Nova Scotia, Canada*
- MPO 279 **Metabolism of Kava Kava Pyrones to Glutathione Reactive Metabolites;** Kevin D White¹; Neil Hartman²; John Strong²; Steven M Musser¹; ¹*CFSAN, Food and Drug Administration, College Park, MD*; ²*CDER, Food and Drug Administration, Laurel, MD*
- MPO 280 **A Hepatic S9-based Assay to Identify Potential Covalent Modifiers Using a Novel MS/MS Correlation Algorithm for Automatic Glutathione Conjugate Identification;** Shichang Miao¹; Robert Cho¹; Wayne Inman¹; Jeff Whitney²; ¹*Tularik Inc., South San Francisco, CA*; ²*Novatia LLC, Princeton, NJ*
- MPO 281 **Analytical Strategies for Assessment of Plant Polyphenol Sub-metabolomes;** Bart A. O'Brien; A. Daniel Jones; Po Yu Chen; Ruth C. Plymale; Kelli Hoover; *The Pennsylvania State University, University Park, PA*
- MPO 282 **Identification of Bortezomib Biliary Excreted Metabolites in Rats Treated with a Single Intravenous Bolus Dose of [¹⁴C]-Bortezomib;** Ronghua Wang¹; Jason LaButti¹; Teresa Peko²; Darrell Nix¹; Liang-Shang Gan¹; Frank Hsieh²; ¹*Millennium Pharmaceuticals, Inc., Cambridge, MA*; ²*Drug Safety and Disposition, Millennium Pharmaceuticals, Inc., Cambridge, MA*; ³*Technology Development, Millennium Pharmaceuticals, Inc., Cambridge, MA*
- MPO 283 **Gas-Phase Rearrangement Product Ions Resulting from Benzyl Group Migration from Benzyloxycarbonyl to Amidic Nitrogens - Proof from Metabolite Identification Studies by Ion Trap and Q-TOF Mass Spectrometry;** Jeffrey Alberts; Vinod Arora; Carl Davis; Lisa Zadajura; Yue-Zhong Shu; *Bristol-Myers Squibb, Wallingford, CT*
- MPO 284 **Metabolism of Ginsenosides and Inhibition of Ginseng on Human Liver Cytochrome P450 Isozymes;** Wenkui Li¹; Yongmei Li¹; Wenzhong Liang¹; John F. Fitzloff¹; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL*; ²*Uni. of Illinois College of Pharmacy, Chicago, IL*
- MPO 285 **Profilin 7-oxo-DHEA Metabolites in Human Urine; An Liquid chromatographic-Mass spectrometric Analysis;** Ashok Marwah¹; Padma Marwah¹; Gary Girdaukas²; Henry Lardy¹; ¹*Department of Biochemistry-Enzyme Institute, University of Wisconsin, Madison, WI*; ²*Department of Pharmacy, University of Wisconsin, Madison, WI*
- MPO 286 **Metabolite Profiling - A Direct Approach for Assigning Functions to Genes Using an Integrated High Throughput Analysis Platform;** Martin Dostler; Michael Herold; Martin Kluttig; Britta Lehmann; Richard Trethewey; Tilmann Walk; Ralf Looser; *metanomics GmbH & Co. KGaA, Berlin, Germany*
- MPO 287 **A Total Analysis Solution for Metabolic Stability and Detailed Metabolite Profiling;** David J Detlefsen¹; Jeffrey L Whitney¹; Mark E Hail¹; Jonathan L Joseph²; Mark Sanders²; Kerry D Nugent³; ¹*Novatia, LLC, Princeton, NJ*; ²*Bristol-Myers Squibb, PRI, Princeton, NJ*; ³*Michrom BioResources, Auburn, CA*

- MPO 288 **Fast Metabolic Profiling of GM Tomatoes Using GC-TOFMS**; Daniel Waterman¹; Anna Przyborowska²; Paul Fraser¹; Peter Bramley¹; Raj Patel³; John Halket³; ¹*School of Biological Sciences, Royal Holloway, University of London, Egham, UK*; ²*Drug Control Centre, Kings College London, London, UK*; ³*SBSL, Centre Chemical Sciences, Royal Holloway, University of London, Egham, UK*
- MPO 289 **A Direct LC/MS Method for the Simultaneous Evaluation of Glutathione S-Transferases in Tissue Homogenates**; Stephanie A. Burns; Yun-Jeong Hong; Alyson E. Mitchell; *University of California, Davis, CA*
- MPO 290 **Identification of Urinary Metabolites of AZD3582, a New COX-Inhibiting Nitric Oxide Donator (CINOD), Using LC/MSMS**; Cecilia Weistrand¹; Stellan Swedmark¹; Roland Ocka¹; Stefan Elofsson¹; Hans von Euler¹; Eva Klasson Wehler¹; ¹*AstraZeneca R&D Sodertälje, Sodertälje, Sweden*; ²*AstraZeneca R&D Södertälje, Södertälje, Sweden*
- MPO 291 **Metabolic Studies of Mesterolone in Horses**; Emmie N.M. Ho¹; Kenneth C.H. Yiu¹; Terence S.M. Wan^{*1}; Xiaohua Xu²; John H.K. Yeung²; Henry N.C. Wong³; ¹*Racing Laboratory, The Hong Kong Jockey Club, Sha Tin, Hong Kong, China*; ²*Department of Pharmacology, The Chinese University of Hong Kong, Hong Kong, China*; ³*Department of Chemistry, The Chinese University of Hong Kong, Hong Kong, China*
- MPO 292 **Characterization of Metabolites Found in Microsomal Incubations of Verapamil using the Unique Accurate Mass Measurement Capabilities of an Enhanced Mass-Resolution Triple-Stage Quadrupole Mass Spectrometer**; Mark R. Kagan¹; Joseph Mulholland¹; Gary Paul¹; Witold Winnik¹; ¹*Thermo Electron Corporation, Somerset, NJ*
- MPO 293 **Determination of the Metabolic and Physiochemical State of Individual Bacterial Cells**; Herbert Tobias¹; Maurice Pitesky²; Gregg Czerwiec²; Scott Russell²; David Ferguson¹; Paul Steele¹; Abneesh Shrivastava¹; Keith Coffee¹; Carlito Lebrilla²; Joanne Horn¹; Matthias Frank¹; Eric Gard¹; ¹*Lawrence Livermore National Laboratory, Livermore, CA*; ²*University of California, Davis, CA*
- MPO 294 **Screening and Identification of Phase II Metabolites Using LC-MS/MS**; Xue Ge; Jun Shen; Ying Cheng; Taegen Clary; Cynthia Sun; Babu Subramanyam; Jih-Lie Tseng; *Berlex Biosciences, Richmond, CA*
- MPO 295 **Comprehensive Analysis of Intracellular Metabolites by Capillary Electrophoresis Mass Spectrometry**; Tomoyoshi Soga¹; Shigeru Sato¹; Yuki Ueno¹; Yoshiaki Ohashi¹; Takaaki Nishioka²; Masaru Tomita¹; ¹*Institute for Advanced Biosciences, Keio University, Tsuruoka, Japan*; ²*Graduate School of Agricultural Sciences, Kyoto University, Kyoto, Japan*
- MPO 296 **Systematic Characterization of a Novel Metabolite using LC/MS/MS in Conjunction with (¹H) NMR Spectroscopy**; Daniel J. Weston; Kathleen A. Cox; Wenqing Feng; Hong-Ki Kim; Diane E. Grotz; Kevin B. Alton; Ronald E. White; *Schering-Plough Research Institute, Kenilworth, NJ*
- MPO 297 **In vitro and in vivo Metabolites Identification of a Novel Muscarinic M4 Agonist Using Human, Rat, Monkey, and Mouse Microsomes by a Rapid SPE and LC/MS/MS Method**; Jamshid Eshraghi; Jeff Grassi; *UCB Research, Inc., Cambridge, MA*
- MPP 299 **Structural Elucidation of the Wheat Straw Lignin Polymer by Atmospheric Pressure Chemical Ionization Tandem Mass Spectrometry and Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry**; Joseph H Banoub¹; Michel Delmas²; ¹*Department of Fisheries and Oceans, St. John's, Canada*; ²*Institut National Polytechnique de Toulouse, Toulouse, France*
- MPP 300 **LC/MS Analysis of Pyochelin in Pseudomonas Aeruginosa Cultures**; Francois Lepine¹; Sylvain Milot¹; Eric Deziel²; ¹*INRS-Institut Armand-Frappier, Laval, Qc, Canada*; ²*Massachusetts General Hospital, Boston, MA*
- MPP 301 **Characterization of Shellac by MLADI-TOF-MS, ESI-TOF-MS and MS-MS**; Jason X. Tang; Russ Tsao; Carl Longfellow; *Wyeth Research, Pearl River, NY*
- MPP 302 **High Throughput MSⁿ Library Search in Natural Product Research**; Peter Sander¹; Ying Wang²; Carsten Baessmann¹; Birgit Schneider¹; Gabriela Zurek¹; Dirk Wunderlich¹; ¹*Bruker Daltonik GmbH, Bremen, Germany*; ²*Novartis Institutes for BioMedical Research, Novartis Pharma Inc., Basel, Switzerland*
- MPP 303 **Comprehensive Plant Metabolic Profiling by LC/ESI-MSⁿ/UV Coupling**; Vladimir V. Tolstikov¹; Nobuo Tanaka²; Oliver Fiehn¹; ¹*Max Planck Institute of Molecular Plant Physiology, Golm, Germany*; ²*Kyoto Institute of Technology, Kyoto, Japan*
- MPP 304 **Automated Deconvolution in Natural Product Screening**; Ying Wang¹; Sabine Rudolph¹; Katia Di-Leonardo¹; Antonio Trentani¹; Frank Petersen¹; Peter Sander²; Carsten Baessmann²; Birgit Schneider²; ¹*Novartis Institutes for BioMedical Research, Novartis Pharma Inc., Basle, Switzerland*; ²*Bruker Daltonics Inc., Bremen, Germany*
- MPP 305 **Quadrupole/Time-Of-Flight Fragmentation of Flavanone Aglycones Using Positive and Negative Ion Electrospray and CID**; Dejan Nikolic¹; Natasa Pajkovic¹; Baoning Su¹; Richard B van Breemen¹; ¹*University of Illinois, College of Pharmacy, Chicago, IL*; ²*University of Illinois at Chicago, Chicago, IL*
- MPP 306 **High Throughput Parallel LC-MS for the Estimation of Natural Product Library Chemodiversity**; Peadar A. Cremin¹; Lu Zeng²; Shane Hart³; ¹*Sequoia Sciences Inc., San Diego, CA*; ²*Syrrx, Inc., San Diego, CA*; ³*Neurocrine Biosciences, Inc., San Diego, CA*
- MPP 307 **Investigation of Citrus Flavonoids and their Metabolites in vivo**; Gunter G.C. Kuhnle¹; Anna R. Proteggente²; Catherine A. Rice-Evans¹; ¹*Wolfson Centre for Age Related Diseases, King's College London, London, UK*; ²*School of Biomedical and Life Sciences, University of Surrey, Guildford, UK*
- MPP 308 **Z1518: Isolation and Structure Determination of New Peptaibols from the Fungus Septocylindrium sp. </I>**; Mia Summers; FangMing Kong; Edmund Graziani; Marshall Siegel; Xidong Feng; Jeffrey Janoso; Robert T. Williamson; Guy T. Carter; *Wyeth Research, Chemical Sciences Division, Pearl River, NY*
- MPP 309 **Characterization of alkaloidosteroids, New Ionic Hybrids from Far-Eastern Starfish, by MALDI-, LSI- and ESMS**; Pavel S. Dmitrenok; Alla A. Kicha; Natalia V. Ivanchina; Valery V. Voinov; *Pacific Institute of Bioorganic Chemistry, Far-Eastern branch of RAS, Vladivostok, Russian Federation*
- MPP 310 **The Structural Elucidation of Magnolidin and O-Desrhamnosyl-Magnolidin by Mass Spectrometry**; Y. Sashi Gopaul; Wu-Nan Wu; *Johnson & Johnson, PRD, Spring House, PA*
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- NATURAL PRODUCTS**
- MPP 298 **Vancomycin Impurity Determination by LC/MS & LC/MS/MS**; Dane Karr¹; Robert Cass¹; Julie Seroogy¹;

MPP 311 **Characterization of Alfalfa [*Medicago sativa* L.] Root Saponins by MS/MS utilizing PSD, oMALDI-QqTOF and MALDI TOF/TOF Technologies;** H. Ewa Witkowska¹; Subodh Nimkar¹; Feng Qiu³; Zbigniew Bialy⁴; Marian Jurzysta⁴; George Waller²; ¹*Applied Biosystems, Foster City, CA*; ²*Oklahoma State University, Stillwater, OK*; ³*Bristol-Myers Squibb Company, Princeton, NJ*; ⁴*Institute of Soil Science and Plant Cultivation, Pulawy, Poland*

NON-COVALENT INTERACTIONS

MPQ 312 **Hydrogen Exchange–Mass Spectrometry Coupled with Proteolysis for Characterization of A-beta Amyloid Fibrils;** Maolian Chen¹; Indu Khetarpal²; Ronald Wetzel²; Kelsey Cook¹; ¹*University of Tennessee, Department of Chemistry, Knoxville, TN*; ²*University of Tennessee, Graduate School of Medicine, Knoxville, TN*

MPQ 313 **Study of Lipid-Peptide Non-covalent Interactions by Nanoelectrospray-FTICR;** Yan Li¹; Frédéric Heitz²; Christian Le Grimellec³; Richard B. Cole¹; ¹*University of New Orleans, New Orleans, LA*; ²*CRBM, CNRS-UPR 1086, Montpellier, France*; ³*CBS, INSERM-U414, IURC, Montpellier, France*

MPQ 314 **Gas Phase Behavior of KDO8P Synthase Complexes with its Substrates and Products Under Different Charge States;** Zhili Li; Apurba Sau; Karen S Anderson; *Department of Pharmacology, Yale University, New Haven, CT*

MPQ 315 **Mass Spectrometric Analysis of Protein Complexes from *Rhodopseudomonas palustris*;** Gregory B. Hurst¹; Michelle V. Buchanan¹; Linda J. Foote¹; Robert L. Hettich¹; Stephen J. Kennel¹; Patricia K. Lankford¹; Frank W. Larimer¹; Dale A. Pelletier¹; Michael B. Strader¹; Nathan C. VerBerkmoes²; Yisong Wang¹; ¹*Oak Ridge National Laboratory, Oak Ridge, TN*; ²*University of Tennessee at Knoxville, Knoxville, TN*

MPQ 316 **Syntheses of Protein Complexes in the Gas Phase;** Harsha P. Gunawardena; Scott A. McLuckey; *Department of Chemistry, Purdue University, West Lafayette, IN*

MPQ 317 **Protein-Ligand Interactions: The Case of Bile Acids and Fatty Acids;** Johan Lenggqvist¹; Wiliam Griffiths¹; Thomas Perlmann²; Jan Sjövall¹; ¹*Dept. of Medical Biochemistry & Biophysics, Karolinska Institute, Stockholm, SWEDEN*; ²*Ludwig Institute for Cancer Research, Stockholm Branch, Stockholm, SWEDEN*

MPQ 318 **Probing Hydrophobic Interactions in Protein Complexes by ESI-MS;** Yongming Xie; Joseph A. Loo; *UCLA, Department of Chemistry and Biochemistry, Los Angeles, CA*

MPQ 319 **Highly Asymmetric Interactions between Globin Chains in the Hemoglobin Assembly Process Revealed by Electrospray Ionization Mass Spectrometry;** Wendell P. Griffith¹; Igor A Kaltashov¹; ¹*University of Massachusetts, Amherst, MA*

MPQ 320 **Specificity in Protein-Ligand Binding in the Gas Phase;** Weijie Wang; Elena N. Kitova; John S. Klassen; *University of Alberta, Edmonton, Canada*

MPQ 321 **Asymmetric Dissociation Processes of Homogenous Protein and Peptide Complexes Examined Using Blackbody and Collisional Dissociation;** John C. Jurchen; David E. Garcia; Evan R. Williams; *Department of Chemistry, University of California, Berkeley, CA*

MPQ 322 **Advantages and Limitations of ESI MS for Protein-Metal Interaction Studies;** Mingxuan Zhang¹; Dmitry R Gumerov¹; Anne B Mason²; Igor A Kaltashov¹; ¹*University of Massachusetts, Amherst, MA*; ²*University of Vermont School of Medicine, Burlington, VT*

MPQ 323 **Characterization of Catalases Using Time-Of-Flight Mass Spectrometry;** Lynda J. Donald; Prashen Chelikani; Oleg V. Krokhin; Peter C. Loewen; Harry W. Duckworth; Kenneth G. Standing; *University of Manitoba, Winnipeg, Manitoba*

MPQ 324 **Gas Phase Stability of Protein-Protein Complexes;** Amanda L. Doherty-Kirby¹; J. Guy Guillemette²; Gilles A. Lajoie¹; ¹*University of Western Ontario, London, CANADA*; ²*University of Waterloo, Waterloo, CANADA*

MPQ 325 **Structural Determination of the yeast DNA Repair Protein MLH1 by Cross-linking and Mass Spectrometry;** Jenny M. Cutalo¹; Kenneth Tomer²; Thomas A. Kunkel²; ¹*University of North Carolina at Chapel Hill, Chapel Hill, NC*; ²*National Institute of Environmental Health Sciences, RTP, NC*

MPQ 326 **First Evidence of a Non-covalent Bound Water Molecule in the Active Site of an Enzyme by FTICR-MS Analysis of a Non-covalent Transition State Analogue Inhibitor/Protein Complex;** Richard Wolfenden¹; J. Paul Speir²; Gottfried Schroeder¹; Christoph H. Borchers¹; ¹*UNC - Chapel Hill, Chapel Hill, NC*; ²*Bruker Daltonics, Billerica, MA*

MPQ 327 **Probing Non-Covalent Enzyme-Inhibitor Interactions Using ESI-FTICR Mass Spectrometry;** Janne Jänis¹; Johanna Hakanpää¹; Nina Hakulinen¹; Juha Rouvinen¹; Farid Ibatullin²; Peter Derrick³; Antuan Hoxha³; Pirjo Vainiotalo¹; ¹*University of Joensuu, Department of Chemistry, Joensuu, Finland*; ²*Petersburg Nuclear Physics Institute, Biophysics Division, Gatchina, Russia*; ³*University of Warwick, Department of Chemistry, Coventry, United Kingdom*

MPQ 328 **High Throughput Screening of a diverse library against one or more subdomains of RNA;** Karen M. Gooding; Richard Higgs; Barry Hodge; Eric Stauffer; Randall K. Julian; *Eli Lilly and Company, Indianapolis, IN*

MPQ 329 **Analysis of the Non-covalently Bound Cytochrome c Oxidase Complex by MALDI-TOF MS and ESI-FTMS;** Qian Li¹; Anne M. Distler¹; Carrie Hiser²; Denise Mills²; Ling Qin²; Denis Proshlyakov¹; John Allison¹; Shelagh Ferguson-Miller²; ¹*Michigan State University, Department of Chemistry, East Lansing, MI*; ²*Michigan State University, Dept. of Biochemistry and Molecular Biology, East Lansing, MI*

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MPR 330 **Mass Spectrometric Characterization of Pseudouridines in Ribosomal RNAs;** K. G. Patteson; Anita Durairaj; Patrick A. Limbach; *University of Cincinnati, Cincinnati, OH*

MPR 331 **Formation and Destruction of the Guanine Quartet in Solution Observed by Cold-Spray Ionization Mass Spectrometry (CSI-MS);** Shigeru Sakamoto¹; Kazuhiko Nakatani²; Isao Saito²; Kentaro Yamaguchi¹; ¹*Chemical Analysis Center, Chiba University, Yayoi-cho, Inage-ku, Chiba, Japan*; ²*Department of Synthetic Chemistry and Biochemistry, and Faculty of Eng, Kyoto 606-8501, Japan*

MPR 332 **Shotgun Sequencing of Modified RNAs by Nozzle-Skimmer ESI-MS;** Zhaojing Meng; Patrick A Limbach; *University of Cincinnati, Cincinnati, OH*

MPR 333 **Aminoglycoside Antibiotic Inhibition of HIV-1 NC-Ψ RNA Interactions by ESI FT-ICR MS;** Reddy M. Chilakuri¹; Nathan Hagan¹; Kristina Williams²; Dan Fabris¹; ¹*Dept. of Chem. & Biochem., University of Maryland, Baltimore County, Baltimore, MD*; ²*Dept. of Chemistry, University of Maryland Eastern Shore, Princess Anne, MD*

MPR 334 **Protein-Nucleic Acid Interactions Studied by Electron Capture Dissociation ESI-FTMS;** Katherine A.

- Kellersberger; Dan Fabris; *University of Maryland, Baltimore County, Baltimore, MD*
- MPR 335 **Base Losing and Fragmentation Research on Oigonucleotides Using ESI Mass Spectrometry**; Heyi Yang; Binghu Yang; Jinglan Wang; Yun Cai; Shengqi Wang; Xiaohong Qian; *Beijing institute of radiation medicine, Beijing, China*
- MPR 336 **Evaluation of a Model for Predicting ESI Response of Nucleic Acids as a Function of Hydrophobicity**; Allison P. Null; Jennifer L. Frahm; David C. Muddiman; *W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN*
- MPR 337 **Selective tRNA Analysis Using MALDI-TOF Mass Spectrometry**; Heather Brodtkin; Kim Deandrade; Norman H. L. Chiu; *Department of Chemistry and Chemical Biology, Northeastern University, Boston, MA*
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- MPR 339 **Mechanism and Applications of RNA-cleaving DNA Enzymes by ESI-FTMS**; Nathan A Hagan; Dan Fabris; *University of MD, Baltimore County, Baltimore, MD*
- MPR 340 **Analysis of the Degradation of Fluorescently Labeled Oligonucleotide Strands During the Freezing/Thawing Process Using MALDI-MS**; Katherine J. Heaton; Catherine M. Bentzley; Michael F. Bruist; *University of the Sciences in Philadelphia, Philadelphia, PA*
- MPR 341 **¹³C, ¹⁵N Double Depletion for Improved Determination of RNA Mass by ESI FT-ICR Mass Spectrometry**; Ying Xiong¹; Kersten Schroeder²; Mark R. Emmett³; Christopher L. Hendrickson³; Nancy L. Greenbaum²; Alan G. Marshall³; ¹*Institute of Molecular Biophysics, Florida State University, Tallahassee, FL*; ²*Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL*; ³*National High Magnetic Field Laboratory, Florida State University, Tallahassee, FL*
- MPR 342 **Electron Autodetachment of Oligonucleotide Anions in the Gas Phase**; Allison S Danell; Joel H Parks; *Rowland Institute at Harvard, Cambridge, MA*
- MPR 343 **Analysis of Damaged Nucleobases by Liquid Chromatography Particle Beam Glow Discharge Mass Spectrometry (LC-PB/GD-MS)**; Justin P Hensley; R. Kenneth Marcus; *Clemson University, Clemson, SC*
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- MPR 345 **Determination of Secondary DNA Structure Using ESI Ion Trap Mass Spectrometry**; Xinhua Guo¹; Shuying Liu²; Michael F. Bruist¹; Ning Liu²; Catherine M. Bentzley¹; ¹*University of the Sciences in Philadelphia, Philadelphia, PA*; ²*Chuangchun Institute of Applied Chemistry, Chuangchun, P.R China*
- MPR 346 **RNA-Metal Ion Binding Studies Using ESI-FTMS**; Eizadora T. Yu; Dan Fabris; *University of Maryland, Baltimore County, Baltimore, MD*
- MPR 347 **On the Investigation of RNA and RNA-Ligand Complexes by MALDI and Nano-ESI Mass Spectrometry**; Corina Hunger; Michael Karas; *Institute of Pharmaceutical Chemistry, J.W. Goethe-University, Frankfurt, Germany*
- Denmark; ²*Inst. Genet. & Microbiol., Univ. Paris-Sud, Orsay, France*
- MPS 349 **Detailed Evaluation of a Spin Column Device using Immobilized Metal Ion Affinity Chromatography (IMAC) for Phosphopeptide Enrichment**; Heinz Nika; David Hawke; Ryuji Kobayashi; *UT-M.D. Anderson Cancer Center, Houston, TX*
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- MPS 351 **Direct Analysis and Sequencing of the Native and Phosphorylated Active Site of Acetylcholinesterase**; Reggie S Spaulding; Kathleen M George; Charles M Thompson; *University of Montana, Missoula, MT*
- MPS 352 **Stable Isotope Labeling of Phosphopeptides for Multiparallel Kinase Target Analysis and Identification of Phosphorylation Sites**; Mirko Glinski; Stefanie Wienkoop; Wolfram Weckwerth; *Max Planck Institute for Molecular Plant Physiology, Golm, Germany*
- MPS 353 **A Novel Automated PTM Discovery Method Using a Hybrid Linear Quadrupole Ion Trap Mass Spectrometer**; Christie L Hunter¹; Susan Weintraub²; Tina Settineri¹; ¹*Applied Biosystems, Foster City, CA*; ²*University of Texas Health Science Center, San Antonio, TX*
- MPS 354 **Identification of in-vivo and Protein Kinase C Agonist Stimulated Phosphorylation Sites in Human Keratinocyte Transglutaminase by Mass Spectrometry**; Michelle R. Salemi; Q. Qin; Robert H. Rice; Young-Moo Lee; *University of California at Davis, Davis, CA*
- MPS 355 **Detection of Phosphorylation Sites in Proteins via a Q(q)Tof Mass Spectrometer**; Peter Hoffmann; Ian G. Jennings; Bruce E. Kemp; *St. Vincent's Institute of Medical Research, Melbourne, Australia*
- MPS 356 **LC MS/MS Strategies for the Automated Identification of Post Translationally Modified Proteins**; Brian L Williamson; Jason Marchese; Peter Juhasz; Steve A Martin; *Applied Biosystems, Framingham, MA*
- MPS 357 **Comparison of Positive and Negative LC ESI TOF Mass Spectrometric Analysis of Peptides with and/or without Post-Translational Modifications**; Oleg V. Borisov; Craig M. Whitehouse; V. Sergey Rakov; Marketa Berkova; *Analytica of Branford Inc., Branford, CT*
- MPS 358 **Large-scale Sequence Analysis of Ubiquitinated Proteins in Saccharomyces Cerevisiae as Determined by Tandem Mass Spectrometry**; Daniel Schwartz; Junmin Peng; Joshua E. Elias; Carson C. Thoreen; Dongmei Cheng; Gerald Marshiscky; Jeroen Roelofs; Daniel Finley; Steven P. Gygi; *Harvard Medical School, Boston, MA*
- MPS 359 **Sensitive and Selective Detection of Phosphopeptides Through Precursor Ion Scanning on a Triple Quadrupole Mass Spectrometer using a ESI Nanospray Source**; Witold Winnik¹; Scott Peterman¹; Gary Paul¹; Mark Kagan¹; Susan Weintraub²; ¹*Thermo Electron Corporation, Somerset, NJ*; ²*The University of Texas Health Science Center, San Antonio, TX*; ³*The University of Texas, Health Science Center, San Antonio, TX*
- MPS 360 **Identification and Monitoring of Cell-Cycle Dependent Dynamic Post-Translational Modifications in the 13-Subunit Anaphase Promoting Complex by Mass Spectrometry**; Matthew P. Torres; Carol E. Parker; Mark C. Hall; Christoph H. Borchers; *Department of Biochemistry and Biophysics, UNCl, Chapel Hill, NC*
- MPS 361 **Sequence-Targeted Mass Spectrometric Analysis of Protein Tyrosine Phosphorylation by nanoESI High Resolution Tandem Mass Spectrometry**; Mogjiborahman Salek¹; Angel Alonso²; Wolf D. Lehmann¹; ¹*Central Spectroscopy Unit, German Cancer*
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- PEPTIDES: POST TRANSLATION MODIFICATION**
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- Research Center, Heidelberg, Germany; ²Department for Cell Differentiation, German Cancer Research Center, Heidelberg, Germany
- MPS 362 **Cell-Cycle Dependent Phosphorylation of Replication Initiation Proteins Revealed by Ion Affinity-MALDI-Mass Spectrometry**; Elena Catalina Damoc¹; Martina Baack²; Sandra Kreitz²; Monica Kulartz²; Rolf Knippers²; Michael Przybylski¹; ¹University of Konstanz, Department of Analytical Chemistry, Konstanz, Germany; ²University of Konstanz, Department of Biology, Konstanz, Germany
- MPS 363 **Retention Time Shifts of Phosphopeptides and Dephosphorylated Peptides Using Reversed Phase Liquid Chromatography Combined with Mass Spectrometry**; Jeongkwon Kim; Konstantinos Petritis; David G. Camp; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- MPS 364 **Selective Extraction and Characterization of a Histidine-Phosphorylated Peptide using Cu(II)-IMAC and MALDI-TOF MS**; Scott Napper¹; Jason Kindrachuk²; Jason Kindrachuk²; Jason Kindrachuk²; Jason Kindrachuk²; Douglas J.H. Olson²; Douglas J.H. Olson²; Douglas J.H. Olson²; Stephen J. Ambrose²; Stephen J. Ambrose²; Stephen J. Ambrose²; Stephen J. Ambrose²; Stephen J. Ambrose²; Carmen Dereniwsky³; Carmen Dereniwsky³; Carmen Dereniwsky³; Andrew R.S. Ross²; Andrew R.S. Ross²; Andrew R.S. Ross²; Andrew R.S. Ross²; Andrew R.S. Ross²; ¹National Research Council Canada, Saskatoon, Canada; ²University of Saskatchewan, Saskatoon, Canada; ³University of Regina, Regina, Canada
- MPS 365 **Sequence Dependence of MS/MS Fragmentation for a Series of Phosphopeptides Derived from IRS-1**; Susan T. Weintraub; Christopher A. Carroll; Christopher J. Luna; Moulun Luo; Lawrence J. Mandarino; *University of Texas Health Science Center, San Antonio, TX*
- MPS 366 **Rapid Identification of Human Serum Phosphopeptides by MALDI-TOF/TOF and Immobilized Metal Affinity Chromatography**; Sergei Dikler¹; Veronica Saenz-Vash²; Helen Qui²; Jay Stoerker²; Kathleen L. Grant²; ¹*Bruker Daltonics, Inc., Billerica, MA*; ²*Matritech, Inc., Newton, MA*
- MPS 367 **The Use of Software Agents to Detect Protein Phosphorylation and Other Post-Translational Modifications**; Daniel C. Chamrad; Gerhard Koerting; Helmut E. Meyer; Martin Blueggel; *Protagen AG, Dortmund, Germany*
- MPS 368 **Fragmentation Behavior of Small Phosphopeptides After Derivatization with Trivalent Boron Species**; Kathy H. Li; Renee Huang; Scott Gronert; *San Francisco State University, San Francisco, CA*
- MPS 369 **Technology Development for Effective Detection of Phosphopeptides from Protein Digests by Immobilized Metal Affinity Chromatography and MALDI-MS**; Jacek Stupak¹; Zhengping Wang¹; Huazhi Liu¹; Brenda Booth²; Larry Fliegel²; Liang Li¹; ¹Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada; ²Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada
- MPS 370 **A Phosphoproteomic Analysis of the Mammalian Synapse**; M O Collins²; H Husi²; J Choudhary¹; I D G Campuzano³; L Yu¹; W Blackstock¹; S G N Grant²; ¹Cellzome AG, Elstree Hertfordshire, United Kingdom; ²University of Edinburgh, Edinburgh, United Kingdom; ³University of Edinburgh, Edinburgh, United Kingdom; ⁴Waters Corporation, Manchester, United Kingdom
- MPS 371 **Spatial Distribution and Identification of Protein Post-translational Additions by MALDI-FTMS and Mass Defect Analysis**; Jeffrey J. Jones¹; Jeffrey J. Wilson¹; Joshua Sakon¹; Charles L. Wilkins¹; ¹University of Arkansas, Fayetteville, AR; ²University of Arkansas, Fayetteville, AR
- MPS 372 **An Algorithm for Identification of Post-Translational Modification(s) of a Target Protein in Mixtures**; Haowei Song; Fong-Fu Hsu; Sasanka Ramanadham; Sheng Zhang; John Turk; *Washington University in St. Louis, St. Louis, MO*
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- MPT 375 **Specific in vivo Measurement of Diepoxides From Butadiene and Isoprene by LC-MS/MS**; Charlotta Fred¹; Antti Kautiainen²; Margareta Törnqvist¹; ¹Environmental Chemistry, Stockholm, Sweden; ²Biovitrum, Stockholm, Sweden
- MPT 376 **Quantification (N-ethyl-N'-(Dimethylaminopropyl) Urea and Adipic Acid Dihydrazide by LC-MS/MS**; Anthony Shannon; Ronald Heller; David Lamb; Earl Zablakis; Robert Ryall; Patricia Cash; Paula Lei; *Aventis Pasteur, Swiftwater, PA*
- MPT 377 **The Identification of Affinity Purified Proteins by HPLC/MS/MS**; Terry D. Cyr; William L. Casley; Mary A. Hefford; Tommy L.K. Chan; Sophie D'Aoust; Jean C. Ethier; *Centre for Biologics Research, BGTD, Health Canada, Ottawa, Ont., Canada*
- MPT 378 **Evaluation of Proteomimetic AQUA Peptides for Suitability as Internal Standards**; Ross Tomaino¹; Scott A. Gerber¹; John Rush²; Steven P. Gygi¹; ¹Cell Signaling Technology, Beverly, MA; ²Harvard Medical School, Boston, MA
- MPT 379 **Quantification of [Dmt1]DALDA in Ovine Plasma using Quadrupole Time-of-Flight Mass Spectrometry**; Haibao Wan; Dominic M Desiderio; *University of Tennessee Health Science Center, Memphis, TN*
- MPT 380 **Reproducibility of LC-MS Analysis of Proteins and Metabolites in Complex Samples: a Basis for Large Scale Quantification and Discovery of Biomarkers**; Hua Lin; Weixun Wang; Haihong Zhou; Sushmita Roy; Thomas A. Shaler; Lander R. Hill; Scott Norton; Praveen Kumar; Markus Anderle; Christopher H. Becker; *SurroMed, Inc., Mountain View, CA*
- MPT 381 **Quantitation of Polypeptides in Rat Plasma by Protein Precipitation and LC/MS**; David C Delinsky; Michael G Bartlett; *The University of Georgia, Athens, GA*
- MPT 382 **Quantitative, Selective, High-Throughput Analysis of Peptides and Proteins Using HPLC-Triple Quadrupole Mass Spectrometry**; Lisa A. Ford; Glenn D. Tabolt; Adlai E. Niggebrugge; Michael Zhou; Anthony S. Chilton; *Cardinal Health, RTP, NC*
- MPT 383 **Rapid Recognition and Quantification of Isomeric Peptides by the Kinetic Method**; Lianming Wu; Brandy Young; Pengxiang Yang; Tenna Aggerholm; Rebecca Clark; R. Graham Cooks; *Department of Chemistry, Purdue University, West Lafayette, IN*
- MPT 384 **Intensity Surface Analysis for Peptide Counting**; Brian Carrillo; Kossi Lekpor; Corey Yanofsky; Alexander Bell; Daniel Boismenu; Robert E. Kearney; *McGill University, Montreal, Canada*

- MPT 385 **Comparative Proteomic Study of Breast Cancer Doxorubicin-Resistance by Proteolytic ¹⁸O Labeling;** Kristy J. Reynolds; Catherine Fenselau; *University of Maryland, College Park, MD*
- MPT 386 **Evaluation of Detection Limits for the Quantitative and Qualitative analysis of Peptides on a Hybrid Linear Quadrupole Ion Trap Instrument;** Subodh Nimkar; Louise Basa; *Applied Biosystems, Foster City, CA*
- MPT 387 **Quantitation of Peptide Hormones in Biological Samples by LC-LC-MS-MS;** Showchien Hsieh; Zibin Chen; Kathleen MacKenzie; *GlaxoSmithKline, Research Triangle Park, NC*
- MPT 388 **Quantitative Analysis of Proteins Using Quadrupole-TOF Mass Spectrometer and Proteolysis Peptides;** Jun Liu¹; Fan Xiang²; ¹*Applied Biosystems, Foster City, CA*; ²*SUGEN, Inc, South San Francisco, CA*
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- MPU 389 **Characterization of Quinone-Modified Peptides and Proteins;** Haiteng Deng; Ruth H. Angeletti; Lisa Mints; *Albert Einstein College of Medicine, Bronx, NY*
- MPU 390 **Essential Cysteine-Alkylation Strategies to Monitor Structurally Altered Estrogen Receptor as Found in Oxidant-Stressed Breast Cancers;** Christian D. Atsriku¹; Jose E. Meza¹; Gary K. Scott¹; Christopher C. Benz¹; Michael A. Baldwin²; ¹*Buck Institute for Age Research, Novato, CA*; ²*University of California, San Francisco, CA*
- MPU 391 **Acetylation of the Chemotaxis Response Regulator CheY by Acetyl-CoA Synthetase Purified from Escherichia coli;** Rina Barak¹; Krishna Prasad¹; Alan J. Wolfe³; Tevie Mehlman²; Alla Shainskaya²; Michael Eisenbach¹; ¹*Department of Biological Chemistry, Weizmann Institute of Science, Rehovot, Israel*; ²*Biological Mass Spectrometry Facility, Weizmann Institute of Science, Rehovot, Israel*; ³*Stritch School of Medicine, Loyola University, Chicago, IL*
- MPU 392 **Mass Spectrometric Analysis of in vivo Formed Albumin Adducts of Hexahydrophthalic Anhydride in Nasal Lavage Fluid;** Monica H Kristiansson; Christian H Lindh; Bo AG Jönsson; *Department of Occupational and Environmental Medicine, Lund, Sweden*
- MPU 393 **S-nitrosation and S-glutathiolation of Recombinant Calbindin D_{28k} from Human Brain;** Limei Tao; Ann M. English; *Concordia University, Montreal, Canada*
- MPU 394 **Characterization of A-beta Amyloid Fibrils with Electrospray Mass Spectrometry Using Hydrogen Exchange on Proline Mutant Fibrils;** Erik Portelius¹; Angela Williams²; Indu Kheterpal²; Ronald Wetzel²; Kelsey Cook¹; ¹*University of Tennessee, Department of Chemistry, Knoxville, TN*; ²*University of Tennessee, Graduate School of Medicine, Knoxville, TN*
- MPU 395 **Solid-State Glycation of β-lactoglobulin: Localisation of the Modified Amino Acids using Mass Spectrometry Techniques;** François Fenaille¹; François Morgan¹; Véronique Parisod¹; Jean-Claude Tabet²; Philippe A. Guy¹; ¹*Nestlé Research Center, Lausanne, Switzerland*; ²*Laboratoire de Chimie Biologique Organique et Structurale, Paris, France*
- MPU 396 **Mass Spectrometry : A Useful Technique to Confirm a Mechanism Based Behavior of Enzyme Inhibitors;** Lionel Pochet¹; Marc Dieu²; Raphaël Frédéric¹; Annmarie Murray¹; Bernard Pirotte³; Bernard Masereel¹; ¹*Dpt of Pharmacy, University of Namur, Namur, Belgium*; ²*Unité de recherche en biologie cellulaire, University of Namur, Namur, Belgium*; ³*Laboratoire de Chimie Pharmaceutique, Université de Liège, Liège, Belgium*
- MPU 397 **Characterization of Selenomethionine Membrane Protein Using Q-TOF and MALDI TOF-TOF;** Karine Pacaud¹; Nicolas Folschweiller²; Hervé Celia²; Franc Pattus²; Noelle Potier¹; Alain Van Dorsselaer¹; ¹*Laboratoire de Spectrométrie de Masse Bio-Organique, CNRS-UMR 7509/ULP, Strasbourg, France*; ²*Département des Récepteurs et Protéines Membranaires, UPR9050 CNRS, Illkirch-Graffenstaden, France*
- MPU 398 **Detection and Identification of Modified Immunoglobulin as a Biomarker for Diagnosis of Type-2 Diabetes;** Jiayi Wang; Wen Jin; Rulin Zhang; George Jackowski; *Syn-X Pharma Inc., Toronto, Canada*
- MPU 399 **Identification of a Common Post-Translational Modification Found in Three Recombinant Nuclear Receptors;** Kristina Zachrisson; Agneta Tjernberg; *Biovitrum AB, Stockholm, Sweden*
- MPU 400 **Posttranslational Characterization of S-Adenosylmethionine Decarboxylase from Escherichia coli by LC-MS/MS;** Sonja Hess¹; Yongfu Li²; Lewis K. Pannell³; ¹*NIDDK, Bethesda, MD*; ²*NCI, Bethesda, MD*; ³*University of South Alabama, Mobile, AL*
- MPU 401 **Study of the Calbindin Regulation Mechanism;** Frederic Halgand¹; Christophe Vanbelle²; Eva Thulin²; Sara Linse²; Olivier Laprevote¹; ¹*ICSN.-CNRS, Gif-Yvette, France*; ²*Lund University, Lund, Sweden*
- MPU 402 **Mass Spectrometric Elucidation of the in-vivo Mechanism of an E3 Ubiquitin Ligase;** Jae R. Hwang¹; Carol E. Parker²; Jihong Jiang¹; Phillip J. Elms²; R. Marshall Pope²; Cam Patterson¹; Christoph H. Borchers²; ¹*Department of Medicine, UNC-CH, Chapel Hill, NC*; ²*Department of Biochemistry and Biophysics, UNC-CH, Chapel Hill, NC*; ³*Department of Biochemistry and Biophysics, UNC-CH, Chapel Hill, NC*
- MPU 403 **Identification of S-Homocysteinylation of Transthyretin in Human Plasma and its Implication as a Novel Indicator of Homocysteine Burden in Hyperhomocysteinemia;** Amareth Lim¹; Shantanu Sengupta²; Mark E. McComb¹; Roger Theberge¹; William G. Wilson²; Donald W. Jacobsen²; Catherine E. Costello¹; ¹*Boston University School of Medicine, Boston, MA*; ²*Cleveland Clinic Foundation, Cleveland, OH*; ³*University of Virginia School of Medicine, Charlottesville, VA*
- MPU 404 **Two Novel Lipid Hydroperoxide-Derived Modifications to Hemoglobin;** Anastasia K Yocum¹; Tomoyuki Oe¹; Alfred Yergey²; Ian A Blair¹; ¹*Center for Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA*; ²*Section on Metabolism and Mass Spectrometry, NIH, Bethesda, MD*
- MPU 405 **Fragmentation Patterns of Peptide/Protein-Benzo(a)pyrene Diol Epoxide Conjugates Characterized by Nanoflow LC Coupled to Hybrid Q-TOF MS;** Jin J. Wang¹; Aaron T. Timperman²; Brandon Law¹; Daniel M. Lewis¹; ¹*National Institute for Occupational Safety and Health, CDC, Morgantown, WV*; ²*Dept. of Chemistry, West Virginia University, Morgantown, WV*
- MPU 406 **S-Methylation and Glutathionylation of Human Lens Beta-Crystallins;** Veniamin N. Lapko; David L. Smith; Jean B. Smith; *Department of Chemistry, University of Nebraska, Lincoln, NE*
- MPU 407 **Identification of Transglutaminase-Mediated Deamidation Sites in a Recombinant Alpha-Gliadin by Means of Mass Spectrometric Methodologies;** Maria Fiorella Mazzeo; Beatrice De Giulio; Stefania Senger; Mauro Rossi; Antonio Malorni; Rosa Anna Siciliano; *Institute of Food Science and Technology - National Research Council, Avellino, Italy*
- MPU 408 **Determination of Selenomethionine Incorporation Level in Proteins by LCMS;** Kheng B. Lim; Ciaran N. Cronin; Daniel B. Kassel; *Syrrix, Inc., San Diego, CA*

- MPU 409 **The Comparison of Photochemical Cleavages found in UV-Irradiated Model Lens Protein to Yellowed Human Lens Protein;** Amanda J. Schreckenberg; Elizabeth R. Gaillard; Victor Ryzhov; *Northern Illinois University, DeKalb, IL*
- MPU 410 **Identification of Covalent Modifications of SecA by Stable Isotope Labeling and Mass Spectrometry;** Suzana Martinovic¹; Linda L. Randall²; Kim K. Hixson¹; Ronald J. Moore¹; Harold R. Udseth¹; Richard D. Smith¹; ¹*Pacific Northwest National Laboratory, Richland, Washington*; ²*University of Missouri, Columbia, MO*
- MPU 411 **Oxidation of CysteinyI Residues in PA-1 (pI 4.78) Parvalbumin from Bullfrog Skeletal Muscle in vivo;** Hikari Taka¹; Naoko Kaga¹; Reiko Mineki¹; Tsutomu Fujimura¹; Noriko Shindo¹; Masaru Tanokura²; Kimie Murayama¹; ¹*Juntendo University, Tokyo, Japan*; ²*University of Tokyo, Tokyo, Japan*
- MPU 412 **Identification and Comparison of Post-Translational Modifications on Histone H4 and Histone H2b from Asynchronously Grown and Mitotically Arrested HeLa Cells;** Beatrix M. Ueberheide¹; Cynthia M. Barber²; C. David Allis²; Jeffrey Shabanowitz¹; Donald F. Hunt³; ¹*Department of Chemistry, University of Virginia, Charlottesville, VA*; ²*Dept. of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA*; ³*Department of Pathology and Chemistry, University of Virginia, Charlottesville, VA*
- MPU 413 **Equilibrium and Time-Resolved Footprinting Approaches to Examine the Dynamics of Ca²⁺ Dependent Activation of Gelsolin;** Janna G. Kiselar¹; Steven C. Almo¹; Paul A Janmey²; Mark R. Chance¹; ¹*Albert Einstein College of Medicine, Bronx, NY*; ²*Institute for Medicine and Engineering University of Pennsylvania, Philadelphia, PA*
- MPU 414 **Specific Nitration at Tyrosine-430 Revealed By High Resolution Mass Spectrometry as Basis for Redox Regulation of Bovine Prostacyclin Synthase;** Patrick Schmidt²; Nikolay I. Youhnovski¹; Andreas Daiber²; Alina Balan¹; Momo Arsic¹; Markus Bachschmid²; Michael Przybylski¹; Volker Ullrich²; ¹*University of Konstanz, Department of Chemistry, Konstanz, Germany*; ²*University of Konstanz, Department of Biology, Konstanz, Germany*
- MPU 415 **Identification of the Glutathionylation Site(s) of Oxidatively Modified Proteins;** Valentina Bonetto¹; Simona Casagrande²; Tania Massignan¹; Maddalena Fratelli²; Ivano Eberini³; Elisabetta Gianazza³; Mario Salmons²; Pietro Ghezzi²; ¹*University of Milan, Milan, Italy*; ²*Dulbecco Telethon Institute at Istituto "Mario Negri", Milan, Italy*; ³*Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy*; ⁴*Dulbecco Telethon Institute at Istituto, Milan, Italy*
- MPU 416 **Determination of the Microheterogeneity of Plasma-Derived Human Serum Albumin by Means of Electropray Ion Trap Mass Spectrometry and Gel Electrophoretic Techniques;** Omar Belgacem¹; Katharina Pock¹; Andrea Buchacher¹; Juergen Roemisch¹; Andreas Rizzi²; Guenter Allmaier³; ¹*Octapharma Pharmazeutika, Vienna, Austria*; ²*Institute for analytical chemistry, Vienna, Austria*; ³*Institute of Chemical Technologies and Analysis, Vienna, Austria*
- MPU 417 **Mapping of Acetylation Sites by Nano-electrospray-Based Precursor Ion Scanning;** Thomas Koecher; Alessia Buscaino; Mikko Taipale; Asifa Akhtar; Matthias Wilm; *EMBL, Heidelberg, Germany*
- MPU 418 **The Structural Role of Linker Histone H5;** Jennifer A Lynch¹; Jim Allan¹; John Monaghan²; ¹*University of Edinburgh ICMB, Edinburgh, UK*; ²*University of Edinburgh Chemistry, Edinburgh, UK*
- MPU 419 **Development and Applications of Novel Affinity-Based Approaches for the Enrichment and Characterisation of Modified Peptides in Proteolytic Digests of Lipid-Protein Conjugates;** Jenny T.C Ho; Simon J Gaskell; *UMIST, Manchester, United Kingdom*
- MPU 420 **MALDI-TOFMS Characterization of the Conjugates of Hen Egg White Lysozyme With Organo-Ruthenium Complex in Solution and in the Crystal State;** Jean-Claude Blais¹; Michèle Salmain²; Bertrand Caro³; Françoise Le Guen-Robin³; Gérard Jaouen²; ¹*Université Pierre et Marie Curie, Paris, France*; ²*Ecole Nationale Supérieure de Chimie de Paris, Paris, France*; ³*Université Rennes 1, Rennes, France*
- MPU 421 **Investigation of S-Nitrosoproteins by MS: II. Stoichiometric Determination;** Rina Kaneko; Yoshinao Wada; *Osaka Medical Center, Izumi, Osaka, Japan*
- MPU 422 **Characterization of a Monoclonal IgG4 Antibody by Multidimensional Chromatography Coupled with Online ESI-TOF MS Analysis;** Asish B. Chakraborty¹; Brooks Sunday²; Steven A. Cohen¹; Scott J. Berger¹; ¹*Waters Corporation, Milford, MA*; ²*Schering Plough Research Institute, Union, NJ*; ³*Schering-Plough Research Institute, Union, NJ*
- MPU 423 **Mass Spectrometric Characterization of Allergenic Chemical Structures Formed *in vitro* Between Hexahydrophthalic Anhydride and Human Serum Albumin;** Christian H Lindh; Monica H Kristiansson; Bo AG Jönsson; *Dep. of Occupational and Environmental Medicine, Lund, Sweden*
- MPU 424 **Quantitative Analysis for Drug Binding and Fatty Acid Modification of Tubulin;** Yeoun Jin Kim¹; Dan Sackett¹; Lewis K. Pannell²; Jan Wolff³; P. Jeram Britto¹; ¹*National Institutes of Health, Bethesda, MD*; ²*University of South Alabama, Mobile, AL*
- MPU 425 **Specific Fragmentation on an ε-N,N,N-Trimethyllysine in Matrix-assisted Laser Desorption/Ionization Mass Spectrometry;** Yoshinori Satomi; Junko Hirota; Toshifumi Takao; *Institute for Protein Research, Osaka University, Osaka, Japan*
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- MPV 426 **Mapping Complex Protein Energy Landscapes with HDX/ESI MS: What Can Be Learnt When Multiple Transitions Are Present?;** Hui Xiao; Joshua K Hoerner; Andras Dobo; Stephen J Eyles; Igor A Kaltashov; *University of Massachusetts, Amherst, MA*
- MPV 427 **Transhydrogenase: Structural Elucidation of Domain I and Domain III Binding Interfaces by Hydrogen/Deuterium Exchange Monitored by High Resolution FT-ICR MS;** TuKiet T. Lam¹; Elisabet Carlsohn²; Ute Krengel³; Michael J. Chalmers¹; Mark R. Emmett¹; Alan G. Marshall⁴; Tomas Johansson³; Christine Oswald³; ¹*Ion Cyclotron Resonance Program, NHMFL, Florida State University, Tallahassee, FL*; ²*Institute of Medical Biochemistry, Göteborg University, Göteborg, Sweden*; ³*Dept. of Molecular Biotechnology, Chalmers University of Technology, Göteborg, Sweden*; ⁴*Dept. of Chemistry and Bioscience, Chalmers University of Technology, Göteborg, Sweden*; ⁵*Dept. Chemistry and Biochemistry, Florida State University, Tallahassee, FL*
- MPV 428 **Is There Hydrogen Scrambling in the Gas Phase?;** Joshua Hoerner; Hui Xiao; Igor A. Kaltashov; *University of Massachusetts, Amherst, MA*
- MPV 429 **Conformational Dynamics of Partially Denatured Myoglobin Studied by Time-Resolved ESI-MS and amide H/D Exchange;** Douglas A. Simmons¹; Stanley D. Dunn²; Amanda Doherty-Kirby²; Gilles A. Lajoie²; Lars Konermann¹; ¹*Dept. of Biochemistry, The University of*

- Western Ontario, London, Canada; ²Dept. of Chemistry, The University of Western Ontario, London, Canada
- MPV 430 **Probing the Methanol-Induced Conformations of Cytochrome C From Several Mammalian Cells by Mass Spectrometry;** Yen-Peng Ho; Yao-Feng Wang; May-Yeh Ho; *National Dong Hwa University, Department of Chemistry, Hualien, Taiwan, ROC*
- MPV 431 **A Study on Conformational States of Corticotropin Releasing Factor using H/D Exchange;** Xianmei Cai; Chhabil Dass; *The University of Memphis, Memphis, TN*
- MPV 432 **Hydrogen-Deuterium Exchange / Nano LC / ESIMS of the Chaperone, Lens Alpha Crystallin with Heat Denatured Gamma S-Crystallin;** Jiong Yu; Jean B. Smith; David L. Smith; *University of Nebraska, Lincoln, NE*
- MPV 433 **Oxidative Folding Studies of a Modified Form of Macrophage Colony Stimulating Factor β (M-CSF β) using ESI-MS and MALDI-ToF/ToF MS/MS;** R. Ryan Preston¹; Michael I. Schimerlik²; Michael I. Schimerlik²; Max L. Deinzer¹; Max L. Deinzer¹; Claudia S. Maier¹; Claudia S. Maier¹; ¹Oregon State University, Department of Chemistry, Corvallis, OR; ²Oregon State University, Department of Biochemistry and Biophysics, Corvallis, OR
- MPV 434 **Hydrogen/Deuterium Exchange Coupled with MALDI Mass Spectrometry Reveals a Critical Role for the C Helix of *E. coli* Trp Repressor in Folding and Stability;** Robert Simler; James E. Evans; C. Robert Matthers; *University of Massachusetts Medical School, Worcester, MA*
- MPV 435 **E Colicin DNases; Equally Acting, Distinct Folding;** Ewald T.J. van den Bremer¹; Wim Jiskoot¹; Robin E.J. Spelbrink¹; Arie van Hoek²; Richard James³; Geoffrey R. Moore⁴; Colin Kleanthous²; Antonie J.W.G. Visser²; Claudia S. Maier¹; Albert J.R. Heck¹; ¹Utrecht University, Utrecht, The Netherlands; ²Wageningen University, Wageningen, The Netherlands; ³University of Nottingham, Nottingham, United Kingdom; ⁴University of East Anglia, Norwich, United Kingdom; ⁵University of York, York, United Kingdom
- MPV 436 **A Combined ESI MS/Chemometric Approach to Study Protein Dynamics and Shape in Solution;** Anirban Mohimen; Andras Dobo; Joshua K Hoerner; Igor A Kaltashov; *University of Massachusetts, Amherst, MA*
- MPV 437 **Probing the Conformational Alterations of Plasminogen Activator Inhibitor-1 by Amide Hydrogen \rightarrow Deuterium Exchange;** Benedicta N Nukuna¹; Marc S Penn¹; Vernon E Anderson²; Stanley L Hazen¹; ¹Cleveland Clinic Foundation, Cleveland, OH; ²Case Western Reserve University, Cleveland, OH
- MPV 438 **The Influence of Mutation on Protein Folding and Ligand Binding of IFABP as Monitored by H/D Exchange and HPLC/MS;** Mei M. Zhu; Don L. Rempel; Zhaohui Du; Michael L. Gross; Benhur Ogbay; David P. Cistola; *Washington University, St. Louis, MO*
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- PROTEOMICS: FUNDAMENTALS**
- MPW 439 **Building Statistical Models for Factors that Affect Protein Identification Using MALDI-TOF and Tandem Mass Spectrometry;** Haofei T Wang¹; Jaxk Reeves²; Ron Orlando¹; ¹Complex Carbohydrate Research Center, University of Georgia, Athens, GA; ²Department of Statistics, University of Georgia, Athens, GA; ³Ciphergen Biosystems, Inc., Fremont, CA
- MPW 440 **Determination of the Protein Composition of Clathrin-Coated Vesicles, a Global Approach Through Proteomics Analysis;** Francois Blondeau¹; Sylwia Wasiak¹; Brigitte Ritter¹; Daniel Boismenu²; Line Roy²; Nathalie Hamel²; Robert E. Kearney²; John J.M. Bergeron²; Alexander W. Bell²; Peter S. McPherson¹; ¹Montreal Neurological Institute, McGill University, Montreal, Canada; ²Montreal Proteomics Centre, McGill University, Montreal, Canada
- MPW 441 **Probabilistic and Statistical Evaluation of Protein Identification by Database Search of MS/MS Spectra;** Colette J Rudd¹; Fernando Maroto¹; Michaela Scigelova¹; Andreas Huhmer¹; Roger Biringier¹; Jesus Vazquez²; ¹Thermo Electron, San Jose, CA; ²ThermoFinnigan, San Jose, CA; ³Centro de Biología Molecular Severo Ochoa, Madrid, Spain
- MPW 442 **The Proteome Analysis of the Cyanobacterium *Anabaena* sp. Strain PCC 7120 and Classification of the Peptides Detectable by MALDI-TOF/MS;** Noriyuki Ojima¹; Takashi Sazuka²; Minoru Yamaguchi¹; Tomoko Kuriki¹; Nobuyuki Akinaga¹; Eiji Ando¹; ¹Shimadzu Corporation, Kyoto, Japan; ²Kazusa DNA Research Institute, Kisarazu, Japan
- MPW 443 **Sources of Failure in Automated Peptide Sequence Assignment of MS/MS Spectra;** Sara P. Gaucher¹; Subodh Nimkar²; Eoin Fahy³; Steven W. Taylor³; Soumitra S. Ghosh²; Bradford W. Gibson¹; ¹Buck Institute for Age Research, Novato, CA; ²MitoKor, San Diego, CA; ³Applied Biosystems, Foster City, CA; ⁴Mitokor, San Diego, CA
- MPW 444 **Integrated and Automated Data Processing System for Protein Identification, Characterization and Quantification;** Lan Huang¹; Peter R. Baker¹; Robert J. Chalkley¹; Nadia P. Allen²; Kirk Hanson¹; Michael Rexach²; A.L. Burlingame¹; ¹University of California, San Francisco, CA; ²Stanford University, Palo Alto, CA
- MPW 445 **Quantitative Proteomics: Relative Concentrations of Proteins in Rough and Smooth Endoplasmic Reticulum;** Jacques Paiement¹; Line Roy²; Zsuzsanna Bencsath-Makkai³; Natalie Hamel²; Jennifer Gushue¹; Alex Bell²; Daniel Boismenu³; Annalyn Gilchrist³; Rob Kearney³; David, Y. Thomas⁴; John, J. M. Bergeron²; ¹Département de pathologie et biologie cellulaire, Université de Montréal, Montreal, Canada; ²Pathologie et biologie cellulaire, Université de Montréal, Montreal, Canada; ³Anatomy and Cell Biology, Montreal Proteomics Centre McGill University, Montreal, Canada; ⁴Department of Cell Biology, McGill University, Montreal, Canada
- MPW 446 **Matrix-Assisted Laser Desorption / Ionization Time-of-Flight (MALDI-TOF) Mass Spectrometry with Re-Engineered Derivatives of 2,5-Dihydroxybenzoic acid for Enhanced Proteomic and Polymer Analysis;** Sajid Bshir; Jocelyn K.C. Rose; *Cornell University, Ithaca, NY*
- MPW 447 **Increasing Sequence Coverage of *in situ* Digested Proteins for Post-Translational Modification Studies;** Sabrina Laugesen¹; Kristian S Bak-Jensen²; Christine Finnie²; Ole Østergaard²; Per Hägglund¹; Birte Svensson²; Peter Roepstorff¹; ¹Dept. of Biochem. & Mol. Biol., University of Southern Denmark, Odense, Denmark; ²Dept. of Biochem. & Mol. Biol., University of Southern Denmark, Odense, Denmark
- MPW 448 **Subcellular Proteome Analysis of the Spinal Cord Dorsal Horn Region;** Mathias Dreger¹; Joanna Mika²; Annette Bieller²; Ricarda Jahnel¹; Clemens Gillen³; Eberhard Weihe²; Martin K.H. Schaefer²; Ferdinand Hucho¹; ¹Institute f. Chemistry/Biochemistry, Free University, Berlin, Germany; ²Dept. of Molecular Neuroscience, Philipps-University, Marburg, Germany; ³Dept. of Molecular Neuroscience, Philipps-University, Marburg, Germany
- MPW 449 **Global Identification of Tryptic Peptides from the HMEC Cell Line;** Jon M Jacobs¹; Li-Rong Yu²; Heather Mottaz¹; Brian D Thrall¹; Wan-Nan U Chen¹; David G

- Camp¹; Richard D Smith¹; ¹*Pacific Northwest National Laboratory, Richland, WA*; ²*National Cancer Institute at Frederick, Frederick, MD*
- MPW 450 **Potential of MALDI-TOF-TOF, nanoLC-Q-TOF and nanoLC-ion trap techniques for proteomic studies;** Florence Poirier; Elsa Wagner; Sophie Richert; Alain Van Dorsselaer; Christine Schaeffer; Emmanuelle Leize; *LSMBO-ULP-CNRS, Strasbourg, France*
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- PROTEOMICS: NEW AND IMPROVED METHODS**
- MPX 451 **Toward Near 100% Sequence Coverage of Cancer Cell Line Proteins using Capillary Electrophoresis interfaced to Electrospray-TOF and Tandem Mass Spectrometry;** Chul S Yoo; David M Lubman; *University of Michigan, Ann Arbor, MI*
- MPX 452 **Which Multidimensional Separation System Is the Best for Post-Synaptic Density Proteome Analysis?;** Tsuyoshi Tabata¹; Keiko Satoh²; Hiroyuki Katayama¹; Masakazu Takeuchi²; Maki Tawarada²; Takeshi Nagasu¹; Yoshiya Oda¹; ¹*Eisai Co., Ltd., Tsukuba, Japan*; ²*Kan Research Institute, Kyoto, Japan*
- MPX 453 **Strategies for Identifying Proteins in Complex Mixtures by Electrospray Mass Spectrometry;** Therese McKenna¹; James Langridge¹; Mark Ritchie¹; Ole Jensen²; Allan Stensballe²; Thomas Nühse³; Scott Peck³; Richard Denny¹; Keith Richardson¹; Phillip Young¹; ¹*Waters Corporation, Manchester, UK*; ²*University of Southern Denmark, Odense, Denmark*; ³*Sainsbury Laboratory, Norwich, UK*
- MPX 454 **Multiple LCMS Exclusion List Analyses: A Tool to Enhance Protein Identification From Complex Biological Samples;** Dan B. Kristensen; Alexandre V. Podtelejnikov; Jan C. Brond; Michael L. Nielsen; Jesper V. Olsen; Jacek R. Wisniewski; Keiryn L. Bennett; *MDS Proteomics, Odense, Denmark*
- MPX 455 **Comparison of 2D and 3D (LCQ deca) Quadrupole Ion Traps for Proteomic Applications;** W. Hayes McDonald¹; Mike J. Maccoss¹; Andrew Guzzetta²; Christine C. Wu¹; Rohan Thakur²; Mike Senko²; Jae Schwartz²; John R. Yates¹; ¹*The Scripps Research Institute, La Jolla, CA*; ²*ThermoElectron Corporation, San Jose, CA*
- MPX 456 **A Novel Approach for Interfacing Capillary Electrophoresis With Electrospray Ionization Mass Spectrometry;** Haleem J. Issaq; George M. Janini; Thomas P. Conrads; Timothy D. Veenstra; *SAIC-Frederick, Inc., NCI-Frederick, Frederick, MD*
- MPX 457 **Structure Elucidation of Structural Proteins from Yersinia Phages using MALDI-ToF and ESI-FTMS Data;** Sebastian Beck¹; Eckhard Strauch²; Stefan Hertwig²; Iris Klein²; Antje Konietzny²; Bernd Appel²; Andreas Wieghaus³; Wolfgang Metelmann-Strupat³; Jens Griep-Raming³; Michael W. Linscheid¹; ¹*Humboldt Universitaet zu Berlin, Berlin, Germany*; ²*Robert Koch Institute, Berlin, Germany*; ³*Thermo Finnigan MAT, Bremen, Germany*
- MPX 458 **Enlightenment of Minimal Proteome Differences With Two-Dimensional Nano LC/MS in the E. coli Proteome Grown On Different Carbon Sources;** Edgar Naegele; Martin Vollmer; Partic Hoerth; *Agilent Technologies Deutschland GmbH, Waldbronn, Germany*
- MPX 459 **Accelerated Endopeptidase Digestion of Proteins Employing an HPLC and MS Friendly Surfactant;** John C Gebler; Ying-Qing Yu; Martin Gilar; Peter J Lee; Weibin Chen; Amy E Daly; *Waters Corp., Milford, MA*
- MPX 460 **Analysis of the Proteome in Human Tissues by In-gel Isoelectric Focusing and LC-MS/MS;** Francesco Giorgianni; Dominic M. Desiderio; Sarka Beranova-Giorgianni; *University of Tennessee Health Science Center, Memphis, TN*
- MPX 461 **Optimization of Enzymatic Digest Strategies for De Novo Sequencing of Proteins;** Tanya Q Shang¹; Natalie Keiper-Hrynko²; David Hallahan²; Charles N McEwen²; Barbara S Larsen²; ¹*University of Delaware, Newark, DE*; ²*Dupont Central Research and Development, Wilmington, DE*
- MPX 462 **Toward Ultra-sensitive Liquid Chromatography and Mass Spectrometric Proteome Analysis;** Li-Rong Yu¹; Haleem J. Issaq¹; Takuma Uo²; Josip Blonder¹; George M. Janini¹; Richard S. Morrison²; Timothy D. Veenstra¹; Thomas P. Conrads¹; ¹*SAIC-Frederick, Inc, National Cancer Institute at Frederick, Frederick, MD*; ²*University of Washington School of Medicine, Seattle, WA*
- MPX 463 **Micro-Scale Integration of size-Exclusion With Reversed Phase LC/MS for Protein Identification;** Man Ho Choi; Steven R. Tannenbaum; John S. Wishnok; *Massachusetts Institute of Technology, Cambridge, MA*
- MPX 464 **Improved Sample-Processing Time, and Peptide Recovery for the Mass Spectrometry Analysis of Protein Digests;** Doris E. Terry; Edward S. Umstot; Dominic M. Desiderio; *University of Tennessee, Memphis, TN*
- MPX 465 **Specific Removal of Multiple High Abundance Proteins from Human Sera;** Gordon R Nicol; Nina Zolotarjova; James Martosella; Barry Boyes; *Agilent Technologies, Wilmington, DE*
- MPX 466 **LC-MS/MS Evaluation of Silver Stain Removal from Protein Gels Using Hydrogen Peroxide;** Victor S. Asirvatham; Lloyd W. Sumner; *The Samuel Roberts Noble Foundation, Ardmore, OK*
- MPX 467 **A Novel Albumin Removal Method for Improved Plasma Protein Expression Analysis in the Treatment of Amyotrophic Lateral Sclerosis Using 2D-DIGE-MS;** Richard A Katenhusen; Anthony G Sullivan; Alisha George; Henry Brzeski; Richard I Somiari; *Windber Research Institute, Windber, PA*
- MPX 468 **A Simple One-Step Approach to Fabricate a Trypsin Enzyme Capillary Reactor Immobilized on a Macroporous Monolith; Submicromolar Protein Digestion on a Seconds Time-Scale and MALDI/TOF/MS Peptide Fingerprinting;** Anders K Palm; Milos V Novotny; *Indiana University, Bloomington, IN*
- MPX 469 **Combining Metabolomics and Proteomics in Plant Systems Using GC/TOF and Multidimensional LC/MS;** Wolfram Weckwerth; *Max Planck Institute of Molecular Plant Physiology, 14424 Potsdam, Germany*
- MPX 470 **Rapid On-Column Trypsin Digestion of Proteolytically Resistant Proteins in Aqueous-Organic Solvents;** Gordon W. Slysz¹; David C. Schriemer¹; ¹*University of Calgary, Calgary, Alberta, Canada*; ²*University of Calgary, Calgary, Canada*
- MPX 471 **Comparison of Peptide Shotgun CID in Source Versus in Collision Cell on a QTOF;** David R Goodlett; Eugene C Yi; Benno Schwikowski; Ning Zhang; Ruedi Aebersold; *Institute For Systems Biology, Seattle, WA*
- MPX 472 **Fabrication and Use of 20 um i.d. Nanobore Columns for Proteomics;** Gary A. Valaskovic; James P. Murphy III; *New Objective Inc, Woburn, MA*
- MPX 473 **An Improved Cross-linked Enzyme Reactor for Protein Identification by LC-ESI/MS and MALDI-ToF/MS;** H. Abouchacra; I. Sanhaji; K. Waldron; Michel J. Bertrand; *University of Montreal, Montreal, Canada*
- MPX 474 **ALS-PAGE in Proteomic Analysis of Cerebral Protein Expression After Stroke;** Oliver Schmidt¹; Michael Besselmann²; Simone Koenig¹; ¹*Integrated Functional Genomics, University of Muenster, Muenster, Germany*; ²

- ²*Department of Neurology, University of Muenster, Muenster, Germany*
- MPX 475 **Comparison of Online Peak Parking Versus Automated Fraction Analysis of a Complex Protein Mixture;** Anders L. Lund¹; Colleen K. Van Pelt²; Michael J. Nold¹; LeRoy B. Martin¹; ¹*Waters Corp., Beverly, MA;* ²*Advion BioSciences, Inc, Ithaca, NY*
- MPX 476 **In-solution Digestion Mixed with Acetonitrile for Proteomics of Human Plasma;** Kiyonaga Fujii; Rong Wang; *Mount Sinai School of Medicine, New York, New York*
- MPX 477 **The Use of Precursor Ion Scans as Survey Scans in the LC-MS/MS Analysis of Peptide Mixtures;** Willy Bienvenut; Manfredo Quadroni; *Protein Analysis Facility, University of Lausanne, Epalinges, Switzerland*
- MPX 478 **LC MS/MS Methods Development for Characterisation of Complex Peptide Mixtures from Preparations of Human Cytoskeleton;** Natalia Bykova; Xiaobo Meng; Keding Cheng; Kenneth Standing; Werner Ens; John Wilkins; *University of Manitoba, Manitoba Centre for Proteomics, Winnipeg, Canada*
- MPX 479 **Cleavable Detergents for MALDI-MS: Methods for Analysis of Intracellular and Membrane Proteins;** Jeremy L. Norris; Ned A. Porter; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- MPX 480 **Two Dimensional HPLC/Ion Trap MS for Comparison of Complex Protein Mixtures;** Markus Lubeck¹; Ralph Rabus²; Ulrike Schweiger-Hufnagel¹; Helen Muccitelli³; Carsten Baessmann¹; ¹*Bruker Daltonik GmbH, Bremen, Germany;* ²*Max-Planck-Institute for Marine Microbiology, Bremen, Germany;* ³*Bruker Daltonics Inc., Billerica, MA*
- MPX 481 **Comparison of Trypsin Immobilization Techniques With or Without a Solid Support for Peptide Mapping;** Isabelle Migneault¹; Catherine Dartiguenave¹; Hussein Hamad¹; Karen C. Waldron¹; Michel J. Bertrand¹; Joëlle Vinh²; ¹*University of Montreal, Montreal, Canada;* ²*Ecole Supérieure de Physique et de Chimie Industrielles, Paris, France*
- MPX 482 **Quantitative Aspects in Direct Characterization of Digested Protein Complex: An Approach Based on High-Accuracy Mass Chromatographic Analysis with FT ICR MS;** Takemichi Nakamura; Naoshi Dohmae; Koji Takio; *RIKEN (The Institute of Physical and Chemical Research), Wako, Japan*
- MPX 483 **Capillary Separations-Nanoelectrospray Mass Spectrometry Using Polyaniline Coated Silica - A New Tool for Proteomics;** Douglas R. Smith¹; Jason A. Anspach¹; Alexis C. Thompson²; Troy D. Wood¹; ¹*University at Buffalo, Buffalo, NY;* ²*Research Institute on Addictions, Buffalo, NY*
- MPX 484 **Improved Peptide Mapping of Proteins with Multiple Enzymatic Digestions and Mass Spectrometry;** Yi-Ting Chen; Feng-Chun Lo; Wen-Ling Lu; Sung-Fang Chen; *Biomedical Engineering Center, Industrial Technology Research Institute, Hsinchu, Taiwan, R.O.C.*
- MPX 485 **High-Performance Capillary Isoelectric Focusing Mass Spectrometry of Intact Proteins;** Dae Ho Shin¹; Yufeng Shen Shen²; Seonghee Ahn²; Kristina Taylor Nelson²; Ljiljana Pasa-Tolic²; David C. Simpson²; Richard D. Smith²; ¹*Seoul Branch, Korea Basic Science Institute, Seoul, Korea;* ²*Pacific North West National Laboratory, Richland, WA*
- MPX 486 **Development of Direct Digestion of SDS-solubilized Proteins and HPLC-MALDI MS/MS for Membrane Protein Identification;** Nan Zhang; Nan Li; Liang Li; *University of Alberta, Edmonton, Canada*
- MPX 487 **Analysis of Human Serum Proteins by Multidimensional Peptide Separation in Conjunction with Nanoelectrospray Tandem Mass Spectrometry;** Zhen Xiao; King C. Chan; George Janini; Haleem J. Issaq; Timothy D. Veenstra; Thomas P. Conrads; *SAIC-Frederick, Inc., National Cancer Institute at Frederick, Frederick, MD*
- MPX 488 **Electrochemical Oxidation of Peptides with On-Line Mass Spectrometric Detection: Prospects for Fast On-line Protein Digestion;** Hjalmar P Permentier; Ulrik Jurva; Rainer Bischoff; Andries P Bruins; *University of Groningen, Groningen, The Netherlands*
- MPX 489 **Novel Sample Fractionation for Proteomics Using Stop and Go Extraction Tips (StageTips) with Single and Multiple Disks;** Yasushi Ishihama; Juri Rappsilber; Matthias Mann; *Dep of Biochem & Molecular Biology, Univ of Southern Denmark, Odense, Denmark*
- MPX 490 **Peptide Mass Mapping by MALDI-MS of India Ink Stained Proteins After Western Blot on PVDF;** Ruth Mengue Methogo; Geneviève Dufresne-Martin; Klaus Klarskov; *University of Sherbrooke, Sherbrooke, Quebec, Canada*
- MPX 491 **A Micro Enzyme/Chemical Reactor for Protein Digestion and Chemical Labeling Based on Reversible Immobilization and Concentration of the Protein Substrate;** Theo C. Goh; Henry S. Duewel; *MDS Proteomics Incorporated, Toronto, Canada*
- MPX 492 **Comparison of Different Protocols for the Analysis of Protein Digests by SCX-RPLC-MS/MS;** Joelle Vinh; Delphine Pflieger; Jean Rossier; *Neurobiologie et Diversité Cellulaire, CNRS UMR 7637, Paris, France*
- MPX 493 **A Novel Multiplexed Online Solid Phase Extraction-Tandem Mass Spectrometry System for High-Throughput Proteome Analysis;** Liguo Song¹; Jianjun Li²; Tammy-Lynn Tremblay²; Wen Ding²; D. Jed Harrison³; Pierre Thibault⁴; ¹*Molecular and Cellular Biophysics, Roswell Park Cancer Institute, Buffalo, New York;* ²*Institute for Biological Sciences, National Research Council of Canada, Ottawa, Canada;* ³*Department of Chemistry, University of Alberta, Edmonton, Canada;* ⁴*Caprion Pharmaceuticals, St-Laurent, Quebec, Canada*
- MPX 494 **A Multidimensional LC/ESI-TOF MS Prefractionation Approach for the Analysis of Intact Proteins in Complex Proteomes;** Kevin Millea²; Ashish Chakraborty¹; Steven A. Cohen¹; Ira S. Krull²; Scott J. Berger¹; ¹*Waters Corporation, Milford, MA;* ²*Northeastern University, Boston, MA*
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- SURFACE ANALYSIS & IMAGING**
- MPY 495 **UV Laser Desorption and Protein Imaging from Ice via Femtosecond Laser Pulses;** Jamal I Berry¹; Shixin Sun¹; Yousheng Dou²; Nick Winograd¹; ¹*Materials Research Institute and Dept. of Chem./ Penn State University, University Park, PA;* ²*Dept. of Physics/ Texas A & M University, College Station, TX*
- MPY 496 **Surface Sampling with Electrospray Mass Spectrometry;** Gary J. Van Berkel¹; Stephen J. Kennel¹; Mitchel J. Doktycz¹; Michael J. Ford¹; Amaury D. Sanchez²; J. Martin E. Quirke²; ¹*Oak Ridge National Laboratory, Oak Ridge, TN;* ²*Florida International University, Miami, FL*
- MPY 497 **Development of MALDI Laser Microprobe for Biological Analysis: Instrumentation, New Matrices and Application to Photodynamic Therapy of Cancer;** Jean-François Muller; Benoit Maunit; Natacha Lourette; Jerome Bour; Marc Dodeller; Lionel Vernex-Loiset; Gabriel Krier; *LSMCL, Université de Metz, Metz, France*
- MPY 498 **Peptide Imaging MS of *Lymnaea stagnalis* Neuroendocrine Tissue by Matrix Enhanced SIMS;** Sander R. Piersma¹; A.F. Maarten Altelaar¹; Jan van

- Minnen²; Connie Jimenez²; Ron M.A. Heeren¹; ¹*FOM Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands*; ²*Free University, Amsterdam, The Netherlands*
- MPY 499 **Laser Introduction and Focusing Apparatus for High Spatial Resolution Matrix Assisted Laser Desorption/Ionization and Microscopic Imaging**; David S Wunschel; Kenneth M Beck; *Pacific Northwest National Laboratory, Richland, WA*
- MPY 500 **Automated SMALDI Imaging with a Lateral Resolution of 1 μm** ; Werner Bouschen; Kai Maass; Bernhard Spengler; *Institute of Inorganic and Analytical Chemistry/ University of Giessen, Giessen, Germany*
- MPY 501 **Quantitative and High Resolution Imaging of Protein Turnover in Biological Tissues**; Claude P. Lechene; Edmund A. Mroz²; Francois Hillion³; ¹*Harvard Medical School/Brigham and Women's Hospital, Boston, MA*; ²*Harvard Medical School/Massachusetts Eye and Ear Infirmary, Boston, MA*; ³*Cameca, Courbevoie, France*
- MPY 502 **Imaging MALDI with an Orthogonal TOF Mass Spectrometer**; Gamini Piyadasa¹; Alexander Loboda²; Vic Spicer¹; James McNabb¹; Kenneth G Standing¹; Werner Ens¹; ¹*Department of Physics and Astronomy, Winnipeg, Canada*; ²*MDS Sciex, Concord, Canada*
- MPY 503 **Reactive Ion Scattering Spectrometry (RISS) : An Efficient Tool to Probe Organic Thin Films**; Selvan R; Darrin L Smith; Facundo M Fernandez; Xi Yang; Zhuhua Qi; Karen E Bryden; Ronald J Wysocki Jr; Vicki H Wysocki; *Department of Chemistry, University of Arizona, Tucson, AZ*
- MPY 504 **MALDI Tissue Imaging using the Molecular Scanner**; George Vella¹; Barrie Wagenfeld¹; Robert Lotti¹; Carlton Paul¹; Stacey Oppenheimer²; Richard Caprioli²; Tim Nadler¹; ¹*Applied Biosystems, Framingham, MA*; ²*Vanderbilt University, Mass Spectrometry Research Center, Nashville, TN*
- MPY 505 **Illuminating Micro-Landscapes: An in-situ Method for Recording the Topology of a Sample Surface - Experiments, Simulations and Deconvolution**; Liam A. McDonnell; Stefan L. Luxembourg; Gert B. Eijkel; Todd H. Mize; Ron M. A. Heeren; *FOM-Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands*
- MPY 506 **High Resolution Imaging Mass Spectrometry: Characterization of Ion Yields and Laser Spot Sizes**; Kenneth E. Schriver; Pierre Chaurand; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- MPY 507 **Developing 3-D Imaging Mass Spectrometry**; Anna C. Crececius; Betsy Williams; Bobby Bodenheimer; Benoit Dawant; Ariel Y. Deutch; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- MPY 508 **Rapid FT-ICR Mass Spectral Imaging using Fuzzy Logic Classification**; Timothy R. McJunkin; Paul L. Tremblay; Jill R. Scott; *Idaho National Engineering and Environmental Laboratory (INEEL), Idaho Falls, Idaho*
- MPY 509 **The Analysis of Pharmaceutical Compounds in Skin by Matrix Assisted Laser Desorption Ionisation Mass Spectrometry**; Josephine Bunch¹; Malcolm R. Clench¹; Don S. Richards²; ¹*Sheffield Hallam University, Sheffield, UK*; ²*Pfizer Global R&D, Sandwich, UK*
- MPY 510 **Conductive Glass Slides: Pairing Microscopy and Imaging Mass Spectrometry**; Pierre Chaurand; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- MPY 511 **Description of Activation Processes and Polyethylene Formation on a Phillips Model Catalyst by Laser Ablation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry and static Time of Flight Secondary Ion Mass Spectrometry**; Frédéric Aubriet¹; Pascal Di Croce²; Patrick Bertrand³; Paul Grange²; Jean-François Muller¹; ¹*LSMCL Université de Metz, Metz, France*; ²*Unité CATA Université catholique de Louvain, Louvain-la-Neuve, Belgium*; ³*Unité PCPM Université catholique de Louvain, Louvain-la-Neuve, Belgium*
- MPY 512 **Inverse Laser Capture Microdissection (ILCM) for Acquiring Cells from Healthy and Diseased Tissues for Direct Profiling by MALDI Mass Spectrometry**; Michael T Madden¹; Sudha S Marimanikkuppam²; Wilmar L Salo¹; Thomas P Krick²; John M Streitz Jr.¹; Arthur C Aufderheide¹; ¹*University of Minnesota, Duluth, Duluth, MN*; ²*University of Minnesota, St. Paul, MN*
- MPY 513 **Molecule Specific Imaging Analysis of Carcinogens in Breast Cancer Cells**; K. J. Wu; J. N. Quong; M. G. Knize; K. S. Kulp; *Lawrence Livermore National Laboratory, Livermore, CA*
- MPY 514 **Development of a MALDI Mass Microscope With Stigmatic Ion Optics**; Stefan L. Luxembourg; Todd H. Mize; Liam A. McDonnell; Dirk-Jan Spaanderman; Ron M. A. Heeren; *FOM institute for Atomic and Molecular Physics, Amsterdam, The Netherlands*

TUESDAY POSTERS

Tuesday posters should be set up 7:30 – 8:00 am on Tuesday and removed 7:30 – 8:00 pm on Tuesday. Authors of odd numbered posters (i.e., 001, 003, 005) present 8:45 – 10:15 am on Tuesday. Authors of even numbered posters (i.e., 002, 004, 006) present 1:30 – 3:00 pm on Tuesday.

BIOINFORMATICS

- TPA 001 **Integrating a New Peptide De-Novo Sequencing Tool for Sophisticated Data Analysis**; Ulrike Schweiger-Hufnagel¹; Markus Lubeck¹; Detlev Suckau¹; Helen Muccitelli²; Carsten Baessmann¹; ¹*Bruker Daltonik GmbH, Bremen, Germany*; ²*Bruker Daltonics Inc., Billerica, MA*
- TPA 002 **A Hardware Based Human Genome Database Search for Mass Spectrometry**; Anish Alex¹; Ruth Isserlin-Weinberger²; Jonathan Rose¹; Christopher Hogue³; ¹*University of Toronto Dept. of Electrical Engineering, Toronto, Ontario Canada*; ²*University of Toronto Dept. of Biochemistry, Toronto, Ontario Canada*; ³*Samuel Lunenfel Research Inst, Mt. Sinai Hospital, Toronto, Ontario Canada*
- TPA 003 **ProSight PTM: Web and Database Support for High Throughput Analysis of Intact Proteins Using “Top Down” Mass Spectrometry**; Gregory K. Taylor¹; Yong-Bin Kim¹; Ryan E. McCarthy¹; Andrew J. Forbes²; Fanyu Meng²; Neil L. Kelleher²; ¹*University of Illinois, Dept. of Comp. Sci., Urbana, IL*; ²*University of Illinois, Dept. of Chemistry, Urbana, IL*
- TPA 004 **Creation of an Open Standard File Format for the Representation of MS Data**; Patrick G.A. Pedrioli¹; Jimmy Eng¹; Robert Hubley¹; Brian Pratt²; Erik Nilsson²; Alex Taylor³; Ruedi Aebersold¹; ¹*Institute for Systems Biology, Seattle, WA*; ²*Insilicos, Seattle, WA*; ³*Amgen, Seattle, WA*
- TPA 005 **Predicting MS/MS Peptide Fragmentation Patterns: Beyond Sequest**; Joshua E. Elias; Francis D. Gibbons; Frederick P. Roth; Steven P. Gygi; *Harvard University Medical School, Boston, MA*
- TPA 006 **Mapping Post-Translational Modifications in Deinococcus Radiodurans Using Peptide Sequence Tags**; Anil Patwardhan¹; Katherine Williams¹; Maria Pallavicini¹; Eric Strittmatter²; Richard Smith²; ¹*University of California, San Francisco, CA*; ²*Pacific Northwest National Labs, Richland, WA*
- TPA 007 **Evaluating Automated De Novo Sequencing Results and Assessing Tandem Mass Spectral Quality**; Richard S. Johnson; J. Alex Taylor; *Amgen, Seattle, WA*
- TPA 008 **De Novo Peptide Sequencing Based on a Divide-and-Conquer Algorithm and Accurate Prediction of Peptide MS/MS Spectra**; Zhongqi Zhang; *Amgen Inc., Thousand Oaks, CA*
- TPA 009 **Development of a Human Protein Reference Database**; Suraj Peri¹; Daniel Navarro¹; Ramars Amanchy¹; Vidya Niranjan²; Babylakshmi Muthusamy²; Kiran Jonnalagadda¹; Akhilesh Pandey¹; ¹*Johns Hopkins Medical Institute, Baltimore, MD*; ²*Institute of Bioinformatics, Bangalore, Karnataka, India*
- TPA 010 **Microorganism Identification by Mass Spectrometry and Bioinformatics-generated Biomarker Databases**; Plamen A. Demirev¹; Andrew B. Feldman¹; Jeffrey S. Lin¹; Fernando J. Pineda²; Cheryl L. Resch¹; ¹*Johns Hopkins Applied Physics Laboratory, Laurel, MD*; ²*Johns Hopkins School of Public Health, Baltimore, MD*
- TPA 011 **Nemesis: A Bioinformatics Tool for High-Throughput Data Analysis in Proteomics**; Philippe Valade; Tammy-Lynn Tremblay; Kenneth H.N. Chan; John Kelly; *National Research Council of Canada, Ottawa, Ontario*

- TPA 012 **Gapped Sequence Tag Query For Improving De Novo Sequencing Results**; Yonghua Han; Bin Ma; Kaizhong Zhang; *University of Western Ontario, London, ON, Canada*
- TPA 013 **Determining the Factors Affecting Peptide Fragmentation: Derivation of a Relative Proton Mobility Scale and its Implications for MS/MS Scoring Algorithms**; Eugene A Kapp¹; Frédéric Schütz²; Gavin E Reid¹; Richard AJ O'Hair³; James S Eddes¹; Robert L Moritz¹; Terry P Speed²; Richard J Simpson¹; ¹*Ludwig Institute for Cancer Research, Melbourne, Australia*; ²*The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia*; ³*Dept. of Chemistry, University of Melbourne, Melbourne, Australia*
- TPA 014 **PIMM (Peptide Identification Based on a Mixture Model): a New Algorithm for Automated MS Spectral Analysis Using a Mixture Probability Model and Bayesian Inference**; Shan Jiang; Erol Gulcicek; *Cellular Genomics, Inc., Branford, CT*
- TPA 015 **Liquid Chromatography Peptide Elution Time Prediction by Using Artificial Neural Network and the Implementation of this Information in Proteome Analysis**; Konstantinos Petritis; Lars Kangas; Eric F. Strittmatter; Kenneth J. Auberry; Nikola Tolic; David Camp; Mary Lipton; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- TPA 016 **Deriving Statistical Models for Predicting Peptide Fragment Ion Intensities**; Frédéric Schütz¹; Eugene A Kapp²; James E Eddes²; Richard J Simpson²; Terence P Speed¹; ¹*The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia*; ²*Ludwig Institute for Cancer Research, Melbourne, Australia*

CARBOHYDRATES/OLIGOSACCHARIDES

- TPB 017 **The Utility of GC-MS and GC-MS/MS for Linkage Analysis of Oligosaccharides**; Lisa D. Morrison; Kenneth H.N. Chan; Jianjun Li; John Kelly; *National Research Council of Canada Institute for Biological Sciences, Ottawa, Canada*
- TPB 018 **Determination of the Phosphorylation Sites in Lipooligosaccharides from Pseudoalteromonas Haloplanktis TAC 125 Grown at 15 C and 25 C**; Salvatore Ummarino¹; Maria M. Corsaro¹; Rosa Lanzetta¹; Ermenegilda Parrilli¹; Michelangelo Parrilli¹; Jasna Peter-Katalinic²; ¹*Universita' di Napoli "Federico II", Naples, Italy*; ²*University of Münster, Münster, Germany*
- TPB 019 **Application of Infrared Multiphoton Resonance Dissociation (IRMPD) to the Mass Spectrometric Analysis of Bacterial Glycolipids**; Buko Lindner; *Reseach Center Borstel/ Division of Biophysics, Borstel, Germany*
- TPB 020 **Advances in MALDI-MS Methods to Investigate the Structure of Bacterial Lipopolysaccharides**; Luisa Sturiale¹; Antonio Molinaro²; Rosa Lanzetta²; Domenico Garozzo¹; ¹*CNR - Istituto di Chimica e Tecnologia dei Polimeri, Catania, Italy*; ²*Dip. di Chimica Organica e Biochimica Univ. di Napoli Federico II, Napoli, Italy*
- TPB 021 **GC-MS Evaluation of Oxidative Degradation Mechanism Occurs during Per-O-methylation of Carbohydrates for their Structural Analysis by Mass Spectrometry**; Ionel Ciucanu; Catherine E. Costello; *Mass Spectrometry Resource, School of Medicine, Boston University, Boston, MA*
- TPB 022 **Direct Analysis of Lipopolysaccharide Structure from *in vivo* Organisms Using Capillary Electrophoresis-Electrospray Mass Spectrometry**; Jianjun Li¹; Adele Martin¹; Valerie Bouchet²; Derek W. Hood³; Elke K. H. Schweda⁴; Stephen I. Pelton²; Richard Goldstein²; E.

- Richard Moxon³; James C. Richards¹; ¹*Institute For Biological Sciences, Ottawa, Canada*; ²*Boston University School of Medicine, Boston, MA*; ³*University of Oxford, Oxford, UK*; ⁴*Karolinska Institute and University College of South Stockholm, Huddinge, Sweden*
- TPB 023 **Development of Mass Spectrometry Based Methods for Characterization of Water-soluble and Water-insoluble Polysaccharides from Ganoderma Lucidum**; T.-W. D. Chan; P.H.I. Li; B Sun; *The Chinese University of Hong Kong, Hong Kong SAR, China*
- TPB 024 **Application of CE-ESMS in Bacterial Metabolomics and Functional Characterization of Flagellin Glycosylation Gene Products of *Campylobacter jejuni* 81-176**; Evelyn C. Soo¹; Annie J Aubry¹; Susan M Logan¹; Patricia Guerry²; Lisa D Morrison¹; John F Kelly¹; Pierre Thibault³; ¹*National Research Council Canada, Ottawa, Canada*; ²*Naval Medical Research Center, Silver Spring, MD*; ³*Caprion Pharmaceuticals Inc, Montreal, Canada*
- TPB 025 **A Strategy for Determining Glycosaminoglycan Structural Domains**; Robert J. Seward; May Joy C. Miller; Catherine E. Costello; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- TPB 026 **Rapid Method for the Determination of N-glycosylation and Site Heterogeneity**; Hyun Joo An; Jerry L Hedrick; Carlito B Lebrilla; *University of California, Davis, CA*
- TPB 027 **Sequencing Underivatized Oligosaccharides Using a MALDI-TOF/TOF Tandem Mass Spectrometer**; Domenico Garozzo¹; Emanuela Spina¹; Franz J. Mayer-Posner²; Volker Sauerland²; ¹*CNR Istituto Chimica e Tecnologia dei Polimeri CT, Catania, Italy*; ²*Bruker Daltonik GmbH, Bremen, Germany*
- TPB 028 **Characterization of Oligosaccharides Using Derivatization with Phenylhydrazine**; Erika Lattova; Helene Perreault; *Chemistry Department, University of Manitoba, Winnipeg, Canada*
- TPB 029 **High Energy CID by MALDI-TOF/TOF for Structural Characterization of Glycoconjugates**; Douglas M. Sheeley; Alfred L. Yergey; *National Institutes of Health, Bethesda, MD*
- TPB 030 **Effects of N-glycosylation on the Specificity of Pectin Methyltransferase from *A.Niger***; Jeremi Johnson¹; Min Xie¹; Carl Bergmann¹; Jaap Visser²; Jacques Benen²; Ron Orlando¹; ¹*University of Georgia, Athens, GA*; ²*Wageningen Agricultural University, Wageningen, The Netherlands*
- TPB 031 **Unraveling Isobaric *C. elegans* Glycomers: Molecular Disassembly (MSⁿ) and Structural Continuity**; Andrew Hanneman; Suddham Singh; Hailong Zhang; Vernon Reinhold; *University of New Hampshire, Durham, NH*
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- CLINICAL CHEMISTRY**
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- TPC 032 **Laser Desorption Mass Spectrometry Time Course Study of *Plasmodium yoelii* Malaria Infection in Mice**; Peter F. Scholl¹; Plamen A. Demirev²; Darin Kongkasuriyachai¹; Andrew B. Feldman²; Jeffery Lin²; David Sullivan, Jr.¹; Nirbhay Kumar¹; ¹*Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD*; ²*Johns Hopkins University Applied Physics Laboratory, Laurel, MD*
- TPC 033 **Analysis of Rat Microdialysates for Monoamine Neurotransmitters and their Metabolites Using Liquid Chromatography Electrospray / Tandem Mass Spectrometry**; Vicky Bablekis¹; Themis Flarakos²; Mark L. J. Reimer²; James G. Pfaus¹; ¹*Chemistry and CSBN, Concordia University, Montreal, Canada*; ²*Dept. of Analytical Sciences, MDS Pharma Services, Montreal, Canada*
- TPC 034 **A Simple, High Throughput LC/MS/MS Assay to Quantify 6 Protein-Bounded Oxidized Tyrosine Species and their Precursors in Human Serum**; Wei Song; Stanley L. Hazen; *Cleveland Clinic Foundation, Cleveland, OH*
- TPC 035 **Quantitation of Modified Nucleosides in Complex Biological Mixtures with Affinity Chromatography Coupled to Mass Spectrometry**; Qing Yang; Pauline J. Vollmerhaus; Feng Zhong; Michael Chan; Takeo Sakuma; *MDS SCIEX-Applied Biosystems, Concord, Ontario*
- TPC 036 **Accurate Measurement of HbA1c Based on Peptide Analysis by Isotope Dilution Method Using Deuterium-Labeled Synthetic Peptides**; Toyofumi Nakanishi; Ken Iguchi; Akira Shimizu; *Osaka Medical College, Takatsuki, Japan*
- TPC 037 **Measurement of Homocysteine Thiolactone and Homocysteine in Human Plasma by LC/MS/MS**; Mary B. Satterfield¹; Katrice A. Lippa¹; Bryant C. Nelson²; ¹*National Institute of Standards and Technology, Gaithersburg, MD*; ²*Genzyme Corporation, Framingham, MA*
- TPC 038 **Determination of δ -Aminolevulinic Acid in the Human Urine by Liquid Chromatography-Tandem Mass Spectrometry**; Natalia M Felitsyn; George N Henderson; Peter W Stacpoole; *Department of Medicine, University of Florida, Gainesville, FL*
- TPC 039 **The Analysis of Urine Proteomic and Metabonomic Patterns for the Diagnosis of Cystitis**; David A Lucas¹; Brian Luke¹; Jack Collins¹; Que N Van¹; John Klose¹; Gwendolyn N Chmurny¹; DaRue A Prieto¹; Thomas P Conrads¹; Stanley K Burt¹; Sue K Keay²; Timothy D Veenstra¹; ¹*SAIC, Frederick, MD*; ²*University of Maryland School of Medicine, Baltimore, MD*
- TPC 040 **Development of an LC/MS/MS-Based Enzyme Assay for Testing Inducible Nitric Oxide Synthase (iNOS) Inhibitors**; Jinghua Zhang; Susanne Goeters; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*
- TPC 041 **Determination of Oxidized Phospholipids in Biological Samples by LC/ESI/MS/MS**; Lian Shan¹; MingJiang Sun²; Renliang Zhang¹; Zhongzhou Shen¹; Stanley L Hazen¹; ¹*Department of Cell Biology, Cleveland Clinic Foundation, Cleveland, OH*; ²*Department of Chemistry, Case Western Reserve University, Cleveland, OH*
- TPC 042 **Globotriaosylceramide Isoform Distribution in Fabry Patient and Normal Human Plasma by Liquid Chromatography/Tandem Mass Spectrometry**; Bryant C. Nelson; Shaparak Araghi; Dennis Wilkens; Thomas Roddy; John Thomas; Kate Zhang; Fei Wang; Crystal C.-C. Sung; Susan Richards; *Genzyme Corporation, Framingham, MA*
- TPC 043 **Quantitation of NTBC (Nitisinone, Orfadin) in Human Plasma by LC-ESI-MS/MS**; Katerina Sadilkova¹; Rhona M. Jack¹; C. Ronald Scott²; ¹*Children's Hospital and Regional Medical Center, Seattle, WA*; ²*University of Washington, Department of Pediatrics, Seattle, WA*
- TPC 044 **Arginine Adducts as Endogenous Inhibitors of nNOS: Analysis Using an LC/MS-Based Enzyme Assay**; Susanne Goeters; Tomoyuki Oe; Ian A. Blair; *Center of Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA*
- TPC 045 **An LC-MS/MS Method for Diagnosis of α -Mannosidosis**; Yan An¹; Robert D. Stevens¹; Joe T. R. Clarke²; David S. Millington¹; ¹*Duke University Medical Center, Durham, North Carolina*; ²*The Hospital for Sick Children, Toronto, Canada*
- TPC 046 **Phenotypic Characterization of Human Urine Proteins Using Mass Spectrometric Immunoassay**; Urban A. Kiernan¹; Dobrin Nedelkov¹; Kemmons A. Tubbs¹; Eric E.

- Niederkofler¹; Elizabeth McConnell²; Randall W. Nelson¹; ¹*Intrinsic Bioprobes, Inc., Tempe, AZ*; ²*Arizona State University, Tempe, AZ*
- TPC 047 **Top Down Proteomics of Transthyretin Variants using Accurate Mass Tags and Sequencing by LC-FT-ICR-MS**; Angelito I. Nepomuceno¹; H. Robert Bergen III¹; Steven R. Zeldenrust²; John F. O'Brien³; David C. Muddiman¹; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN*; ²*Department of Hematology, Mayo Clinic, Rochester, MN*; ³*Department of Clinical Biochemistry, Mayo Clinic, Rochester, MN*
- TPC 048 **Analysis of Angiotensin Converting Enzyme (ACE) Inhibitors and the Active Metabolites in Equine Urine and Plasma by LCMSMS**; Jeffrey Rudy¹; Cornelius Uboh¹; Mark Kahler¹; Jack Shellenberger¹; Lawrence Soma²; Yi Luo²; Fuyu Guan²; ¹*Pennsylvania Equine Toxicology and Research Center, West Chester, PA*; ²*University of Pennsylvania School of Veterinary Medicine, New Bolton, Kennet Square, PA*
- TPC 049 **SNP Genotyping Assays For Potential Prostate Cancer Markers**; Xiaoyang Zheng; Norman H. L. Chiu; *Department of Chemistry and Chemical Biology, Northeastern University, Boston, MA*
- TPC 050 **LC-MS/MS Quantification of Circulating Free Nitrotyrosine – Evidence of Elevated Free Nitrotyrosine in Hypertensive Patients**; H. Helen Wang; Susan A Lagerstedt; Ravinder J Singh; *Mayo Clinic, Rochester, MN*
- TPC 051 **A Simple, Sensitive and Specific LC/MS/MS Method for the Determination of Iothalamate and Iohexol in Plasma and Urine as Exogenous Markers of Glomerular Filtration Rate**; Minghong Jia¹; Hanno B. Richards²; Westley H. Reeves²; Vikas R. Dharmidharka³; George N. Henderson²; ¹*Biomedical Mass Spectrometry Lab, CRC, Univ. of Florida, Gainesville, FL*; ²*Dept. of Medicine, College of Medicine, Univ. of Florida, Gainesville, FL*; ³*Dept. of Pediatrics, College of Medicine, Univ. of Florida, Gainesville, FL*
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- DRUG METABOLISM: HIGH THROUGHPUT**
- TPD 052 **Development of a Rapid Method for pKa Determination of Compounds in Drug Discovery using Capillary Electrophoresis Tandem Mass Spectrometry with Cassette Injections**; Erick Kindt; Stephen Kurzyniec; Udeni Yapa; Charles Stankovic; Susan Glynn; Karen Dehring; *Pfizer, Ann Arbor, MI*
- TPD 053 **Highthroughput Online LC/MS/MS Simultaneous Determination of Dextromethorphan (CYP2D6, CYP3A) and Metabolites, Midazolam (CYP3A) and Metabolite in Human Plasma for Assessment of Phenotypic Activity**; Othman Akram; Chenier Dodard; Jacques Prevost; Rudolf Guilbault; *MDS/PS, Montreal, Canada*
- TPD 054 **Automated LC/MS/MS Cocktail Assay for Screening Compound Inhibition of Human Cytochrome P450s 1A2, 2A6, 2C8, 2C9, 2C19, 2D6 and 3A4**; Lin Deng; Thomas L Lloyd; Margaret Davis; Louis Leung; Yasmeen Hasan; Rasmy Talaat; *Wyeth Research, Collegeville, PA*
- TPD 055 **Method Development and Validation of A Novel Dual PPAR alpha/gamma agonist-Merck Compound A in Human Plasma Using On-Line Turbulent Flow Extraction and LC-MS/MS**; Xiaohui (Sophia) Xu; Kerri X Yan; Henry Song; Man-Wai Lo; *Merck & Co., Inc., West Point, PA*
- TPD 056 **Automated in-vivo Pharmacokinetic Screen in Drug Discovery using QuanLynx Software**; Cymbelene Nardo; Hong Mei; *Schering Plough Research Institute, Kenilworth, NJ*
- TPD 057 **Mass-Directed Purification of Drug Metabolites by SFC/MS**; Lu Zeng; Ron Xu; Anna Aparicio; Melinda Manuel; Daniel Kassel; *Syrrx, Inc, San Diego, California*
- TPD 058 **Staggered Chromatography for High Throughput Bioanalysis Using An Integrated MS Software**; Tabisam Khan¹; David R Little¹; Liyu Yang²; Jiwen Chen²; Parya Nouri²; Samy Tadros²; Patrick Rudewicz²; ¹*Waters MS Technologies Centre (Micromass), Manchester, UK*; ²*Schering-Plough Research Institute, Kenilworth, NJ*
- TPD 059 **Use of Highly Retentive Stationary Phase Packings in LC/MS**; Luisa M. Pereira¹; Rick Ludwig²; Mark Woodruff¹; ¹*Thermo Electron Corporation, Chromatography and Mass Spectrometry, Runcorn, Cheshire*; ²*Thermo Electron Corporation, Chromatography and Mass Spectrometry, Bellefonte, PA*
- TPD 060 **Determination of LAG078, a Lipid Modulator, in Dog Plasma Using Liquid Chromatography-Tandem Mass Spectrometry: Application in a Toxicokinetic Study**; Shari S Wu; Tapan K Majumdar; Sunanda Vedananda; Cindy Chen; Francis L.S. Tse; *Novartis Pharmaceuticals Corporation, East Hanover, NJ*
- TPD 061 **Assessing the Utility of Turbulent Flow Chromatography/Mass Spectrometry for In vivo Cassette Analysis**; Nalini Sadagopan¹; Brandon Pabst²; Lucinda Cohen¹; ¹*Pfizer Global Research and Development, Ann Arbor Laboratories, MI*; ²*Michigan State University, East Lansing, MI*
- TPD 062 **Comparison of LC-MS/MS and RIA Methods for Serum Nicotine Determination**; Gary D. Byrd; Riley A. Davis; *R. J. Reynolds Tobacco Company, Winston Salem, NC*
- TPD 063 **A Fully Automated Dual HPLC-MS/MS System for High Throughput Bioanalysis of In-Vitro ADME Samples**; Kenneth C Saunders; Drew Gibson; Caroline E Green; *Pfizer Global R&D, Sandwich, UK*
- TPD 064 **High Throughput - High Temperature LC/ Electropray-MS**; Jennifer A. Townsend; Robert D. Voyksner; *LCMS Limited, Raleigh, NC*
- TPD 065 **A Sensitive High-Throughput LC/MS/MS Assay for the Detection of Putative Organic Anion Transporter Substrates**; Diana C. Kazolias; John R. Soglia; John Janiszewski; Sabrina Zhao; Bo Feng; Mark J. Cole; *Pfizer, Inc., Groton, CT*
- TPD 066 **Evaluation of Micro-Turbulent Flow Chromatography/Tandem Mass Spectrometry for the Direct Analysis of Samples for Cytochrome p450 Inhibition Screening**; Rena Zhang; Debbie Dooney; Sue Crathern; James Yergey; Richard King; *Merck & Co., Inc., West Point, PA*
- TPD 067 **Utilization of an Automated Blood Sampling Device for Rat Pharmacokinetic Studies with Direct Bioanalysis by Nano-ESI-MS/MS from a Silicon Chip**; Marc Lastelle; Luc Scholliers; Sylviane De Broux; Jean-Marie Dethy; *Lilly Development Center, Mont-Saint-Guibert, Belgium*
- TPD 068 **Bio-analytical Quantitation by Direct Injection of Plasma Utilizing a Back-Flow Technique**; Shane M Hart; Ning Song; Ta-Kung Chen; Haig Bozgian; *Neurocrine Biosciences, San Diego, CA*
- TPD 069 **The Use of Parallel LC-MS/MS with Automated Optimization to Increase Throughput for the Quantification of Incubated Drug Candidate Samples**; Paul Courtney¹; Richard Weaver¹; Kendon Graham²; Tabisam Khan²; ¹*AstraZeneca R&D Charnwood, Physical and Metabolic Sciences, Loughborough, UK*; ²*Waters MS Technologies Centre (Micromass), Manchester, UK*
- TPD 070 **High-Throughput LC/MS/MS Analysis of Bupropion and its Metabolites in Human, Mouse, Rat and Dog**

- Plasma using a Monolithic Column;** Virginia Borges; Jack Henion; *Cornell University, Ithaca, NY*
- TPE 071 **Turbulent Flow Chromatography Approach in Support of Drug Discovery, – What “Generic” Method Should I Use for My “Non-generic” Library?;** Hamza Kandoussi; Thomas.L Lloyd; David Ayres; Craig Titsh; Rana Ramdass; Zhang Cai; Fangbiao Li; Alena Barry; William Adams; *Wyeth Research, Collegeville, PA*
- TPE 072 **Automated Mass Spectrometer Optimization, Method Development and Quantification;** Louis Maljers; Ed Gonzalez; Raymond Wilson; Huy Bui; *ThermoFinnigan, San Jose, CA*
- TPE 073 **Strategies for Enhancing Throughput in the Discovery Rat Pharmacokinetic Model Using the Packard Multiprobe II and TSQ Quantum;** Kimberly W. Dunn-Meynell; Samuel Wainhaus; Walter A. Korfmacher; *Schering Plough Research Institute, Kenilworth, NJ*
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- DRUG METABOLISM:
METABOLITE AND IMPURITY IDENTIFICATION**
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- TPE 074 **Characterization of the Unusual C-Demethylated Metabolites of the NK1 Receptor Antagonist, CJ-11,972, in Human Liver Microsomes And CYP3A Isoforms by LC-MS/MS;** Jinyan Lin; Kevin Colizza; Chandra Prakash; *Pfizer Global Research and Development, Groton, CT*
- TPE 075 **Glucosides Identified as Novel Hydromorphone Metabolites by LC/MSn Analysis;** Feng Gao¹; Danlin Wu¹; Douglas Zook¹; Carlo Sensenhauser²; Jan Miotto¹; Fred Tonelli²; Juergen Liefhold³; ¹*Purdue Pharma, L.P. International R&D, Ardsley, New York*; ²*Johnson & Johnson, Raritan, New Jersey*; ³*Purdue Pharma, L.P. International R&D, Mundipharma GmbH, Germany*
- TPE 076 **Structure Elucidation of Metabolites of Drug RO0730574 and their Quantification in Biological Fluids using HPLC Combined with Quadrupole-Linear Ion Trap Mass Spectrometry;** Manfred Zell¹; Christophe Husser¹; Rodolfo Gasser¹; Gerard Hopfgartner²; ¹*F. Hoffmann-La Roche Ltd, Pharma Research, Basel, Switzerland*; ²*University of Geneva, Laboratory of Pharm. Analytical Chemistry, Geneva, Switzerland*
- TPE 077 **Metabolite Detection and Identification System Designed to Accelerate Drug Discovery and Development;** Yoshihisa Sano; Shinki Kawaguchi; Tsutomu Yoshimura; Mami Gomibuchi; *Eisai Co., Ltd., Tsukuba, Japan*
- TPE 078 **Rapid Identification of Potential Metabolites in Complex Mixtures Using AutoShift, a Novel MS/MS Correlation Algorithm;** Jeffrey L Whitney¹; Ji Ma²; Shichang Miao²; Mark E Hail¹; David J Detlefsen¹; ¹*Novatia, LLC, Princeton, NJ*; ²*Tularik, Inc, South San Francisco, CA*; ³*Tularik Inc., South San Francisco, CA*
- TPE 079 **Duloxetine: A Study in Metabolism Diversity;** Todd Gillespie; Kenneth Cassidy; Ronald Lantz; Mary Pat Knadler; *Lilly Research Laboratories, Indianapolis, Indiana*
- TPE 080 **The Structure Elucidation of Metabolites of ICL670, a New Drug in the Treatment of β -thalassemia;** Gerard J Bruin¹; Josef Schneider²; Ulrike Glaenzel¹; Lukas Oberer²; Felix Waldmeier¹; ¹*Novartis Pharma AG, Preclinical Safety, Basel, Switzerland*; ²*Novartis Pharma AG, Preclinical Research, Basel, Switzerland*
- TPE 081 **Using Mass Spectrometric Approaches to Differentiate Between Possible Isomers of Sulfadiazine Metabolites;** Thomas Pfeifer¹; Jochen Tuerk²; ¹*INFU/University of Dortmund, Dortmund, Germany*; ²*IUTA, Duisburg, Germany*
- TPE 082 **Static Nanoelectrospray Ionization in Drug Metabolite Structure Elucidation;** Steven T Cook; David J Borts; Gary D Bowers; Michael J O'Mara; *GlaxoSmithKline, RTP, NC*
- TPE 083 **Distribution and Metabolism of Dipeptide FK228 (FR901228, NSC 630176) in Blood as Measured by Electrospray LC/MS/MS;** Kenneth K. Chan¹; Jim J. Xiao²; Guido Marcucci³; Michael Grever³; John Byrd³; ¹*Colleges of Pharmacy and Medicine, The Ohio State University, Columbus, OH*; ²*College of Pharmacy, BioMedical Mass Spectrometry Laboratory, Columbus, OH*; ³*College of Medicine and Public Health, Columbus, OH*
- TPE 084 **In Vitro Metabolism and Fragmentation Mechanism of Sildenafil Derivatives by Liquid Chromatography/Tandem Mass Spectrometry;** Jaeick Lee; Junghyun Son; Dong-Hyun Kim; *Korea Institute of Science and Technology, Seoul, South Korea*
- TPE 085 **Characterization of in vivo Metabolites of the Potent Tachykinin NK1 Receptor Antagonist, CP-122,721 in Sprague-Dawley Rats by HPLC/RAM/ESI/MS/MS;** John Davis; Amin Kamel; *Pfizer Global Research and Development, Groton, CT*
- TPE 086 **Understanding by MALDI-MS of Photobleaching Processes of Temoporfin Used in Photodynamic Therapy;** Natacha Lourette¹; Benoît Maunit¹; Marc Dodeller¹; Jean-François Muller¹; Lina Bezdetsnaya²; Carole Ramacci²; François Guillemin²; ¹*LSMCL Université de Metz, Metz, France*; ²*CAV faculté de médecine de Nancy, Nancy, France*
- TPE 088 **Strengths and Shortcomings of Automated Metabolite Identification Software Systems, and Their Effective Integration into Screening Programs;** Lucas J. Utley; Melissa Coache; Jakal Amin; *Charles River Laboratories, Discovery and Development Services, Worcester, MA*
- TPE 089 **Impurity and Degradation Product Analysis: High Sensitivity Quantitative and Qualitative Analysis Using a Hybrid Triple-Quadrupole-Linear Ion Trap Mass Spectrometer;** Tom Biesenthal; Tanya Gamble; Nadia Pace; Gary Impey; *Applied Biosystems/MDS Sciex, Concord, Canada*
- TPE 090 **Identification of Novel Degradation Products of Ketorolac Tromethamine and Determination of Ketorolac in Plasma by High Pressure Liquid Chromatography Coupled to MS/MS Detection;** Vida Pezeshk; Frank Beissel; Amy Pierce; Liesa Shanahan; Mourad Rahi; *Pace Analytical Services, Inc., Minneapolis, MN*
- TPE 091 **Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry – A Rapid Method for Metabolite Identification;** Shiaw-Lin Wu¹; Andreas Wiegand¹; Helmut Muenster¹; Jens Griep-Raming¹; Robert Malek¹; Payton Jacob III²; ¹*Thermo Electron, Bremen, Germany*; ²*University of California, San Francisco, CA*
- TPE 092 **Simultaneously Characterizing and Quantifying Chloramphenicol and its Metabolites Using LC-MS/MS;** Alicia Y. Du¹; Elliott Jones¹; Louise J. Basa¹; Ling Chen¹; Wenbao Li²; ¹*Applied Biosystems, Foster City, CA*; ²*Genelabs Technologies Inc., Redwood City, CA*
- TPE 093 **Investigation of a Novel Sulphonamide Cleavage in Microsomal Stability Assay by Ion Trap and Time of Flight Mass Spectrometers;** Marie-Anne Stenger; Andrew Osprey; Paul Scullion; *Organon Laboratories Ltd, Newhouse, Scotland*
- TPE 094 **Metabolic and Pharmacokinetic Studies of CKD-732 by LC/MS/MS;** Seung-Woon Myung¹; Hye-Ki Min¹; Myungsoo Kim¹; Ho Sup Lee²; Joon Kyum Kim²; Soon Kil Ahn²; Chung Il Hong²; ¹*Korea Institute of Science &*

- Technology, Seoul, Korea; ²CKD Research Institute, Chonan, Korea*
- TPE 095 **Identification of In-Vitro Metabolites of Indinavir, Using a Hybrid Triple Quadrupole / Linear Ion Trap (Q-trap) Mass Spectrometer;** Casey C Hao¹; Yongjin Yao²; Alicia Du¹; Patricia Bassett¹; ¹*Applied Biosystems, Foster City, CA; ²Alza Corporation, Mountain View, CA*
- TPE 096 **Identification of Rat Microsomal Metabolites of Potent Cannabinoid Receptor Ligands JWH-015, AM-630, and AM-251;** Qiang Zhang¹; Peng Ma¹; Weiqun Wang²; Richard B. Cole²; Guangdi Wang¹; ¹*Xavier University of Louisiana, New Orleans, LA; ²University of Louisiana, New Orleans, LA; ³University of New Orleans, New Orleans, LA*
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- DRUG METABOLISM: QUANTITATION**
- TPF 097 **LC-MS/MS Method for the Rapid and Sensitive Quantitation of Total 4-Methylnitrosamino-1-(3-pyridyl)-1-butanol (NNAL) in Human Urine Using a Normal Phase Chromatography;** Kirk Newland; Erica Carnes; Daryl Grafelman; Vincent Andaloro; Patrick Lin; *MDS Pharma Services, Lincoln, NE*
- TPF 098 **Rapid Method by Tandem Mass Spectrometry for Quantification of Sirolimus in A Paediatric Transplant Program;** Warren E. Walsh¹; Lawrence J. Fisher¹; John W. Callahan¹; Zul Verjee¹; ¹*The Hospital for Sick Children, Toronto, Canada; ²University Of Toronto, Toronto, Canada*
- TPF 099 **Development of a Quantitative LC/MS/MS Method for the Analysis of the Thymidylate Synthase Inhibitor CB 300638 (N-[N-{4-[N-((6RS)-2-methyl-4-oxo-3,4,7,8-tetrahydro-6H-cyclopenta[g]quinazolin-6-yl)-N-(prop-2-ynyl)amino]benzoyl}-L-g-glutamyl]-D-glutamic acid) in Mouse Plasma;** Florence I Raynaud; David Gibbs; Ann Jackman; *The Institute of Cancer Research, Sutton, UK*
- TPF 100 **Maintaining the Performance of a Validated Bioanalytical Method During Sample Analysis: A Case Study;** Edward G. Green¹; David J. Anderson¹; John R. Perkins¹; Richard S. Hucker²; David Muirhead²; ¹*Advion BioSciences, Inc., Ithaca, NY; ²Pfizer Global Research and Development, Sandwich, Kent, UK*
- TPF 101 **Profiling of Long Chain Fatty Acid Acyl Conjugates of Triamcinolone Acetonide Via GC-MS Analysis;** Walter C. Hubbard; Andrew E. Blum; Carol A. Bickel; Nicola M. Heller; Robert P. Schleimer; *Johns Hopkins University School of Medicine, Baltimore, MD*
- TPF 102 **Evaluation of Directly Coupled LC/MS/NMR as a Potential Qualitative and Quantitative Tool for Metabonomic Applications;** Asoka Ranasinghe; Xiaohong Liu; Joseph L. Cantone; Dieter Drexler; Xiaohua Huang; Mark Sanders; Vikram A. Roongta; Mary M. Sauer; Adrienne Tymiak; *Bristol-Myers Squibb Company, Wallingford, CT*
- TPF 103 **The Signal Suppression of Stable Labeled Analytes as the Internal Standard by Co-eluting Analytes in Quantitative Bioanalytical LC-MS/MS;** Wei Zhou; Shaolian Zhou; Richard L. Tollefson; Xiangyu Jiang; Naidong Weng; *Covance Laboratories Inc., Madison, WI*
- TPF 104 **A LC-MS/MS Method for Quantitation of a Small Molecule Drug Candidate in Rat Plasma, Urine and Synovial Fluid and Matrix Effect Evaluation in These Three Matrices Using API 4000 and API 3000;** Xiao Ding; Jeffrey X Duggan; Douglas M Fast; *Pharmacia, Skokie, IL*
- TPF 105 **Novel Quantification of An Endogenous Analyte, a-Ketoisocaproic acid (KIC), in Biofluid using Stable Isotope Labeled Calibration Standards;** Wenlin (Wendy) Li; Lucinda Cohen; Scott Fountain; Liming Zhang; Kathleen Szczap; *Pfizer Inc., Ann Arbor, MI*
- TPF 106 **Sensitive LC/MS/MS Method for the Determination of Total Propranolol in Human EDTA K3 Plasma;** Sébastien Gagné; Jean Couture; *Anapharm Inc., Québec, Canada*
- TPF 107 **A Highly Sensitive and Specific LC/MS/MS Method (3 pg/mL) for Quantitation of Fluticasone Propionate in Human Plasma;** Dawei Zhou; Guangchun Zhou; Christen J. Scotto; Joseph Caruso; Jinn Wu; Yong-Xi Li; *XenoBiotic Laboratories, Inc., Plainsboro, NJ*
- TPF 108 **Challenges During the Development of a Bioanalytical Method for Conjugated Duloxetine Metabolites in Human Plasma; Chromatographic Separation, Sequential SPE, and the Use of Positive and Negative Ion Mass Spectrometry;** Julie D. McCulloch; Fengjiun Kuo; Mary Pat Knadler; Darlene K. Satonin; *Eli Lilly and Company, Indianapolis, IN*
- TPF 109 **Sensitive LC/MS/MS Method for the Determination of Raloxifene in Human EDTA K3 Plasma;** Isabelle M Lévesque; Jean Couture; *Anapharm Inc., Québec, Canada*
- TPF 110 **Development and Validation of Bioanalytical Method for a Novel Vitamin D Analog;** Ago B Ahene¹; Thuy Tran¹; Douglas Clark¹; Flora Chang¹; Kelly Young¹; Jeremy McCabe¹; Irving Fong²; Thomas Tarnowski¹; ¹*Roche Bioscience, Palo Alto, CA; ²CV Therapeutics, Palo Alto, CA*
- TPF 111 **Quantitation of Verapamil and Normethyl-verapamil Enantiomers in Human Plasma by LC/MS/MS;** Jing Ke; Sreedhara Chaganty; Allan Xu; *SFBC Analytical Laboratories, Inc., North Wales, PA*
- TPF 112 **Extraction and LC-MS-MS Analysis of Abacavir in Complex Biological Matrices;** T. Nicole Clark; Catherine A. White; Michael G. Bartlett; *The University of Georgia, Athens, GA*
- TPF 113 **A Fast LC/MS/MS Method for the Simultaneous Quantitation of SCIO-469 and Three Metabolites in Human Plasma;** Satish I Rao; Jennifer Amundson; Beth Fernandez; Jin Shu; Maurice Standlee; James Tovera; Vinh Tran; Yang Wang; Rodney A Jue; *Scios, Inc., Sunnyvale, CA*
- TPF 114 **Simultaneous Quantitation of Dextromethorphan and Automated Identification and Quantitation of the Main Metabolites in Rat Plasma by the Coupling of Micro Turbulent Fluid Chromatography, High Performance Liquid Chromatography and Mass Spectrometry;** Lars Ynddal; *Novo Nordisk A/S, Dept. of Drug Metabolism, Maaloev, Denmark*
- TPF 115 **Sensitive LC/MS/MS Method for the Determination of Paroxetine in Human EDTA K3 Plasma with Multiprobe II EX;** Patrice Arcand; Jean Couture; *Anapharm, Québec, Canada*
- TPF 116 **Determination of PEG Conjugated and Free Retinoic Acid in Rat Plasma Using an LC-MS-MS Method;** Steven J Lawson; Clark March; Chet Leach; *Nektar Therapeutics, San Carlos, CA*
- TPF 117 **Simultaneous Determination of Glipizide and Rosiglitazone Unbound Drug Concentrations in Plasma by Equilibrium Dialysis and LC-MS/MS;** Zhongping John Lin¹; Daksha Desai-Krieger²; Linyee Shum¹; ¹*Avantix Laboratories, Inc., New Castle, DE; ²Johnson & Johnson Pharmaceutical Research & Development, Spring House, PA*
- TPF 118 **Quantitative Analysis of CPT-11 (Camptosar), SN-38, and APC in Human Plasma by HPLC/MS/MS;** Barbara A. Duncan¹; Richard A. Johnson²; Michael J. Herrera²; ¹*Pharmacia, Kalamazoo, Michigan; ²AvTech Laboratories, Inc., Kalamazoo, MI*

ENVIRONMENTAL

- TPG 119 **Investigation of New Disinfection By-Products in Drinking Water Using Solid Phase Extraction Coupled with Mass Spectrometry;** Salvador J. Pastor¹; Stuart W. Krasner¹; Howard S. Weinberg²; Susan D. Richardson³; ¹Metropolitan Water District of Southern California, La Verne, CA; ²University of North Carolina, Chapel Hill, NC; ³U.S. Environmental Protection Agency, Athens, GA
- TPG 120 **Applications of Underwater Mass Spectrometers in the Marine and Freshwater Environment;** Peter G. Wenner; Friso H.W. van Amerom; John E. Edkins; Strawn K. Toler; Karsten Koehn; Ryan J. Bell; Robert T. Short; *University of South Florida, St. Petersburg, FL*
- TPG 121 **HPLC/ESI-Quadrupole Ion Trap Mass Spectrometry for Simultaneous Quantification of Poly-dispersed Anionic, Amphoteric and Nonionic Surfactants in Membrane Bioreactors for Treating Simulated Graywater and Urine;** Lanfeng H. Levine¹; Jay L. Garland¹; Jodie V. Johnson²; ¹Dynamac Corporation, Kennedy Space Center, FL; ²University of Florida, Gainesville, FL; ⁴University of Florida, Gainesville, FL
- TPG 122 **ESI-MS Characterization of Hydrolytic Lignin, a Precursor of Humic Acids;** Kate Stuttaford¹; John Carey²; Mehran Alaei²; ¹Department of Chemistry, University of Guelph, Guelph, Ontario; ²National Water Research Institute, Burlington, Ontario
- TPG 123 **Analysis of Volatile Organic Compounds in Drinking Water by USEPA Method 524;** Patrick J. O'Brien; *Thermo Electron Corporation, Somerset, NJ*
- TPG 124 **Investigation of the Behaviour of Hexabromocyclododecane under Negative ESI and APCI LC/MS/MS Conditions;** Gordia MacInnis¹; Gregg Tomy²; Wes Budakowski²; Chris Marvin¹; Mehran Alaei¹; ¹National Water Research Institute, Environment Canada, Burlington, Ontario; ²Department of Fisheries and Oceans, Freshwater Institute, Winnipeg, Manitoba
- TPG 125 **Application of a Bioanalytical Method Validation Approach to the Quantitation of Perfluorooctanoic Acid in Human Serum;** David J. Anderson¹; Kimberly L. Norwood¹; Stephen Lowes¹; Mary A. Kaiser²; Barbara S. Larsen²; ¹Advion BioSciences, Inc., Ithaca, NY; ²Dupont Experimental Station, Wilmington, DE
- TPG 126 **Identification of Compounds in South African Stream Samples Using Ion Composition Elucidation (ICE);** Andrew H. Grange¹; Papo M. Thomas²; Solomon Mathebula²; G. Wayne Sovocool¹; ¹Environmental Sciences Division, U.S. EPA, Las Vegas, NV; ²Dept. of Water Affairs and Forestry, Institute for Water Quality, Pretoria, South Africa
- TPG 127 **Investigation of Anionic and Nonionic Fluorosurfactants by Liquid Chromatography-Mass Spectrometry;** Bogdan Szostek; Janet C. Maslanka; Vladimir Capka; *DuPont Haskell Laboratory for Health and Environmental Sciences, Newark, DE*
- TPG 128 **Analytical methods and Quality Assurance Criteria for LC/ES/MS Determination of PFOS in Fish Tissue, Blood Serum, and Bile;** Douglas W. Kuehl; *U.S. Environmental Protection Agency, Duluth, MN*
- TPG 129 **Quantitative Determination of Fluorotelomer Sulfonates in a Groundwater System;** Melissa M. Schultz; Douglas F. Barofsky; Jennifer A. Field; *Oregon State University, Corvallis, OR*
- TPG 130 **Membrane Introduction Mass Spectrometry (MIMS) as a Real-Time Monitor for Organic Contaminant Destruction by Advanced Photo-Oxidation Processes (AOP);** Janet H. L. Nelson; Duane A. Friesen; Erik T. Krogh; *Chris G. Gill*; *Malaspina University College, Nanaimo, BC, Canada*
- TPG 131 **Mass Spectrometric Characterization of Two Lipopeptide Biosurfactants, Putisolvin I and II, Which Inhibit;** Russell Pickford¹; Irene Kuiper²; Ellen L. Lagendijk²; Jeremy Derrick³; Guido V. Bloemberg²; Jane E. Thomas-Oates¹; ¹University of York, York, UK; ²University of Leiden, Leiden, Netherlands; ³UMIST, Manchester, UK
- TPG 132 **GC/MS Identification of Drinking Water Disinfection By-products From Milwaukee's New Ozonation Plants;** Alfred D. Thruston, Jr.¹; Susan D. Richardson¹; Lon A. Couillard²; Carrie Lewis²; Pat Klappa²; ¹U.S. Environmental Protection Agency, National Exposure Research Lab., Athens, GA; ²Milwaukee Water Works, Milwaukee, WI
- TPG 133 **A Novel Time-of-Flight MS for Rapid Quantitation of Persistent Organic Pollutants in Environmental Matrices;** Matt Lasater¹; Lin Lu²; Jonathan Hughes²; Meredith Conoley¹; ¹Thermo Electron, Austin, TX; ²Thermo Finnigan, Austin, TX; ³Thermo Hypersil Keystone, Runcorn, UK; ⁴Thermo Electron, Runcorn, UK
- TPG 134 **De Novo Identification of Trace-Level Polar Compounds in Water by Electro Spray Ionization (ESI) High-Field Asymmetric Waveform Ion Mobility Spectrometry (FAIMS) on a Q-Star Time-of-Flight Mass Spectrometer;** Wojciech Gabrylski; Kenneth L. Froese; Steve E. Hrudey; *Department of Public Sciences, University of Alberta, Edmonton, Canada*
- TPG 135 **SPME/Cryotrap-GC/MS for Analysis of MTBE, ETBE and TAME in Water;** Maw-Rong Lee; Chi-Chi Chou; He-Hsuan Hsiao; *National Chung-Hsing University, Taichung, Taiwan, R. O. C.*
- TPG 136 **Quantitation of Anionic Surfactants by Flow-Injection Electro Spray Mass Spectrometry (FIA-ESI-MS);** Maria Cristina A. Dancel¹; Jewel Racquel S. Unson²; Fabian M. Dayrit³; ¹Chemistry Department, University of Florida, Gainesville, FL; ²Department of Chemistry, Ateneo de Manila University, Quezon City, Philippines; ³National Chemistry Instrumentation Center, Ateneo de Manila University, Quezon City, Philippines
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- TPG 138 **Analysis of Polychloroalkanes in Environmental Samples by Metastable Atom Bombardment (MAB) High-Resolution Mass Spectrometry;** Serge Moore¹; Louis Vromet¹; Bernard Rondeau²; ¹Centre d'Expertise en Analyse Environnementale, Environment Quebec, Laval, Quebec, Canada; ²Centre St-Laurent, Environment Canada, Montreal, Quebec, Canada
- TPG 139 **Low-Level Determination of Perchlorate in Drinking Water Using Ion Chromatography Mass Spectrometry;** Elizabeth J. Hedrick¹; Rosanne Slingsby²; David Munch¹; Daniel Hautman¹; ¹U.S. Environmental Protection Agency, Cincinnati, OH; ²Dionex Corporation, Sunnyvale, CA
- TPG 140 **Sonic Spray Ionization (SSI) in LC-MS Analysis of Endocrine Disruptors in the Environment;** Tom Benijts¹; Wolfgang Guenther²; Willy Lambert¹; Andre De Leenheer¹; ¹Laboratory of Toxicology, Ghent University, Ghent, Belgium; ²Merck KGaA, Darmstadt, Germany
- TPG 141 **GC-MS Comparison of the Behavior of Chlorine and Sodium Hypochlorite Towards Organic Matter Dissolved in Water;** Albert T. Lebedev; Gulnara M. Shaydullina; Natalia A. Sinikova; Nina V. Harchevnikova; *Moscow State University, Moscow, Russia*
- TPG 142 **GC and LC Chromatographic, and EI, CE, +/- CI and ES MS and MS/MS Spectra of Salts and Amides of Perfluorooctanesulfonic Acid;** Boris Rozyanov¹; Douglas Kuehl²; ¹Aspen Research, White Bear Lake, MN; ²U.S. Environmental Protection Agency, Duluth, MN

TPG 143 **Determination of the Insecticide Imidacloprid and its Degradation Products in Groundwater by LC-MS/MS;** Francois Houde¹; Carole Veillette¹; Christian Deblois¹; Isabelle Giroux²; ¹Centre d'Expertise en Analyse Environnementale du Quebec, Quebec, Canada; ²Ministere de l'Environnement du Quebec, Quebec, Canada

FTMS

TPH 144 **Isolation of Multiple Charge Studies of Proteins for Improved MS/MS Performance using IRMPD and FTMS;** Charley C. Langley; Petr Novak; Gary H. Kruppa; Richard Behrens; *Sandia National Laboratory, Livermore, CA*

TPH 145 **Overcoming Limitation of Analog-to-Digital-Converter (ADC) to Extend Low Mass Range of FT-ICR Mass Spectrometers;** Paul L. Tremblay; Timothy R. McJunkin; Jill R. Scott; *Idaho National Engineering and Environmental Laboratory (INEEL), Idaho Falls, ID*

TPH 146 **Site Specific Electron Capture: Thioether Bridges in Lantibiotics and Zn²⁺-binding in the Protein Colicin E9 Dnase;** Anne J. Kleinnijenhuis¹; Marc C. Duursma¹; Albert J.R. Heck²; Ron M.A. Heeren¹; ¹FOM-AMOLF, Amsterdam, The Netherlands; ²Utrecht University, Utrecht, The Netherlands

TPH 147 **Broadband Phase Correction of FT-ICR MS Spectra via Simultaneous Excitation and Detection;** Steve C. Beu¹; Christopher L. Hendrickson²; John P. Quinn²; Greg T. Blakney²; Alan G. Marshall²; ¹S. C. Beu Consulting, Austin, TX; ²National High Magnetic Field Laboratory, Tallahassee, FL

TPH 148 **Enhanced Gated Trapping of High Mass In-Cell-MALDI Generated Ions for the FTICR Mass Spectrometry;** Sven Burmester; Karl P. Wanczek; *Inorg. & Phys. Chemistry, University of Bremen, Bremen, Germany*

TPH 149 **The Advantages and Challenges of MALDI Cryogenic FTICRMS;** Peter B. O'Connor; *Boston University School of Medicine, Boston, MA*

TPH 150 **Ion Threshing: Collisionally-Activated Dissociation in an External Octopole Ion Trap by Oscillation of an Axial Electric Potential Gradient;** Melinda A. McFarland¹; Christopher L. Hendrickson²; Alan G. Marshall²; ¹Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL; ²National High Magnetic Field Laboratory, Tallahassee, FL

TPH 151 **Surface-Induced Dissociation of MALDI Ions in FT-ICR MS;** John J Hache; Jean H Futrell; Julia Laskin; *Pacific Northwest National Laboratory, Richland, WA*

TPH 152 **Screened Miniature Cylindrical ICR-Cells : Computer Simulations and Experimental Investigations;** Frank Luebke; Karl-Peter Wanczek; *Institute of Inorganic & Physical Chemistr, University of Bremen, Bremen, Germany*

TPH 153 **Tcl Automation of the MIDAS Data Acquisition System for Data-dependent Electron Capture Dissociation;** Mitchell L. Meade; Michael A. Freitas; *The Ohio State University, Columbus, OH*

TPH 154 **Multipole-Storage Assisted Dissociation for the Characterization of Intact Proteins;** Chongle Pan¹; Robert Hettich²; ¹Genome Science and Technology Graduate School, University of Tennessee, Knoxville, TN; ²Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN

TPH 155 **A Modular Data and Control System to Improve Sensitivity, Selectivity, Speed of Analysis, Ease of Use, and Transient Duration in an External Source FTICR-MS;** Todd H. Mize; Marc Duursma; Marco Seynan; Marco

Konijnenburg; Dirk-Jan Spaanderman; Ionna Taban; Ron M. A. Heeren; *FOM-AMOLF, Amsterdam, Netherlands*
 TPH 156 **SORI-ECD: Looking at the Ways to Improve Electron Capture Dissociation Efficiency;** Michael V. Gorshkov¹; Christophe D. Masselon²; Eugene N. Nikolaev¹; Harold R. Udseth²; Ljiljana Pasa-Tolic²; Richard D. Smith²; ¹IEPCP, Russian Academy of Sciences, Moscow, Russia; ²EMSL, Pacific Northwest National Laboratory, Richland, WA

INSTRUMENTATION: ION SOURCES (ESI & APP)

TPI 157 **Proton Transfer Reaction Mass Spectrometry - PTR-ITMS;** Peter Prazeller¹; Michael L. Alexander¹; Bertram T. Jobson¹; Elena Boscaini²; Peter T. Palmer³; ¹Institute for Ion Physics, University of Innsbruck, Innsbruck, Austria; ²Pacific Northwest National Laboratory, Richland, WA; ³Dept. of Chemistry and Biochemistry, San Francisco State University, San Francisco, CA

TPI 158 **Simultaneous Quantitation and Identification using MRM Triggered MS/MS Experiments on a Hybrid Triple-Quadrupole/Linear Ion Trap with Photoionization;** Fiona Anthes; Mauro Aiello; Yves LeBlanc; Jean-Francois Alary; *Appliedbiosystem/MDS SCIEX, Concord, Canada*

TPI 159 **Development of Cold-Spray Ion Source for LC-TOFMS;** Jun Tamura¹; Tatsuji Kobayashi¹; Tetsuichiro Morita¹; Yutaka Takahashi¹; Junichi Osuga¹; Kiyotaka Konuma¹; Kazuko Tanaka¹; Yoshihisa Ueda¹; Kentaro Yamaguchi²; ¹JEOL Ltd., Tokyo, Japan; ²Chiba University, Chiba, Japan

TPI 160 **Charge Reduction Electrospray Mass Spectrometry of Protein Cations with Corona Discharge Generated Anions;** Brian L. Frey; Michael S. Westphall; Lloyd M. Smith; *University of Wisconsin, Madison, WI*

TPI 161 **Improved Signal Intensity and Signal-to-Noise Ratio in ESI MS by Means of the "Wetted Spray Mode";** Guenter Klesper¹; Gregor Fushshoeller²; Heike Klesper²; Franz Wilhelm Röllgen¹; ¹Institute of Physical Chemistry, University of Bonn, Bonn, Germany; ²CARBOTEC GmbH, Bergisch Gladbach, Germany

TPI 162 **Atmospheric Ion Sampling Signal-to-Noise Ratio Improvement at High LC Flow Rates;** Charles Jolliffe; Saad Khbeis; Dragan Vuckovic; *IONICS Mass Spectrometry Group Inc., Concord, Canada*

TPI 163 **Characterization and Optimization of an Atmospheric Pressure Photoionization (APPI) Interface for Routine Use in Drug Discovery and Development;** Nadège Hélias; Steve Cepa; *Abbott Laboratories, Abbott Park, IL*

TPI 165 **Performance Evaluations of a Q-TOF UltimaTM with the Addition of an Electrodynamic Ion Funnel;** Harold R Udseth¹; Keqi Tang¹; Richard D Smith¹; Kevin Giles²; John Hoyes²; Robert Bateman²; ¹Pacific Northwest National Laboratory, Richland, WA; ²Micromass UK Ltd, Manchester, UK

TPI 166 **Atmospheric Pressure Photoionization Mass Spectrometry: High Throughput Applications;** Terri L. Quenzer; Ben Bolanos; Brandi Cooper; Michael J. Greig; Jessica M. R. Bylund; Catherine Pham; *Pfizer Global R&D - La Jolla, San Diego, CA*

TPI 167 **Generating Electrosprays from an Optical Fiber Coated with Gold Nanoparticles and A Tungsten Fiber Coated with Nanowires;** Jingyueh Jeng; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

TPI 168 **Nanomolar Detection of Phosphorylated Peptides by Neutral Loss and Precursor Ion Scanning Linear Ion Trap with an Atmospheric Pressure Charged Particle Discrimination (APCPD) Interface;** Charles C. Liu; Thomas Covey; Lorne Fell; Feng Zhong; Bradley

- Schneider; *Applied Biosystems/MDS SCIEX, Concord, Ontario, Canada*
- TPJ 169 **Direct Link Between Current Oscillations and Taylor Cone Instabilities in Electrospray**; Lida Parvin; Linda Heffernan; Ioan Marginean; Akos Vertes; *George Washington University, Washington, DC*
- TPJ 170 **LC-MS Investigation of Atmospheric Pressure Photoionization Versus Electrospray Ionization and Atmospheric Pressure Chemical Ionization using Eleven Test Compounds**; David E. McKenzie; Lisa L. McDermott; *Pharmacia, St. Louis, MO*
- TPJ 171 **Two and Three Laser Ion Trap Mass Spectrometry**; August A. Specht; Micheal W. Blades; *University of British Columbia, Vancouver, Canada*
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- INSTRUMENTATION: NEW CONCEPTS**
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- TPJ 172 **A New Concept for Sample Introduction in Bioanalytical LC-MS**; Martijn J Hilhorst¹; Jaap Wieling²; Bert Ooms¹; ¹*Spark Holland BV, Emmen, The Netherlands*; ²*Xendo Laboratories, Groningen, The Netherlands*
- TPJ 173 **Theory and Simulations of Resonance Excitation of Ion Vibrations in Non-Linear and Pure Quadrupole Ion Traps**; Michael Soudakov; Sumio Kumashiro; *Shimadzu Research Laboratory Ltd., Manchester, UK*
- TPJ 174 **Implementation and Benefits of “Universal Collision Energy (CE)” on an Hybrid Quadrupole Linear Ion Trap**; Nadia Pace; Tanya Gamble; J.C. Yves Le Blanc; Nic Bloomfield; *Applied Biosystems|MDS Sciex, Concord, Canada*
- TPJ 175 **The New Approach for Selection of Ions Having Different Charge States in RF Multipole Ion Traps: Theory and Experimental Verification**; Aleksey V. Tolmachev; Andrey N. Vilkov; Ljiljana Pasa-Tolic; Keqi Tang; Harold R. Udseth; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- TPJ 176 **Mass Spectrometry with Supersonic Molecular Beams – GC-MS and LC-MS**; Aviv Amirav; Alexander B. Fialkov; Alexander Gordin; Ori Granot; *Tel Aviv University, Tel Aviv, Israel*
- TPJ 177 **Infrared Multiphoton Dissociation with a Hollow Fiber Waveguide**; James C Hannis; Jared J Drader; Steven A Hofstadler; *Ibis Therapeutics--A Div of ISIS Pharmaceuticals, Carlsbad, CA*
- TPJ 178 **Multiple Quadrupole 2D Trap Time-Of-Flight Mass Spectrometer**; Craig M. Whitehouse; Vsevolod Rakov; Gholamreza Javahery; Lisa M. Cousins; David Welkie; Iliia Tomski; *Analytica of Branford Inc., Branford, CT*
- TPJ 179 **Application of Orthogonal MALDI for Quantitation of Small Molecules using a Triple Quadrupole Mass Spectrometer**; Peter Kovarik; Jay J. Corr; Thomas R. Covey; *MDS SCIEX, Concord, Canada*
- TPJ 180 **Automated Orthogonal ESI Control System for Variable Flow Rate LC/MS**; Mike S. Lee¹; Gary A. Valaskovic²; James P. Murphy²; ¹*Milestone Development, Newtown, PA*; ²*Milestone Development Services Inc, Newtown, PA*; ³*New Objective Inc, Woburn, MA*
- TPJ 181 **New Active Splitting Device: an Innovative Approach for Normal Phase Liquid Chromatography - Mass Spectrometry**; Franck Himbert¹; Patrick Chaimbault¹; Patrick Favetta¹; Claire Elfakir¹; Michel Dreux²; Michel Lafosse¹; ¹*ICOA, Orléans, France*; ²*SEDERE, Alfortville, France*
- TPJ 183 **Charge State Discrimination by Means of Ion Storage at Intermediate Pressures**; Jason L Wildgoose; John B Hoyes; Robert H Bateman; Anthony J Gilbert; *Waters Corporation, Manchester, UK*
- TPJ 184 **An Ion Trap with Rectilinear Geometry**; Zheng Ouyang; Guangxiang Wu; Hongyan Li; Huanwen Chen; Jason R. Green; R. Graham Cooks; *Department of Chemistry, Purdue University, West Lafayette, IN*
- TPJ 185 **Rapid and Cost-Effective Prototyping of Plastic Microfabricated Devices for Mass Spectrometry**; Justin S Mecomber¹; Patrick A Limbach¹; ¹*University of Cincinnati, Cincinnati, OH*; ²*University of Cincinnati, Cincinnati, OH*
- TPJ 186 **Analytical Performances of a Novel Digital Ion Trap (DIT) Mass Spectrometer Equipped with an Electrospray Source**; Francesco Brancia; Li Ding; Michael Sudakov; Sumio Kumashiro; *Shimadzu Research Laboratory, Manchester, UK*
- TPJ 187 **Dynamic Well in Purely Electrostatic Periodic Systems**; Anatoli Verentchikov; *Institute for Analytical Instrumentation, St. Petersburg, Russia*
- TPJ 188 **Simultaneous MS/MS - All the products of all the precursors all the time**; Christie G Enke; *University of New Mexico, Albuquerque, NM*
- TPJ 189 **A LC-MS Orthogonal TOF (Time of Flight) Mass Spectrometer with Increased Transmission, Resolution, and Dynamic Range**; Kevin Howes; Jason Wildgoose; Martin Green; Mike McCullagh; *Waters Corporation, Micromass UK Ltd, Manchester, United Kingdom*
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- ION STRUCTURES: ENERGETICS**
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- TPK 190 **Experimental and Theoretical Studies of the Fragmentation of an Adenine-Steroid Adduct**; Daryl Giblin; Harald Koefeler; Zhi Yang; Michael L. Gross; *Washington University, St. Louis, MO*
- TPK 191 **An Experimental and Theoretical Study of Radical Cationic Tripeptides Generated by Copper – Ligand Complexes**; Ivan K. Chu¹; Corey N.W. Lam¹; Jenny C.Y. Chan¹; Christopher F. Rodriguez Rodriguez²; ¹*The University of Hong Kong, Hong Kong (SAR) China, China*; ²*McNeese State University, Lake Charles, LA*
- TPK 192 **IR Photofragment Spectroscopy with Fourier Transform Mass Spectrometry: A New Method for Characterization of Gaseous Ion Conformations**; Cheng Lin; HanBin Oh; Harold Hwang; Barry K. Carpenter; Fred W. McLafferty; *Cornell University, Ithaca, NY*
- TPK 193 **Chiral Ammonium Ion Recognition by Tris(oxazoline) Receptor in the Gas Phase: The CID Curve-Shift Method for the Relative Binding Energy Measurement**; Jun-Ho Jeon¹; Chi-Hu Park²; Kyo-Han Ahn¹; Yoon-Seok Chang²; Byung-Hoon Kim²; Seung-Koo Shin¹; ¹*Dept. Chemistry, POSTECH, Pohang, Korea*; ²*School of Environmental Science and Engineering, POSTECH, Pohang, Korea*
- TPK 194 **The Stabilization of Gas-Phase Zwitterions by Cyclodextrins**; Xin Cong; Michele Stone; Seonghee Ahn; Carlito B. Lebrilla; *Department of Chemistry, University of California, Davis, CA*
- TPK 195 **Dynamics of n+/n- Ion/Ion Reactions in a Quadrupole Ion Trap Mass Spectrometer**; Paul A. Chrisman¹; J. Mitchell Wells²; Scott A. McLuckey¹; ¹*Department of Chemistry, Purdue University, West Lafayette, IN*; ²*Griffin Analytical, West Lafayette, IN*
- TPK 196 **Isolation and Characterization of a Dimeric Degradate of a Novel Insulin Sensitizer Using LC/MS**; Michael H. Wang; Henry Wu; Xue-Zhi Qin; Tsang-Lin Hwang; *Merck & Co., Inc., West Point, PA*
- TPK 197 **FRET Measurements of Trapped Oligonucleotide Anions**; Allison S Danell; Joel H Parks; *Rowland Institute at Harvard, Cambridge, MA*
- TPK 198 **Cationized Amino Acid and Amino Acid Heterodimer Structures by *ab initio* Calculations and Experimental Validation**; Sophie Rochut¹; Claude Pepe¹; Jean-Paul Paumard¹; Jean-Claude Tabet²; ¹*LADIR, UMR 7075*

- TPK 199 *Université Pierre et Marie Curie, Paris, France;*²*LCSOB, UMR 7613 Université Pierre et Marie Curie, Paris, France*
Binding Energy of Water to Cationized Amino Acids: Formation of Gas-Phase Zwitterions; Andrew S. Lemoff¹; Matthew F. Bush²; Evan R. Williams¹; ¹*University of California, Berkeley, CA;* ²*Carleton College, Northfield, MN*
- TPK 200 **Collision Induced Dissociation Studies of Alkali Metal Adducts of Tetracyclines and Antiviral Agents by Electrospray Ionization, Gas Phase H/D Exchange and Multiple Stage Mass Spectrometry;** Amin, M Kamel¹; Burnaby Munson²; ¹*Pfizer Global Research and Development, Groton, CT;* ²*Dept. of Chem. and Biochem. University of Delaware, Newark, DE*
- TPK 201 **An Experimental Investigation of the Internal Energy of Neutral Val-Pro Desorbed via Laser-induced Acoustic Desorption in a Fourier-transform Ion Cyclotron Resonance Mass Spectrometer (LIAD FT-ICR);** Ryan C Shea; Christopher J Petzold; Hilka I Kenttamaa; *Purdue University, West Lafayette, IN*
- TPK 202 **Thermodynamics and Structure of the Proton-Bound Clusters of Glycine in Gas Phase;** Serguei A. Raspopov; Terry B. McMahon; *University of Waterloo, Department of Chemistry, Waterloo, Ontario, Canada*
- TPK 203 **Determination of Amino Acids and Modified Amino Acids Acidity Values Using the Kinetic Method by ESI/ITMS;** Sakina Mezzache; Carlos Afonso; Philippe Karoyan; Françoise Fournier; Jean-Claude Tabet; *Laboratoire de Chimie Structurale Organique et Biologique, Paris VI, Paris, France*
- TPK 204 **Structure Identification of the Degradation Products by LC/MS;** Nona Khaselev; Brent Kleintop; Gerald DiDonato; *Bristol-Myers Squibb, New Brunswick, NJ*
- TPK 205 **Relative Binding Energies of Histidine, Arginine, and Lysine-Containing Peptides to Metalloporphyrins: A CID Experiment;** Emily E. Jellen; Victor Ryzhov; *Northern Illinois University, DeKalb, IL*
- TPK 206 **Cluster Formation and Fragmentation of Medium-sized Peptides Observed by Multiphoton Ionization;** Osama Abd El Rahman; Juergen Grotemeyer; *Institute for Physical Chemistry, University Kiel, Kiel, Germany*
- TPK 207 **Determination of the Gas-Phase Activation Energy for the Unimolecular Dissociation of a Non-Covalent Complex by infrared Multiphoton Dissociation Tandem Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Mathias Schäfer¹; Carsten Schmuck²; Martin Heil²; Helen J. Cooper³; Christopher L. Hendrickson³; Michael J. Chalmers³; Alan G. Marshall³; ¹*Institute for Organic Chemistry, University Cologne, Cologne, Germany;* ²*Institute for Organic Chemistry, University Warrzburg, Warrzburg, Germany;* ³*ICR Program, NHMFL, Florida State University, Tallahassee, FL*
- TPK 208 **Peptide Radicals Derived from Monolithiated and Dilithiated Gly-Phe and Phe-Gly;** Francesco Pingitore; Chrys Wesdemiotis; *University of Akron, Akron, OH*
- TPK 209 **The Performance of HF, MP2 and B3-LYP on the Proton and Electron Affinities of Semiquinone Flavins;** Richard A Ochran; Douglas P Ridge; *University of Delaware, Newark, DE*
- TPK 210 **The Acidity of Adenine and Adenine Derivatives and Biological Implications: A Computational and Experimental Gas Phase Study;** Jeehiun K. Lee; Seema Sharma; *Rutgers University, Piscataway, NJ*
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- LIPIDS: BIOCHEMISTRY AND STERIODS**
- TPL 212 **Stereoisomeric Effects in EI and CI Mass Spectra of 12-Hydroxy-Steroid Derivatives;** Vladimir G. Zaikin; Roman S. Borisov; *Topchiev Institute of Petrochemical Synthesis, RAS, Moscow, Russia*
- TPL 213 **Mechanisms of Intracellular Stabilization of Leukotriene A₄;** Jennifer S Dickinson; Dennis R Voelker; Robert C Murphy; *National Jewish Medical and Research Center, Denver, CO*
- TPL 214 **Adduction of RNA by Leukotriene A₄;** Jessica L Krank¹; Robert C Murphy²; ¹*University of Colorado Health Sciences Center, Denver, Colorado;* ²*National Jewish Medical and Research Center, Denver, CO*
- TPL 215 **Metabolic Conversions of DHEA and Related Steroids in Differentiating 3T3-L1 Adipocytes: a Liquid Chromatographic-Mass Spectrometric Study;** Francisco E Gomez¹; Ashok Marwah²; Padma Marwah²; Henry A Lardy²; James M Ntambi¹; Brian G Fox¹; ¹*Department of Biochemistry, Madison, WI;* ²*Institute for Enzyme Research, Madison, WI*
- TPL 216 **Ethanol-induced Alteration of Hippocampal Phospholipids by Liquid Chromatography-Mass Spectrometry: Effect of Chronic Ethanol Exposure;** Zhiming Wen; Hee-Yong Kim; *National Institutes of Health, Rockville, MD*
- TPL 217 **Mass Spectral Analysis of Biologically Active Ozonized Cholesterol Products;** Melissa K. Pulfer; Robert C. Murphy; *National Jewish Research Center, Denver, CO*
- TPL 218 **Investigating the Randomness of Triglyceride Biosynthesis using LC-MS and GC-MS;** Michael Malone; Joseph Alper; Jason J. Evans; *University of Massachusetts, Boston, MA*
- TPL 219 **Characterization of Acyl-Coenzyme A Species by Electrospray Ionization Tandem Mass Spectrometry (ESI-MS/MS);** Chris A. Haynes; M. Cameron Sullards; Alfred H. Merrill, Jr; *Georgia Institute of Technology, Atlanta, GA*
- TPL 220 **Analysis of Acyl-CoAs Using HPLC and Negative Ion Electrospray Mass Spectrometry;** Seppo Auriola; Ingo Loitz; Joanna Itziak; Timo Mauriala; Karl-Heinz Herzig; *University of Kuopio, Kuopio, Finland*
- TPL 221 **Characterization of the Lipid Content in Peripheral Nerve Tissue from Rats Exposed to Dichloroacete;** Timothy J Garrett¹; Xu Guo²; Peter W Stacpool²; Richard A Yost¹; ¹*Department of Chemistry: University of Florida, Gainesville, FL;* ²*Department of Medicine: University of Florida, Gainesville, FL*
- TPL 222 **Measurement of Neurosteroid Levels in Fetal Alcohol Syndrome by GC-Negative Ion CI MS;** Yan Wu¹; Jerri do Carmo Caldeira²; Robert H. Purdy³; C. Fernando Valenzuela²; John R. Engen¹; ¹*Dept. of Chemistry, University of New Mexico, Albuquerque, NM;* ²*Dept. of Neurosciences, School of Medicine, University of New Mexico, Albuquerque, NM;* ³*Dept. of Neuropharmacology, The Scripps Research Institute, San Diego, CA*
- TPL 223 **Evidence for LPAAT β Transacylase Activity on a Quadrupole Time-of-Flight Mass Spectrometer;** Jessica F Freiberg; David Hollenback; Anil Kumar; Scott A Shaffer; *Cell Therapeutics, Inc., Seattle, WA*
- TPL 224 **Characterization of 2'-Deoxyguanosine Adducts Derived from Decomposition Products of 5(S)-Hydroperoxyeicosatetraenoic acid;** Wenying Jian; Seon Hwa Lee; Ian A. Blair; *Center for Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA*
- TPL 225 **A Fully Automated HPLC/API-MS/MS Triple Quadrupole Method for the Analysis of Malonyl CoenzymeA in BacV Acetyl-CoA Carboxylase 2 Buffer;** Bhasha Desai; John E. Hughes; Kathleen I. MacKenzi; *GlaxoSmithKline, Research Triangle Park, NC*

MALDI: MS/MS

- TPM 226 **MALDI/TOF PSD and CID: Improvements in Precision, Resolution and Mass Accuracy**; Andrew J. Hoteling¹; Kevin G. Owens²; ¹Eastman Kodak Company, Rochester, NY; ²Drexel University, Philadelphia, PA
- TPM 227 **Analysis of Capillary Reversed-phase HPLC Separations of 1D Gel Digests by MALDI MS/MS**; Daniel B. Wall¹; Jeffrey W. Finch¹; Scott J. Berger¹; Steven A. Cohen¹; Richard Tyldesley²; Jeffery Brown²; Matthew Willetts²; ¹Waters Corporation, Milford, MA; ²Waters Corporation, Manchester, U.K.
- TPM 228 **Using AP MALDI for Phosphopeptide Mining on an LCQ Deca XP+ Ion Trap Mass Spectrometer**; Scott M. Peterman; Joseph J. Mulholland; Thermo Electron, Somerset, NJ
- TPM 229 **Infrared Laser Isolation: A Novel Method for Ion Isolation in FT-ICR-MS**; Katherine M Schuboth; Yongming Xie; Carlito B Lebrilla; University of California, Davis, CA
- TPM 230 **AP MALDI-MSⁿ for Rapid Characterization of Cyclic Lipopeptides**; Eric Schulz¹; Ute Bahr¹; Michael Karas¹; Torsten Stein²; ¹Institute of Pharmaceutical Chemistry, J.W. Goethe-University, Frankfurt, Germany; ²Institute of Microbiology, J.W. Goethe-University, Frankfurt, Germany
- TPM 231 **High-Energy CID Using MALDI-TOF/TOF as a Tool for Structural Analysis of Various Compounds**; Marcus Macht¹; Anja Resemann²; Jackie Jarvis³; Sören Deininger¹; Detlev Suckau²; Matthias Witt²; Burkhard Auchter⁴; Michael Rädler⁴; Helmut Fischer⁴; Volker Sauerland²; ¹Bruker Daltonik GmbH, Leipzig, Germany; ²Bruker Daltonik GmbH, Bremen, Germany; ³Bruker Daltonics Ltd, Coventry, Great Britain; ⁴University of Konstanz, Konstanz, Germany
- TPM 232 **MALDI-Tandem Time-of-flight Mass Spectrometry, a Means for Direct Identification of Biomarkers in Complex Matrices**; Dieter R. Mueller; Markus Stoeckli; Angélique Augustin; Hans Voshol; Urs Wirth; Jan van Oostrum; Novartis Pharma AG, Basel, Switzerland
- TPM 233 **Sulfonation Enhances and Simplifies Protein Identification by MALDI-MS/MS**; Keding Cheng; Xiaobo Meng; Natalia Bykova; Oleg Krokhin; Kevin Coombs; Werner Ens; Kenneth Standing; John Wilkins; Manitoba Center for Proteomics, Winnipeg, Manitoba, Canada
- TPM 234 **The Effects of MALDI Matrix and CID Gas on the Fragmentation Efficiencies of Peptides and Proteins up to ~12,000 Da in a MALDI TOF/TOF Mass Spectrometer**; Angela K. Walker; Philip C. Andrews; University of Michigan, Ann Arbor, MI
- TPM 235 **Investigating Rat Retinal Proteins using a MALDI TOF MS and MALDI QIT TOF MS**; Rachel L Martin¹; Susanna Wallenborg²; Hiroyuki Matsumoto³; ¹Shimadzu Biotech, Manchester, UK; ²Gyros, Uppsala, Sweden; ³University of Oklahoma Health Sciences Center, OK
- TPM 236 **Application of MALDI-MS/MS Imaging Software for Small Molecule Profiling in Tissue Samples**; Jane Y. Zhao; Min Yang; Julie Wingate; George Scott; Applied Biosystems / MDS SCIEX, Concord, Ontario
- TPM 237 **The Fragmentation of Ethoxylated Surfactants by AP-MALDI-QIT**; Scott D. Hanton¹; David M. Parees¹; Jerry Zweigenbaum²; ¹Air Products and Chemicals, Inc., Allentown, PA; ²Agilent Technologies, Wilmington, DE
- TPM 238 **Performance of MALDI/MS/MS for Small Molecule Quantitation**; Jason S Gobey¹; Mark J Cole¹; John Janiszewski¹; Jay J Corr²; Tung K Chau²; Peter Kovarik²; Thomas R Covey²; ¹Pfizer Global Research &

Development, Groton, CT; ²MDS Sciex, Concord, Ontario, Canada

- TPM 239 **Intact Protein Analysis by MALDI Tandem Time-of-flight Mass Spectrometry**; Melanie Lin¹; Jennifer M. Campbell¹; Dieter R. Mueller²; Urs Wirth²; ¹Functional Genomics, Novartis Pharma AG, Basel, Switzerland; ²Applied Biosystems, Framingham, MA
- TPM 240 **The Application of MALDI/MS/MS to the Qualitative Determination of Isocyanate Derivatives**; Karen E. Warburton¹; Michael J. Ford¹; Malcolm R. Clench¹; Duncan Rimmer²; John White²; ¹Sheffield Hallam University, Sheffield, UK; ²Health and Safety Executive, Sheffield, UK; ³Health and Safety Laboratory, Sheffield, UK
- TPM 241 **MALDI Seamless PSD and MS/MS (High and Low Energy CID) of Human Phospholipids and Triacylglycerols**; Gerald Stuebiger¹; Ernst Pittenauer²; Dietmar Waidelich³; Emmanuel Raptakis⁴; Gunter Allmaier¹; ¹Inst. of Chemical Technol. & Analysis, Vienna University of Technology, Vienna, Austria; ²Federal Office and Research Center of Agriculture, Vienna, Austria; ³Austrian Agency for Health and Food Safety, Vienna, Austria; ⁴Austrian Agency for Food and Health Safety, Vienna, Austria; ⁵Applied Biosystems, Darmstadt, Germany; ⁶Shimadzu Biotech-Kratos Analytical, Manchester, UK

MALDI: SAMPLE PREPARATION

- TPN 242 **Unique Robotic Matrix Spotter for MALDI Imaging**; Hans-Rudolf Aerni¹; Annette R. Erskine¹; Michelle L. Reyzer¹; David Lee²; Dale S. Cornett¹; Richard M. Caprioli¹; ¹Picoliter Inc., Sunnyvale, CA; ²Vanderbilt University, Nashville, TN
- TPN 243 **Evaluation of Direct Transfer Elution, Centrifugal Elution and Vacuum Elution with Montage[®] In-Gel Digest_{zP} Kit using PerkinElmer's MultiPROBE[®] II Proteomics Workstation**; Libby Kellard¹; Jennifer Van Dinker²; Jason Weber³; ¹Millipore Corporation, Life Science Division, Danvers, MA; ²PerkinElmer Life Sciences, Downers Grove, IL; ³Washington University, Division of Molecular Oncology, St. Louis, MO
- TPN 244 **PrepTips: A New Method for Cleaning and Concentrating Proteins and Other Biological Samples Prior to Mass Spectrometric Analysis**; Jennifer R Krone¹; David Miller¹; Issa Isaac¹; Mary Hurley¹; Cecily Periana²; Mike Pisano³; Ron Sostek²; ¹Genomic Solutions, Ann Arbor, MI; ²Harvard Apparatus, Holliston, MA; ³PRIS, Ann Arbor, MI
- TPN 245 **Identification of Fruit Ripening-Related Proteins by MALDI-MS Using a CD Microlaboratory**; Christina M Bender²; Sajid Bashir¹; Ebru Togan-Tekin²; Jocelyn K. C. Rose¹; ¹Cornell University, Ithaca, NY; ²Gyros US Inc., Monmouth Junction, NJ
- TPN 246 **Comparison of the Desalting Methods for MALDI ToF MS Analysis of Oligonucleotides**; Jeff Van Ness¹; Lori Van Ness¹; Kenneth J. Fountain²; Dominic Gostick²; Martin Gilar²; John C. Gebler²; ¹Ionian Technology, Upland, CA; ²Waters Corp., Milford, MA
- TPN 247 **Novel Protein Digestion Methodology and its Mechanistic Study**; Jawon Seo; Kongjoo Lee; Center for Cell Signaling Center, Ewha Womans University, Seoul, Republic of Korea
- TPN 248 **Anionic Adducts of Oligosaccharides by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry**; Yang Cai; Yanjie Jiang; Richard B. Cole; University of New Orleans, New Orleans, LA
- TPN 249 **A Microfluidic Electrocapture Device in Protein Analysis by MALDI Mass Spectrometry**; Juan Astorga-

- Wells; Hans Jörnvall; Tomas Bergman; *Dept. of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden*
- TPN 250 **Direct Coupling of SPME to Mass Spectrometry via Matrix Assisted Laser Desorption and Electropray/Nanospray;** Markus Walles¹; Hui Tong¹; Bruce Thomson²; Sabatino Nacson³; Janusz Pawliszyn¹; ¹*University of Waterloo, Waterloo, Canada;* ²*MDS Sciecx, Concord, Canada;* ³*Barringer, Missisauga, Canada*
- TPN 251 **A New Method for Low Concentration Oligonucleotides Analysis by MALDI-TOF;** Xiyuan Sun; Yiding Liu; Baochuan Guo; *Cleveland State University, Cleveland, OH*
- TPN 252 **Chromatographic Hollow Fibers;** Mukta M. Shukla¹; Ashok K. Shukla¹; Eric D. Stover²; Andreas F. Huhmer³; ¹*Glygen Corp., Columbia, MD;* ²*ThermoHypersil-Keystone, Bellefonte, PA;* ³*ThermoFinnigan, San Jose, CA*
- TPN 253 **LC-MALDI: Increased Analytical Throughput Using a Parallel Separations Strategy;** Carlton H. Paul; Tim Nadler; George Vella; *Applied Biosystems, Framingham, Massachusetts*
- TPN 254 **ZipTip Concentration versus Thin Layer Affinity Preparation for Automated Protein Identification by MALDI-TOF MS;** Armin Bosserhoff¹; Christian Behn²; Thomas Ruppert¹; ¹*Center of Molecular Biology / University Heidelberg, Heidelberg, Germany;* ²*Invtaxis AG, Cologne, Germany*
- TPN 255 **Effect of Esterification on the MALDI Response of Peptide Ions;** Francesco L Brancia¹; Paolo Lecchi²; ¹*Shimadzu Research Laboratory, Manchester, UK;* ²*George Washington University, Washington, DC*
- TPN 256 **Improving MALDI MS Analysis Using a Microfluidic Sample Preparation Platform;** Susanne Wallenborg; Magnus Gustafsson; Bo Ek; Mats Holmqvist; Per Andersson; *Gyros AB, Uppsala, Sweden*
- TPN 257 **The Method to Improve Sensitivity of MALDI TOF Detection of Diluted Peptide Solutions;** Igor Smirnov; Xiangping Zhu; Todd Taylor; Yulin Huang; Philip Ross; Ioannis Papayanopoulos; Darryl Pappin; *Applied Biosystems, Framingham, MA*
- TPN 258 **An Integrated System for Identifying Low Abundant Proteins from Gels;** Anja Dedeo¹; Elena Chernokalskaya¹; William Kopaciewicz¹; Philip Clark¹; Mark Emerick¹; Cheryl Murphy²; Andy Tomlinson²; ¹*Millipore Corp, Danvers, MA;* ²*Applied BioSystems, Framingham, MA*
- TPN 259 **Effect of Sodium Dodecyl Sulfate on MALDI-MS Analysis of Proteolytic Digests;** Rama Tummala¹; Kari Green-Church²; Patrick A Limbach¹; ¹*University of Cincinnati, Cincinnati, OH;* ²*Ohio State University, Columbus, OH*
- TPN 260 **Use of a Patterned Surface to Desalt and Concentrate DNA and Protein Samples Prior to MALDI-MS;** Yingda Xu; Merlin L. Bruening; J. Throck Watson; *Michigan State University, East Lansing, MI*
- TPN 261 **Improved Sample Preparation and Calibration for AP-MALDI Ion-Trap Mass Spectrometry;** Linda S-L. Wang; Nelli I. Taranenko; Vladimir M. Doroshenko; *MassTech Inc., Burtonsville, MD*
- TPN 262 **Investigation of the Relative Effect of Amino Acid Composition and Sample Deposition on Precision during the MALDI Process;** Jennifer Dally¹; Catherine Bentzley²; ¹*GlaxoSmithkline, King of Prussia, PA;* ²*University of the Sciences in Philadelphia, Philadelphia, PA*
- TPN 263 **The Molecular Scanner: A Rapid Parallel Protein Identification Technique;** Sofia G. Hohnholt; Barrie G. Wagenfeld; Jason Marchese; Ioannis A. Papayannopoulos; *Applied Biosystems, Framingham, MA*
- TPN 264 **High-Throughput Capture and Recovery of Phosphorylated Peptides from Crude Cell Extracts using a Novel High Capacity PHOS-Select.TM. Multiwell Plate;** Justin Wildsmith; Tom C. Hassell; John G. Dapron; William K. Kappel; Richard J. Mehig; *Sigma Aldrich, St. Louis, MO*
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- TPO 265 **Metabolite Profile of Resveratrol in Human Plasma and Urine Using Electropray Ionization and Quadrupole-Linear Ion Trap Mass Spectrometry;** Ari Gritsas¹; Donald Chun¹; Edward Daly¹; Themis Flarakos¹; Jean-Francois Marier¹; Tristan D. Booth²; Mark L.J. Reimer¹; ¹*MDS Pharma Services, Montreal, Canada;* ²*Royalmount Pharma, Montreal, Canada*
- TPO 266 **Liquid Chromatography-Mass Spectrometry Methods for Distinguishing Hydroxylamine from N-Oxide and Hydroxy Metabolites;** Natalia Penner; Ragu Ramanathan; Narsico Alvarez; Swapan Chowdhury; Kevin Alton; James Patrick; *Schering-Plough Research Institute, Kenilworth, NJ*
- TPO 267 **Transport and Metabolism of Resveratrol in Human Intestinal Caco-2 cells;** Yongmei Li¹; Young Geun Shin¹; Chongwoo Yu²; Jerome W. Kosmeder¹; Wendy H. Hirschelman²; John M. Pezzuto¹; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL;* ²*University of Illinois Department of Chemistry, Chicago, IL*
- TPO 268 **Narrow-Bore HPLC Sample Trapping and Separation with Q-ToF MS Detection for Identification of Metabolites in Low-Level In Vitro Incubations;** David J. Foltz¹; David C. Ackley¹; Amy L. Walter¹; Jose Castro-Perez²; Hilary Major²; Timothy R. Baker¹; ¹*P&G Pharmaceuticals, Mason, OH;* ²*Waters MS Technologies, Manchester, UK*
- TPO 269 **Biological Monitoring of Dichloromethane Exposed by Solid-Phase Microextraction and Gas Chromatography-Mass Spectrometry;** Yun-Chun Wu¹; Mei-Kuei Lee¹; Tung-Sheng Shih²; ¹*Chia Nan University of Pharmacy and Science, Tainan, Taiwan;* ²*Institute of Occupational Safety and Health, Council of Labor Affairs, Taipei, Taiwan*
- TPO 270 **Profiling Metabolites of Puerarin in Rats by LC-ESI-Tandem Mass Spectrometry;** Jeevan K Prasain; Kenneth Jones; Nancy Brissie; Ray Moore; Mike Wyss; Stephen Barnes; *University of Alabama, Birmingham, AL*
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- TPO 272 **Metabolism of ¹⁴C-Labeled 1,3-Dichloropropene in F344 Rats and B₆C₃F₁ Mice;** Michael J. Bartels; Steve C. Hansen; Christine M. Thornton; Kathy A. Brzak; Alan L. Mendrala; *Toxicology Laboratory, The Dow Chemical Company, Midland, MI*
- TPO 273 **Metabolic Characteristics of Third-Generation Antifolate Antimalarials;** Michael P. Kozar¹; Todd W Shearer¹; Guy Schiehser²; David P Jacobus²; Wilbur K Milhous¹; ¹*Walter Reed Army Institute of Research, Silver Spring, MD;* ²*Jacobus Pharmaceutical Company, Inc., Princeton, NJ*
- TPO 274 **High Mass Accuracy Measurements in W-optics using an Orthogonal Hybrid Quadrupole Time Of Flight Mass Spectrometer for In-vitro Metabolism Studies;** Gary Harland¹; Jose Castro - Perez¹; Jonathan Pugh¹; Carina Leandersson²; Richard Thompson²; ¹*Waters Corporation (MS Technologies), Manchester, UK;* ²*AstraZeneca R&D, DMPK, Gothenburg, Sweden*
- TPO 275 **Hepatic Metabolism of Isotretandrine, An Anti-inflammatory, Analgesic, and Antimicrobial Bisbenzylisoquinoline Alkaloid, in the Rat;** Wu-Nan Wu;

- Linda A. McKown; V. Sashi Gopaul; *Johnson & Johnson, PRD, Spring House, PA*
- TPO 277 **Evaluation of Atmospheric Pressure Ionization (API) MALDI MS/MS for Metabolite Identification: A Comparison to Electrospray-Ion Trap LC/MS/MS Analysis;** Qing Zhu; Edward J. Takach; Frank Hsieh; *Millennium Pharmaceuticals, Cambridge, MA*
- TPO 278 **Liquid Chromatography/Tandem Mass Spectrometric Determination of inhibition of Human Cytochrome P450 Isozymes by a Standardized *Trifolium pratense* (Red Clover) Extract;** Wenzhong Liang; Wenkui Li; Nikolic Dejan; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*
- TPO 279 **The Analysis of Risperidone and its Metabolite 9-Hydroxyrisperidone: A Comparison of High Resolution Accurate Mass Triple Quadrupole Mass Spectrometry and Quadrupole Time-of-Flight Mass Spectrometry;** Edward J. Daly¹; Jimmy Flarakos²; Ari Gritsas¹; Themis Flarakos¹; Mark L. J. Reimer¹; Paul Vouros²; ¹*MDS Pharma Services, Montreal, Canada*; ²*Barnett Institute and Department of Chemistry, Northeastern University, Boston, MA*
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- TPP 280 **Sheathless Electrospray from an Injection Moulded Polymer Chip;** A Pettersson¹; M Svedberg²; S Nilsson¹; J Bergquist¹; L Nyholm¹; F Nikolajeff²; K Markides¹; ¹*Department of Analytical Chemistry, Uppsala University, Uppsala, Sweden*; ²*Department of Materials Science, Uppsala University, Uppsala, Sweden*
- TPP 281 **A Novel Capillary LC/MS/MS System;** Thomas Covey¹; Bori Shushan¹; Karen Hahnenberger²; David Neyer²; Chris Bailey²; David Rakestraw²; ¹*MDS Sciex, Concord, Canada*; ²*Eksigent Technologies, Livermore, CA*
- TPP 282 **High-Efficiency High-Sensitivity Peptide Analysis with Reversed-Phase Nano-LC Monolithic Columns Coupled to ESI-MS;** Alexander R. Ivanov¹; Li Zang¹; Barry L. Karger¹; ¹*Barnett Institute, Chemistry Department, Northeastern University, Boston, MA*; ²*Barnett Institute, Northeastern university, Boston, MA*
- TPP 283 **Capillary Electrophoresis Electrospray Ionization Mass Spectrometry: From the Analysis of Amino Acids to the Analysis of the Chemical Contents of Single Cells;** Mehdi Moini; Hsiao-Ling Huang; Casey L. Schultz; Haniya Mahmood; *University of Texas, Austin, TX*
- TPP 284 **Analysis of Neurotransmitters Using Sheathless CE/ESI-MS;** Casey L. Schultz; Mehdi Moini; *University of Texas, Austin, TX*
- TPP 285 **Protein Identification with Capillary Zone Electrophoresis - μ ESI-MS (CZE-MS) Compare to LC-nanoESI-MS;** Matthias Pelzing¹; Christian Neusuess¹; Petra Palloch¹; Helen Muccitelli²; Thomas Dresch²; ¹*Bruker Daltonik, Leipzig, Germany*; ²*Bruker Daltonics, Billerica, MA*
- TPP 286 **Evaluation of the Reproducibility of Chromatographic Systems for Proteomic Applications;** Anik Forest; Sylvie Plante; Genevieve Mercier; Alain Carrier; Pierre Thibault; *Caprion Pharmaceuticals, Montreal, Canada*
- TPP 287 **Improving the "Microrecovery" Interface between Surface Plasmon Resonance (SPR) and MALDI MS: Enhanced Mass Spectra of Polypeptides Using a Preparative SPR Chip, Phenylalanine Regeneration and Automated On-Target Deposition;** Kristin S. Murray¹; Keith A. Johnson¹; Jonathan M. Brooks¹; Kara Hurlihy²; Jason C. Rouse¹; ¹*Wyeth Pharmaceuticals, Andover, MA*; ²*Biacore, Inc., Piscataway, NJ*
- TPP 288 **Poly(alkyl methacrylate) Monoliths Formed in Situ by Rapid UV-Photopolymerization in Capillaries and**
- Micro-Channels for Micro-HPLC and Nanoflow LC-ESI-MS;** Xian Huang; Jie Li; Christopher Alpha; Thomas N. Corso; *Advion BioSciences, Inc., Ithaca, NY*
- TPP 289 **Metabolite Identification on a 75 μ m Column with Nanolockspray;** Iain G Beattie¹; Karine Joncour¹; Jose Castro-Perez²; Jennifer Granger³; Rob Plumb³; ¹*AstraZeneca R&D Charnwood, Loughborough, UK*; ²*Waters Corporation (MS technologies), Manchester, UK*; ³*Waters Corporation, Milford, MA*
- TPP 290 **Polymer Microfluidic Devices for Liquid Chromatography + Electrospray-Mass Spectrometry;** Kevin Killeen; Hongfeng Yin; Dan Sobek; Reid Brennen; Tom van de Goor; *Agilent Technologies, Palo Alto, CA*
- TPP 291 **Improved Assay Sensitivity for Intracellular Metabolism of Anti-HIV Drugs by Quantitative CE-MS/MS;** Charles C. Liu¹; Jyy Huang²; Takeo Sakuma¹; David L. Tyrrell²; ¹*Applied Biosystems/MDS SCIEX, Concord, ON, Canada*; ²*University of Alberta, Edmonton, Alberta, Canada*
- TPP 292 **Micrometer Spot Deposition for MALDI/MS of Peptides and Oligosaccharides Separated by Micro-LC, CE, and CEC;** Tony J. Tegeler; Yehia Mechref; Kirk Boraas; James P. Reilly; Milos V. Novotny; *Indiana University, Bloomington, IN*
- TPP 293 **A Search of Trap/Column Parameter Space to Optimize Sensitivity and Sequence Coverage;** James P. Murphy III; Gary A. Valaskovic; *New Objective, Woburn, MA*
- TPP 294 **Importance of Chromatographic Efficiency in Analysis of Complex Matrices by LC/MS;** Christopher C. Benevides; Robert Collamati; Jennifer Granger; Dennis DellaRovere; Robert Plumb; Edouard S. P. Bouvier; *Waters Corp., Milford, MA*
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- TPQ 295 **Dereplication of Natural Products using a LC-MS/MS Library - Fragmentation Pattern Differences of M+H and M+Na ions on an Ion Trap Instrument;** Andreas Fredenhagen; Caroline Derrien; Syngenta, Crop Protection Analytics, Basel, Switzerland
- TPQ 296 **Determination of Pyrrolizidine Alkaloids by High-Performance Liquid Chromatography-Ion Trap Mass Spectrometry in Comfrey Herbs;** Jorgelina C A de Wuilloud; Samuel R Gratz; Karen Wolnik; *US-FDA/Forensic Chemistry Center, Cincinnati, OH*
- TPQ 297 **Direct and Rapid Analysis of Herbal Powder Using PY-MAB-ToF Mass Spectrometry;** Pascal Martin¹; Dimo Zidarov¹; Michel J. Bertrand²; ¹*Dephy Technologies, Montreal, Canada*; ²*Montreal University, Montreal, Canada*
- TPQ 298 **Quantitative Analysis of Lycopene in Prostate Tissue and Plasma of Men with Prostate Cancer or Benign Prostate Hyperplasia Using LC-MS-MS;** Natasa Paikovic¹; Yanan Yang¹; Maria Stacewicz-Sapuntzakis²; Roohollah Sharifi³; Phyllis E. Bowen²; Richard B. van Breemen¹; ¹*Department of Medicinal Chemistry and Pharmacognosy, UIC, Chicago, IL*; ²*University of Illinois College of Pharmacy, Chicago, IL*; ³*Department of Human Nutrition, University of Illinois, Chicago, IL*; ⁴*Department of Human Nutrition, University of Illinois at Chicago, IL*; ⁵*Department of Urology, University of Illinois, Chicago, IL*
- TPQ 299 **Quantitative Analysis of Resveratrol in Raw and Baked Blueberries and Bilberries;** Chongwoo Yu¹; Mary Lyons³; Sool Yeon Cho²; R. Toma³; John M. Pezzuto²; Richard B. van Breemen²; ¹*Department of Chemistry, University of Illinois, Chicago, IL*; ²*University of Illinois College of Pharmacy, Chicago, IL*; ³*Food and Nutritional Science, California State University, Long Beach, CA*

TPQ 300 **Fragmentation Mechanisms of Polyamine Toxins : ESI-tQ vs ESI-FT-ICR**; Julia Chamot-Rooke¹; Jean-Pierre Le Caer¹; Anne-Pascale Bouin¹; Pierre Escoubas²; ¹CNRS - UMR 7651 - Ecole Polytechnique, Palaiseau, France; ²UPR 411 - Institut de Pharmacologie Moléculaire et Cellulaire, Sophia-Antipolis, France

TPQ 301 **Liquid Chromatography-Electrospray Tandem Mass Spectrometric Determination of Terpene Lactones in *Ginkgo biloba***; Yongkai Sun; Wenkui Li; John F. Fitzloff; Richard B. van Breemen; *Univ. of Illinois College of Pharmacy, Chicago, IL*

TPQ 302 **LC/MS Investigation of Active Components and Their Degradation Products in Hypericum Perforatum L**; Frances Liu¹; Charles Pan¹; Patrick Drumm¹; Catharina Ang²; ¹Novartis Pharmaceuticals Corporation, East Hanover, NJ; ²US Food and Drug Administration, Jefferson, AR

TPQ 303 **Normal-phase LC/(+)ESI/MS Investigations of the Impact of Thermal Processing on Procyanidins in Peaches**; Yun-Jeong Hong; Alyson E. Mitchell; *University of California, Davis, CA*

TPQ 304 **MALDI-TOF MS Demonstrates that the Structural Diversity of Polyflavans in Foods and Beverages is Much Greater than Previously Appreciated**; Christian G. Krueger¹; Martha M. Vestling²; Jess D. Reed¹; ¹Dept. of Animal Sciences, University of Wisconsin-Madison, Madison, WI; ²Dept. of Chemistry, University of Wisconsin, Madison, WI

TPQ 305 **Determination of Gingerols and 6-Shogaol in Ginger Dietary Supplements Using High Performance Liquid Chromatography with Tandem Mass Spectrometry**; Yi Tao¹; Wenkui Li¹; Yongkai Sun¹; John F. Fitzloff¹; Richard B. Van Breemen¹; ¹University of Illinois College of Pharmacy, Chicago, IL

TPQ 306 **Identification of Ginsenosides Using Precursor Ion Scans and Accurate Mass Measurements**; Mark Harrison; *Thermo Electron, Hemel Hempstead, UK*

NONCOVALENT INTERACTIONS

TPR 307 **Characterization of Protein Complexes by Nanoscale Liquid Chromatography/Electrospray Ionization Mass Spectrometry**; Catalin E Doneanu¹; Ross F Lawrence¹; Roland K Strong²; William N Howald¹; ¹University of Washington, Seattle, WA; ²Fred Hutchinson Cancer Research Center, Seattle, WA

TPR 308 **Effect of Charge State on the Collisional Activation Dissociation of Drug-DNA Complexes in a Quadrupole Ion Trap Mass Spectrometer**; Carolyn L. Mazzitelli; Leon P. Oehlers; Jennifer S Brodbelt; Jennifer S. Brodbelt; *University of Texas, Austin, TX*

TPR 309 **Dissecting Protein Complexes by Using Nano-ESI and Tandem-MS**; Frank Sobott; Justin L P Benesch; Aquilina Andrew; Carol V Robinson; *Cambridge University, Chemistry Department, Cambridge, UK*

TPR 310 **Quantitative Determination of Noncovalent Protein-Ligand Binding Interactions Using Automated Nanoelectrospray Mass Spectrometry**; Sheng Zhang; Colleen K. Van Pelt; *Advion BioSciences, Inc., Ithaca, NY*

TPR 311 **Serine, Its octamer and the Origin of Life: Contributions to a Mechanism of Homochirogenesis**; Sergio C. Nanita; Zoltan Takats; R. Graham Cooks; *Purdue University, West Lafayette, IN*

TPR 312 **Modifications of Hydrogen/Deuterium Exchange Protocols with FT-ICR Mass Analysis for Reduced Back Exchange, Enhanced Throughput, Data Acquisition and Data Analysis**; Mark R. Emmett¹; TuKiet T. Lam¹; Greg T. Blakney¹; Alan G. Marshall²; ¹Ion Cyclotron Resonance Program, National High

Magnetic Field Lab, Tallahassee, FL; ²Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL

TPR 313 **Gas-Phase Binding of Non-Covalent Protein Complexes: Comparison of Tandem Mass Spectrometry Data with Computational Models**; Victor J. Nesatyy¹; Marc J. F. Suter¹; Nicolas Majeux²; Amedeo Caflisch²; ¹Swiss Federal Institute for Environmental Science and Technology, Dübendorf, Switzerland; ²University of Zurich, Department of Biochemistry, Zurich, Switzerland

TPR 314 **Toward Understanding the Nature of Zinc Stabilization in Cu,Zn Superoxide Dismutase: Using Hydrogen/Deuterium Exchange and ESI-MS to Monitor Effects of Zinc Binding on Thermostability and Solvent Accessibility of apo CuZn SOD**; Bryan F. Shaw; Jorge A. Rodriguez; Kym F. Faull; Joan S. Valentine; *University of California, Los Angeles, CA*

TPR 315 **Determination of Relative Affinity Constants for Non-Covalent Interactions in Solution by Electrospray Ionisation and Fourier Transform Ion Cyclotron Resonance: Calmodulin and Calmodulin-Binding Sequences of Myosin Light Chain Kinase**; Marjaana Nousiainen¹; Jennifer K Mitchell²; Daniel Lafitte³; Pirjo Vainiotalo⁴; Peter J Derrick⁵; ¹University of Joensuu, Joensuu, Finland; ²University of Warwick, Coventry, United Kingdom; ³UPRESA CNRS, Marseille, France

TPR 316 **Mass Spectrometric Identification of the Antigen-binding Site of a Camel Heavy-Chain Antibody - "Paratope-Mapping"**; Andreas Marquardt¹; Serge Muyldermans²; Michael Przybylski¹; ¹Department of Chemistry, Analytical Chemistry, University of Konstanz, Konstanz, Germany; ²Laboratorium van Ultrastructuur, Vrije Universiteit Brussel, Paardens, Brussels, Belgium

TPR 317 **Exploring the Effects of Context on Actin Using Hydrogen/Deuterium Exchange Mass Spectrometry**; John K. Chik; David Schriemer; *University of Calgary, Faculty of Med., Dept. Biochemistry and Mol. Biology, Calgary, Canada*

TPR 318 **A Microchip Device for Nanoflow Electrospray MS: Ligand Screening of a Multi-Protein Target**; Catherine A Keetch¹; Helena Hernandez¹; Alistair Sterling²; Mark Baumett²; Mark H Allen²; Carol V Robinson¹; ¹Cambridge University Chemical Laboratory, Cambridge, UK; ²Advion Biosciences Limited, Norwich, UK

TPR 319 **Intact Complexes of Human Alpha-Fetoprotein with Antineoplastic Agents Analyzed by Electrospray Mass Spectrometry**; Shouxun Zhao; James, F. Holland; John Roboz; *Mount Sinai School of Medicine, New York, NY*

TPR 320 **Making More Accurate Determinations of Host-Guest Interactions using the Equilibrium Partitioning Model**; Courtney L. Sherman; Jennifer S. Brodbelt; *University of Texas, Austin, TX*

TPR 321 **Detection of Sulfated Enzyme Intermediates Using ESI-FTICR Mass Spectrometry: Noncovalent and Covalent Complexes**; Yonghao Yu; Na Pi; Julie A. Leary; *University of California, Berkeley, CA*

TPR 322 **Mapping Interfaces of Cks1 and Skp2 with Hydrogen Exchange Mass Spectrometry**; Zhong-ping Yao; Markus A. Seeliger; Laura S. Itzhaki; Carol V. Robinson; *University of Cambridge, Cambridge, UK*

TPR 323 **Determination of the Stoichiometry of Protein Complexes**; Elisabeth O Hochleitner; Friedrich Lottspeich; *Max Planck Institute for Biochemistry, Martinsried, Germany*

TPR 324 **Screening for Ligands that Destabilize a (GAA)₆/(TTC)₆ Triplex in DNA Using Electrospray Mass Spectrometry**; Xun Cheng; S. V. Santhana

- Mariappan; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*
- TPR 325 **Observation of Drug-DNA Complexes Containing Benzoxazole and Benzimidazole Analogues of UK1;** Leon P. Oehlers; Sean M. Kerwin; Jennifer S. Brodbelt; *University of Texas, Austin, TX*
- TPR 326 **Investigating Subunit Exchange in Transthyretin (TTR) Complexes;** Catherine A Keetch; Margaret G McCammon; John Christodoulou; Carol V Robinson; *University of Cambridge, Cambridge, UK*
- TPR 327 **Studying Interactions in the Host-Guest Complexes by ESI-FTICRMS;** Elina O Ventola; Pirjo Vainiotalo; *University of Joensuu, Joensuu, Finland*
- TPR 328 **Cell Cycle Dynamics of Stable Associations between Pre-DNA Replication Proteins in *Saccharomyces cerevisiae*;** Alan J Tackett; Brian T Chait; *The Rockefeller University, New York, NY*
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- TPS 329 **Qualitative Study of In Vivo Melphalan Adduct-Formation in the Rat by Miniaturised Column-Switching Liquid Chromatography Coupled to Electrospray Tandem Mass Spectrometry;** Bart Van den Driessche¹; Filip Lemièrè¹; Walter Van Dongen¹; Annemie Van der Linden²; Eddy L. Esmans¹; ¹*University of Antwerp (RUCA), Department of Chemistry, Antwerp, Belgium;* ²*University of Antwerp (RUCA), Biomedical Department, Antwerp, Belgium*
- TPS 330 **Study of Deamination Kinetics of 5-methylated Cytosine-Containing Pyrimidine Dimers in Oligodeoxynucleotides by Nuclease P1 Enzyme Coupled Tandem Mass Spectrometry;** Bich T. N. Vu¹; Yinseng Wang²; Vairamani Mariappanadar³; John S. Taylor¹; Michael Gross¹; ¹*Washington University in St. Louis, St. Louis, MO;* ²*University of California, Riverside, California;* ³*Indian Institute of Chemical Technology, Hyderabad, India*
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- TPS 332 **The Application of Mass Spectrometry with a Novel, Linear Amplification Technique for Mitochondrial DNA Genotyping;** Kirsti Zitar; Alison Glaser; Jeffrey B. Graybill; Maha Rudrabhatla; *Ionian Technologies, Upland, CA*
- TPS 333 **ESI-MS Screening of Drug Interaction with DNA Duplex, Triplex and Quadruplex Structures;** Frédéric Rosu; Valérie Gabelica; Claude Houssier; Pierre Colson; Edwin De Pauw; *Department of Chemistry, University of Liege, Liege, Belgium*
- TPS 334 **Analysis and Quantification of DNA Photoadducts by HPLC/Ion Trap Mass Spectrometry;** Guangyu Zhang; Michael Linscheid; *Humboldt University, Berlin, Germany*
- TPS 335 **Studies of DNA Adducts by Nanoflow Chromatography and Ion Trap Mass Spectrometry;** Linge Li¹; M. Paul Chiarelli²; ¹*Dept. of Chemistry, Loyola University, Chicago, IL;* ²*Loyola University, Chicago, IL;* ³*National Center for Toxicological Research, Jefferson, AR;* ⁴*Division of Chemistry, National Center for Toxicological Research, Jefferson, AR*
- TPS 336 **Haplotyping of Single Nucleotide Polymorphisms by MALDI Mass Spectrometry;** Sascha Sauer; Carola Burgtorf; Hans Lehrach; Richard Reinhardt; *Max-Planck-Institute for Molecular Genetics, Berlin, Germany*
- TPS 337 **Quantitative Determination of 3-Methyl-2'-deoxycytidine and 5-Methyl-2'-deoxycytidine in DNA by LC-UV-MS-MS;** Yan Pang¹; Yanan Yang¹; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL*
- TPS 338 **Combination of Enzymatic Digestion and ESI-MS for the Analysis of Original and Modified Oligonucleotides;** Estelle Rathahao; Nathalie Martins; Isabelle Jouanin; Alain Paris; Laurent Debrauwer; *UMR 1089 Xenobiotiques, INRA-ENVIT, Toulouse, France*
- TPS 339 **A Highly Efficient and Automated Method of Purifying and Desalting PCR Products for Analysis by Electrospray Ionization Mass Spectrometry;** Yun Jiang; Kristin A. Sannes-Lowery; Steven A. Hofstadler; *Ibis Therapeutics, A Division of Isis Pharmaceuticals, Carlsbad, CA*
- TPS 340 **Proteomic Approach for the Identification of New DNA Repair Enzymes;** Robert A. Rieger¹; Dmitry Zharkov¹; Arthur P. Grollman¹; Charles R. Iden¹; ¹*Department of Pharmacology, SUNY, Stony Brook, NY;*
- TPS 341 **Structure Elucidation of DNA Interstrand Cross-Links by a Combination of Nuclease P1 Digestion with Mass Spectrometry;** Yuesong Wang; Yinsheng Wang; *University of California, Riverside, CA*
- TPS 342 **DNA Polymorphism Discovery Using Electrospray Ionization Mass Spectrometry and Multiple Enzymatic Strategies;** Linda M Benson¹; Allison P Null²; David C Muddiman¹; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN;* ²*Department of Chemistry, Virginia Commonwealth University, Richmond, VA*
- TPS 343 **Gene Expression and DNA Adduct Formation in Human Lymphoblast Cells Dosed with Benzo[a]pyrene and 4-aminobiphenyl;** Elaine M. Ricicki¹; Wendy Luo²; Hong Xie²; Helmut Zarbl²; Paul Vouros¹; ¹*The Barnett Institute of Chemical and Biological Analysis, Boston, MA;* ²*Fred Hutchinson Cancer Research Center, Seattle, WA*
- TPS 344 **Mass-Directed Purification of Long-Chain Synthetic Oligonucleotides at μMole Scale;** Yansheng Wu, Ph.D.¹; Mark A Jandreski, Ph.D.¹; Paul M Lefebvre²; Martin Gilar, Ph.D.²; Kenneth J Fountain²; Warren B Potts III²; ¹*Bayer Diagnostics, East Walpole, MA;* ²*Waters Corporation, Milford, MA*
- TPS 345 **LC-UV-MS-MS Quantitative Analysis of DNA Oxidation in Human Blood and Prostate Tissue in Men Given Oral Lycopene or Placebo;** Yanan Yang¹; Natasa Pajkovic¹; Yan Pang¹; Maria Stawecz-Sapuntzakis²; Roohollah Sharifi³; Phillis Bowen²; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL;* ²*Dept. of Medicinal Chemistry, Univ. of Illinois, Chicago, IL;* ³*Dept. of Human Nutrition, Chicago, IL;* ⁴*Dept. of Urology, Chicago, IL;* ⁵*Westside Department of Veterans Affairs Medical Center, Chicago, IL*
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- PEPTIDES: POST TRANSLATIONAL MODIFICATION**
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- TPT 346 **Characterization of SIR2-mediated NAD-dependent Deacetylation;** Haiteng Deng; Anthony A. Sauve; Vern L. Schramm; Ruth H. Angeletti; *Albert Einstein College of Medicine, Bronx, NY*
- TPT 347 **Polyamine-Protein Linkage Probed by MALDI-TOF-MS;** Lazaro Betancourt¹; Minako Masuda²; Takeshi Matsuzawa²; Yasuhiko Horiguchi²; Yasutsugu Shimonishi²; Toshifumi Takao³; ¹*Center for Genetic Engineering and Biotechnology, Havana, Cuba;* ²*Research Institute for Microbial Diseases, Osaka University, Osaka, Japan;* ³*Institute for Protein Research, Osaka University, Osaka, Japan*
- TPT 348 **Detection of Peptides Containing Acetylated Lysine Residues by Precursor Ion Scanning;** Peter M Gehrig¹; Nazim El-Andaloussi²; Peter E Hunziker²; Dorothea Rutishauser¹; Ralph Schlapbach¹; ¹*Functional Genomics Center, Zurich, Switzerland;* ²*University of Zurich, Zurich, Switzerland*

- TPT 349 **Enzymatic and Nonenzymatic Acetylation of the HIV-1 Tat Protein: an In Vitro Study;** Wilma Dormeyer¹; Alexander Dorr¹; Melanie Ott²; Martina Schnoelzer¹; ¹University of California, San Francisco, CA; ²Deutsches Krebsforschungszentrum, Heidelberg, Germany
- TPT 350 **A Method For The Identification of Post-Translationally Modified Peptides by Chemical Targeting;** Jie Zhou; Felicia Rusnak; Gary Hathaway; Caltech, Pasadena, CA
- TPT 351 **Oxidative Modification of H46C Mutant of Yeast CuZn Superoxide Dismutase Studied by a Combination of MS and MS/MS Techniques;** H. Ewa Witkowska¹; Bryan Shaw²; Subodh Nimkar¹; Steven C. Hall¹; Soshanna Zittin-Potter²; Aram Nersissian²; Kym Faul²; Joan Valentine²; ¹Applied Biosystems, Foster City, CA; ²University of California, Los Angeles, CA
- TPT 352 **Determination of O-Fucosylation Site in EGF 1-5 by Nano-Electrospray Mass Spectrometry;** Weiping Xie¹; Robert A. Rieger²; Robert Haltiwanger³; Raajit Rampal³; Charles R. Iden²; ¹Department of Biochemistry, SUNY, Stony Brook, NY; ²Proteomic Center, SUNY, Stony Brook, NY; ³Proteomics Center, SUNY, Stony Brook, NY
- TPT 353 **Identification of 4-Hydroxy-2-Nonenal-Protein Adducts in Rat Liver Mitochondria;** Amanda L. Foxwell¹; Marion Kirk²; T. Scott Isbell²; Landon Wilson²; Stephen Barnes¹; ¹University of Alabama, Birmingham, AL; ²UAB Comprehensive Cancer Mass Spectrometry Facility and Proteomics Lab, Birmingham, AL
- TPT 354 **Study of Arabidopsis Native Peptides with an Attached Indole-3-Acetic Acid Moiety Analyzed by MALDI-TOF MS and ESI-TOF MS;** Seijin Park¹; LeeAnn Higgins²; Jerry D. Cohen¹; ¹Department of Horticultural Science, University of Minnesota, St. Paul, Minnesota; ²Department of Biochemistry Molecular Biology and Biophysics, University of Minnesota, St. Paul, MN
- TPT 355 **YxxK and KxxY: Protein Sequence Motifs that Direct the Regiospecific Chlorination of Tyrosine by Hypochlorous Acid;** Constanze F Bergt; Xiaoyun Fu; Jay W Heinecke; University of Washington, Seattle, WA
- TPT 356 **Using Mass Spectrometry to Study the Metal-Catalyzed Oxidation Reactions of First Row Transition Metals with Angiotensin I;** Juma D. Bridgewater; Richard W. Vachet; University of Massachusetts, Amherst, MA
- TPT 357 **Characterization of a Lipid Hydroperoxide-Derived Post-Translational Modification to a Histone Protein Using Mass Spectrometry;** Tomoyuki Oe; Seon Hwa Lee; Anastasia K Yocum; Jasbir S Arora; Ian A Blair; Center for Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA
- TPT 358 **Localization of Phosphorylated Residues in Rat Bone Osteopontin;** Mandana Keykhosravi¹; Harvey A Goldberg¹; Graeme K. Hunter¹; Gilles Lajoie¹; ¹The University of Western Ontario, London, Ontario
- TPT 359 **The Use of Endoproteinase Arg-C and LC/ESI/MS/MS to Study Modification of Lysine Residues in the Histone H4 Tail;** Jan R Crowley¹; Barry M Markaverich²; Trellis Thompson²; Kevin Shoulars²; John Turk¹; ¹Washington University School of Medicine, St. Louis, MO; ²Baylor College of Medicine, Houston, TX
- TPT 360 **Characterization of Thiosulfate Containing Proteins and Peptides by Mass Spectrometry;** Mark Raftery; Carolyn Geczy; School of Medical Sciences, UNSW, Sydney, Australia
- TPT 361 **A Method For The Identification of Post-Translationally Modified Peptides by Chemical Targeting;** Jie Zhou; Felicia Rusnak; Gary Hathaway; Caltech, Pasadena, CA
- TPT 362 **Selective Enrichment and Identification of Low-Abundance S-Nitrosylated Proteins and Peptides From Complex Biological Mixtures;** Gary W Lange; James A Carroll; Bernard N Violand; Kevin L Duffin; Maureen K Highkin; Christine M Kornmeier; Thomas P Misko; Pharmacia Corporation, St. Louis, MO
- TPT 363 **Mass Spectrometric Characterization of Proteins Involved in the Oxidative Stress Response in Yeast;** Delphine Pflieger¹; Agnes Delaunay²; Marie-Benedicte Barrault²; Michel Toledano²; Joelle Vinh¹; Jean Rossier¹; ¹Neurobiologie et Diversité Cellulaire, CNRS UMR 7637, Paris, France; ²Stress Oxydants et Cancers, Service de Biochimie et de Génétique Moléc, Gif sur Yvette, France
- TPT 364 **Analysis of Human Histone H3 Post-Translational Modification Site Patterns from Cells Arrested During Mitosis by Tandem Mass Spectrometry;** Benjamin A. Garcia¹; Scott Busby¹; Jeffrey Shabanowitz¹; Cynthia M. Barber²; C. David Allis²; Donald F. Hunt¹; ¹Department of Chemistry, University of Virginia, Charlottesville, VA; ²Dept. of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA
- TPT 365 **Development of an On-Line System for Chemical Degradation of Cystinyl Proteins for Disulfide Mass Mapping;** Jose-Luis Gallegos-Perez; Jack Throck Watson; Michigan State University, East Lansing, MI
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- TPU 366 **Analysis of Triblock Copolyethers by MALDI-TOF;** Peran Terrier; William Buchmann; Ghislain Cheguillaume; Bernard Desmazières; Jeanine Tortajada; Lab. Analyse et Environnement UMR8587/Université d'Evry Val d'Essonne, Evry, France
- TPU 367 **Analysis of Polylactide Glycolide by Coupled GPC / MALDI-MS;** Henry Y. Shion¹; Stacy S. Powers²; ¹Waters Corporation, MS Technical Center, Beverly, MA; ²Lab Connections, a MOCOCN Company, Northborough, MA
- TPU 368 **Determination of the Hydrolysis Kinetics of N-(2-aminoethyl)-3-aminopropyl-trimethoxysilane as a Function of pH and Temperature Using APCI MS;** Ron Tecklenburg; Gary Kozerski; Dow Corning Corporation, Midland, MI
- TPU 369 **Identification of Isocyanates Generated During the Thermal Degradation of a Polyurethane Paint using HPLC/APCI/MS/MS;** Michel Boutin¹; Jacques Lesage¹; Claude Ostiguy¹; Michel J. Bertrand²; ¹Occupational Health and Safety Research Institute Robert-Sauve, Montreal, Canada; ²Regional Center for Mass Spectrometry, University of Montreal, Montreal, Canada
- TPU 370 **Sequencing Synthetic Polymers using Tandem Mass Spectrometry;** Marie-Soleil Giguère¹; Marc A Dubé²; Paul M Mayer¹; ¹Department of Chemistry, University of Ottawa, Ottawa, Canada; ²Department of Chemical Engineering, University of Ottawa, Ottawa, Canada
- TPU 371 **MALDI-TOF Mass Spectrometry of ABC Triblock Cooligomers Prepared by Ring Opening Metathesis Polymerisation;** Gertraud Hayn; Silvia Riegler; Christian Slugovc; Franz Stelzer; Robert Saf; ICTOS, Graz University of Technology, Graz, Austria
- TPU 372 **Sample Preparation of Mixed Epoxy Resins for MALDI-TOFMS Using LC at Critical Adsorption Point;** Nobuyuki Sato¹; I-ichiro Fukuda²; Koichi Ute²; Tatsuki Kitayama²; ¹Toray Research Center, Inc., Otsu, Japan; ²Osaka University, Toyonaka, Japan
- TPU 373 **Correlation by Principal Component Analysis of Imaging SIMS with FTIR for Investigation of Condensed Phase Nylon Breakdown Patterns;** Mark van den Putte²; Ron M. A. Heeren¹; Stefan L. Luxembourg¹; Liam McDonnell¹; Todd H. Mize¹; ¹FOM-AMOLF,

- Amsterdam, Netherlands; ²Vrije Universiteit Amsterdam, Amsterdam, Netherland
- TPU 374 **Surface and Mass Spectrometric Correlations of Polyaniline Polymers;** Daniel J. Higbee; Troy D. Wood; University at Buffalo, State University of New York, Buffalo, NY
- TPU 375 **Quantitative Analysis of Implantable Device Polymers and Evaluation of Protein Adsorption;** E. Peter Maziarz; X. Michael Liu; Yu-Chin Lai; James Bonafini; George L. Grobe; *Bausch & Lomb Inc., Rochester, NY*
- TPU 376 **Comparing Polycarbonate Roof Tiles Using MALDI-TOFMS;** David J. Evason; Alexis J. Polley; Victor C. Parr; *Scientific Analysis Limited, Manchester, United Kingdom*
- TPU 377 **MALDI PSD TOF Spectra of Alkali Metal Adducts of Polypentylresorcinol Dendrimers;** Hendrik Neubert¹; Kevin A. Knights²; Yolanda de Miguel²; David A. Cowan¹; ¹Drug Control Centre, King's College London, London, UK; ²Department of Chemistry, King's College London, London, UK
- TPU 378 **Accurate Polymer Characterization using GPC with Triple Detection and Mass Spectrometry;** X. Michael Liu¹; E. Peter Maziarz¹; William J. Simonsick²; George L. Grobe¹; David J. Heiler¹; ¹Bausch & Lomb, Inc., Rochester, NY; ²DuPont Marshall R & D Laboratory, Philadelphia, PA
- TPU 379 **Comparison of Field Desorption-Mass Spectrometry (FD-MS) in a Magnetic Sector and an Orthogonal Time-of-Flight (TOF) Instrument;** Anthony T. Jackson¹; Richard C. Jennings¹; James H. Scrivens¹; David S. Douce²; Martin R. Green²; Michael Jackson²; ¹ICI plc, Redcar, UK; ²Micromass UK Ltd, Manchester, UK; ³Waters Corporation, Micromass UK Ltd, Manchester, UK
- TPU 380 **Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Ethylene-Carbonyl Copolymers;** Frederick J. Cox; Murray V. Johnston; *University of Delaware, Newark, DE*
- TPU 381 **MALDI of Structured Polymer Particles;** Barry J. Bauer; Kathleen M. Flynn; *NIST, Gaithersburg, MD*
- TPU 382 **Electrospray Ionization Mass Spectrometry of Small Ionene Polymers;** Bing H. Wang; Andre J. Bourque; Scott P. Clark; Aharon S. Cohen; *Geltex Pharmaceuticals, A Genzyme General Business, Waltham, MA*
- TPU 383 **Collision Induced Dissociation MALDI Mass Spectrometry of Mono-disperse Poly(amic Methyl Esters);** Matthew J. Vergne; Hui Li; Renata Murgasova; David M. Hercules; *Department of Chemistry, Vanderbilt University, Nashville, TN*
- TPU 384 **Molecular Weight Analysis of Polysiloxanes Using Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF MS) and Gel Permeation Chromatography (GPC) Fractionation;** Huiping Chen; Michael R. Reiter; *Dow Corning Corporation, Midland, MI*
- TPU 385 **Characterization of Synthetic Polymers by DIOS-MS;** Violeta Petkovska; David Powell; Kenneth Wagener; *University of Florida, Gainesville, FL*
- TPU 386 **MALDI-TOF Analysis of a Rotaxane; Fragmentation and Ionization Efficiency Considerations;** Kathleen M. Wollyung; Chrys Wesdemiotis; *The University of Akron, Akron, OH*
- TPU 387 **MALDI-TOF MS Analysis of Chain-End Functionalized Polymers;** Charles M. Guttman; H.C. Michelle Byrd; Shen Lin Gibson; Sidi Bencherif; Kathryn L. Beers; *NIST Polymers Division, Gaithersburg, MD*
- TPU 388 **Identification of Components in Polycarbonate and Polyester Monomers and Polymers by GC-MS;** James L. Little; *Eastman Chemical Company, Kingsport, TN*
- TPU 389 **A Study of the Effects of Matrix and Laser Energy of MALDI on the Molecular Mass Distribution of Synthetic Polymers;** Stephanie J. Wetzel¹; Charles M. Guttman¹; James E. Girard²; ¹National Institute of Standards and Technology, Gaithersburg, MD; ²American University, Washington, DC
- TPU 390 **End Group Analysis of Synthetic Polyaniline Oligomers and the Influence of Acid on the Oxidation State of the Oligomers Detected;** Anthony R. Dolan; Troy D. Wood; *University at Buffalo, Buffalo, NY*
- TPU 391 **Identification of End-Group Heterogeneity of Modified Polyamide-6.6 Utilizing Two-Dimensional Chromatography-MALDI MS;** Steffen M. Weidner¹; Ulrich Just¹; Wolfgang Wittke¹; Joerg F. Friedrich¹; Freddy Gruber²; Frank Rittig²; ¹Federal Institute for Materials Research & Testing, Berlin, Germany; ²BASF AG, Ludwigshafen, Germany
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- TPV 392 **Locating Protein Interactions Through Differential Proteolysis;** Daniel A. King¹; Ron Orlando²; Carl Bergmann²; ¹Bethel College, St. Paul, Minnesota; ²University of Georgia, Athens, GA
- TPV 393 **Bias in Quantitative Analysis of Proteins by LC/MS;** John H. Callahan¹; Tracie L. Williams¹; Peter Leopold²; Steven M. Musser¹; ¹Center for Food Safety and Applied Nutrition, FDA, College Park, MD; ²Bioanalyte, Inc., South Portland, ME
- TPV 394 **Mass Spectrometric Characterization of Trichomonad Cysteine Proteases;** Ulf Sommer¹; Bibhuti N. Singh²; Mark E. McComb¹; Eric A. Berg¹; John J. Lucas²; Gary R. Hayes²; Catherine E. Costello¹; ¹Boston University School of Medicine, Boston, MA; ²SUNY Upstate Medical University, Syracuse, NY
- TPV 395 **Isolation and Examination of the Amyloid Precursor Protein of Alzheimer's Disease;** Jillian R.A. Newton; David Parkinson; Malcolm R. Clench; *Sheffield Hallam University, Sheffield, UK*
- TPV 396 **Analysis of Maleimide CyDye Labelled Model Proteins Using Mass Spectrometry;** Jun Yan¹; Nnanna Uwakwe¹; Tim Stone¹; Robin Wait²; Steve Lewis¹; Sue Fowler¹; Paul Orange¹; W. Jon Cummins¹; ¹Amersham Biosciences, Buckinghamshire, UK; ²Imperial College of Medicine, London, UK
- TPV 397 **Identification of Ser/Thr Kinase Substrates by High Throughput Screen of a Peptide Library Using MALDI-MS and LC/MSMS;** Daniel Crawford; Ping Cao; *Tularik Inc., South San Francisco, CA*
- TPV 398 **Probing Receptor-G Protein Interactions by Surface Modification;** Xin Wang¹; Zsolt Ablonczy¹; Sungho Kim²; Rosalie K. Crouch¹; Daniel R. Knapp¹; ¹Medical University of South Carolina, Charleston, SC; ²Soonchunhyang University, Asan, South Korea
- TPV 399 **Identification of Allergenic Peanut Proteins Using Liquid Chromatographic/Mass Spectrometry (LC/MS) methods;** Kevin J. Shefcheck; Steven M. Musser; *CFSAN, U.S. Food and Drug Administration, College Park, MD*
- TPV 400 **Mass Spectrometric Characterization of Transferrins and their Fragments Derived by Reduction of Disulfide Bonds;** Mario Thevis¹; Rachel R. Ogorzalek Loo²; Joseph A. Loo¹; ¹University of California, Dept of Chem.&Biochem., Los Angeles, CA; ²University of California, Dept of Biol. Chemistry, Los Angeles, CA
- TPV 401 **How Hit and Decide to Hit the Transcription Factors Bound to a New Promoter of PF4 Gene by Nanospray LC/Ion Trap MS/MS?;** Zenzaburo Tozuka¹; Akira Kagayama¹; Yoshiaki Okada²; Takefumi Doi²; ¹Fujisawa

- Pharmaceutical Co.,Ltd., Osaka, Japan;* ²*Osaka University, Suita, Japan*
- TPV 402 **Structural Characterization of Escherichia Coli Sialic Acid Synthase**; Xing-Hong Huang¹; Hsin-Kai Liao¹; Tzann-Shun Hwang²; Chun-Hung Lin²; Yu-Ju Chen¹; ¹*Chemistry, Academia Sinica, Taipei, Taiwan, R.O.C;* ²*Biological Chemistry, Academia Sinica, Taipei, Taiwan, R.O.C.*
- TPV 403 **The Homobifunctional Crosslinker 3,3'-Dithiobis(sulfosuccinimidyl propionate), DTSSP, Binds Unexpectedly at Tyrosines**; Catherine L Swaim; David L Smith; Jean B Smith; *University of Nebraska, Lincoln, NE*
- TPV 404 **Identification of Some Adulteration in Milk and in Water Buffalo Mozzarella Cheese by MALDI TOF MS**; Rosaria Cozzolino¹; Salvatore Passalacqua²; Salvatore Salemi²; Domenico Garozzo¹; ¹*CNR ICTP, Catania, Italy;* ²*Industria lattiero casearia A. Zappalà srl, Catania, Italy*
- TPV 405 **Protein Conformation Determined from Hydrogen-Deuterium Exchange and Electron Capture Dissociation**; Kolja Paech; Evan Williams; *University of California, Berkeley, CA*
- TPV 406 **Observation of Protease-Catalyzed Rearrangements of Terminal Amino Acid Residues in Peptides**; Szilan Fodor; Zhongqi Zhang; *Amgen Inc., Thousand Oaks, CA*
- TPV 407 **Identification of Methylation and Acetylation Sites on Mouse Histone H3 Using Matrix-Assisted Laser Desorption/Ionization Time-of-Flight and Nano-electrospray Ionization Tandem Mass Spectrometry**; Ross R Cocklin; Mu Wang; *Indiana University School of Medicine, Indianapolis, IN*
- TPV 408 **Identification of Maleimide CyDye Labeled Escherichia Coli Proteins Using Peptide Mass Fingerprinting**; Sue Fowler; Angie Devenish; Nnanna Uwakwe; Tim Stone; Steve Lewis; Paul Orange; Jon Cummins; Jun Yan; *Amersham Biosciences, Buckinghamshire, UK*
- TPV 409 **Kinetic Constant Calculations For Multiple Substrates of GlcNAc-6-O-sulfotransferase NodST Using Mass Spectrometry: One Pot Assay**; Na Pi; Julie A. Leary; *University of California, Berkeley, CA*
- TPV 410 **Direct Investigation of Covalent Intermediates in Thio-template Biosynthesis Using a Quadrupole Fourier-Transform Hybrid Mass Spectrometer**; Leah M. Miller; Matthew T. Mazur; Shaun M. McLoughlin; Leslie M. Hicks; Neil L. Kelleher; *University of Illinois, Urbana, IL*
- TPV 411 **Identification of Human RNase H1 Disulfide Linkages by μ LC-ESI-FTICR Mass Spectrometry**; Sherilynn M. Manalili; Jared J. Drader; Walt F. Lima; Steven A. Hofstadler; *Ibis Therapeutics, a division of Isis Pharmaceuticals, Carlsbad, CA*
- TPV 412 **Three-Dimensional Structure Determination of Proteins and Protein Complexes by Chemical Cross-Linking and Nano-HPLC / Nano-ESI FTICR Mass Spectrometry**; Andrea Sinz; Gry H. Dihazi; Daniela M. Schulz; Christian Ihling; *University of Leipzig / Biotechnological-Biomedical Center, Leipzig, Germany*
- TPV 413 **Peptide de novo Sequencing by in vivo Whole Cell Isotope Labeling**; Hongying Zhong; Bryce Young; Sandra Marcus; Liang Li; *University of Alberta, Edmonton, Alberta, Canada*
- TPV 414 **Conformational Selectivity Using High Field Asymmetric Waveform Ion Mobility Spectroscopy (FAIMS) and Fourier-Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry**; Errol W. Robinson¹; Randy W. Purves²; Evan R. Williams¹; ¹*University of California, Berkeley, CA;* ²*Ionalytics, Ottawa, Canada*
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- TPW 415 **MALDI-MS Analysis of Hydrophobic Protein Mixtures**; Rachel R. Ogorzalek Loo¹; Joseph A. Loo¹; Robert Gunsalus²; ¹*Dept. of Biological Chemistry & Molecular Biology Institute, UCLA, Los Angeles, CA;* ²*Microbiology, Immunology & Molecular Genetics, Los Angeles, CA*
- TPW 416 **Top-Down Analysis of Membrane Proteins by Fourier-transform Mass Spectrometry**; Julian P. Whitelegge¹; Katianna Pihakari²; Rodrigo Aguilera¹; Ken Conklin¹; Kym F. Faull¹; ¹*UCLA Pasarow Mass Spectrometry Laboratory, Los Angeles, CA;* ²*Ceders-Sinai Medical Center, Los Angeles, CA*
- TPW 417 **Multi-Concentration SDS-PAGE and MALDI-TOF-MS Method for the Analysis of the Membrane Proteome of Tuberculosis Bacterium**; Qinhua Ru; Andrew M. Bradbury; Jose A. Olivares; *Los Alamos National Laboratory, Los Alamos, NM*
- TPW 418 **Structural Characterization of Integral Membrane Protein from Methylococcus Capsulatus (Bath)**; Yu-Ju Chen; Yu-Heng Tseng; Hsin-Kai Liao; Yet-Ran Chen; Huang-Chou Chen; Steve S.-F. Yu; Sunney I. Chan; *Institute of Chemistry, Academia Sinica, Taipei, Taiwan, R.O.C.*
- TPW 419 **Probing Protein Kinase C Conformation Using Chemical Cross-Linking and Mass Spectrometry**; Bill X. Huang; Hee-Yong Kim; *National Institutes of Health, Rockville, MD*
- TPW 420 **Analysis of the Surface Membrane Proteome From Sorted X and Y Chromosome-Bearing Pig Sperm Cells Using 2DE and LC-MS/MS**; Martin R. Larsen¹; Derek Van Dyke²; Bengt Eriksson³; Gareth Evans³; Peter Roepstorff¹; ¹*Dept. of Biochemistry and Molecular Biology, University of Southern Denmark, Odense, Denmark;* ²*Australian Proteome Analysis Facility, Sydney, Australia;* ³*Sydney University, Sydney, Australia*
- TPW 421 **Membrane Proteomics Using Organic Solvents: A Comparison Between Chloroform/Methanol Extraction and Three Phase Partitioning**; A. Jimmy Ytterberg; Jean-Benoit Peltier; Giulia Friso; Klaas J. van Wijk; *Department of Plant Biology, Cornell University, Ithaca, NY*
- TPW 422 **Characterization of Plasma Membrane Proteins from Ovarian Tumor Cells**; Deanna L Auberry; Joshua N Adkins; John H Wahl; David S Wunschel; Karin D Rodland; David L Springer; *Pacific Northwest National Laboratory, Richland, WA*
- TPW 423 **Exploring the Structure and Dynamics of Rhodopsin using Chemical Cross-Linking and LC/MS**; Joseph S. Schoeniger; Richard B. Jacobsen; Gary Kruppa; Petr Novak; Marites Ayson; Pamela Lane; Kenneth Sale; Malin M. Young; *Sandia National Laboratories, Livermore, CA*
- TPW 424 **Identification of Amyloid-Beta Binding Proteins in Neuronal Cell Culture**; Tamas Janaky; Yann Verdier; Zsolt Datki; Botond Penke; *Department of Medical Chemistry, University of Szeged, Szeged, Hungary*
- TPW 425 **MS-Based Identification of Interacting Proteins with the Human Equilibrative Nucleoside Transporter Protein, hENT1**; Alan A. Doucette¹; Carol E. Cass¹; Liang Li²; ¹*Dept. of Oncology, University of Alberta, Edmonton, Alberta, Canada;* ²*Dept. of Chemistry, University of Alberta, Edmonton, Alberta, Canada*
- TPW 426 **Protein Characterization of the Membrane Blebs from Neisseria meningitidis Serogroup B**; Deborah M B Post¹; DeSheng Zhang²; Jerrold P Weiss²; Birgit Schilling¹; Bradford W Gibson¹; ¹*Buck Institute for Age Research, Novato, CA;* ²*University of Iowa, Iowa City, IA*

- TPW 427 **Mass Spectrometric Studies of Oligomeric Transmembrane Proteins;** Sue Slade; Jim Scrivens; Andreas Kukol; Wendy Foxall; *University of Warwick, Coventry, UK*
- TPW 428 **The Peptide QTPVLYAMLDHSR (*m/z* 1532.14) is the Missed Sequence in the P0 Derived Protein of Bovine Peripheral Nerve System Myelin;** Elena Urso¹; Aldo Quattrone¹; Antonio Qualtieri¹; Anna Napoli²; Leonardo Di Donna²; Giovanni Sindona²; ¹*CNR-Istituto Scienze Neurologiche, MANGONE (CS), Italy*; ²*Dipartimento di Chimica-Università della Calabria, RENDE (CS), Italy*
- TPW 429 **Comparison of MALDI-TOF and LC-MS/MS Analyses of Membrane Proteins of Human Colorectal Adenocarcinoma Cell Lines HT-29 and Caco-2;** Karine Pacaud¹; Franck Brichory²; Virginie Wurtz¹; Noelle Potier¹; Jean-François Haeuw²; Alain Van Dorsselaer¹; ¹*Laboratoire de Spectrométrie de Masse Bio-Organique, Strasbourg, France*; ²*Centre d'Immunologie Pierre Fabre, Saint Julien en Genevois, France*
- TPW 430 **Identification of Membrane Proteins in 2DE-Patterns;** Maik A. Wacker; Joachim Klose; *Inst. f. human genetics, Berlin, Germany*
- TPW 432 **Hydrogen/Deuterium Exchange HPLC nanoElectrospray Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Analysis of a Recombinant Glycosyltransferase;** Jeremiah D Tipton; Benjamin H Hornstein; David H Powell; Erin E Burke; *University of Florida, Gainesville, FL*
- TPW 432 **MALDI-TOF Determination of the Covalent Site in a Ligand-Membrane Receptor Complex After Photolabelling Experiments: Strategy Using Isotope and Affinity Tags in the Ligand;** Emmanuelle Sachon; Olivier Tasseau; Solange Lavielle; Sandrine Sagan; Gérard Bolbach; *University P et M Curie, Paris, France*
- TPW 433 **Complete Enzymatic Digestion of Membrane Protein, Bacteriorhodopsin;** Ying Qing Yu; Martin Gilar; John C. Gebler; *Waters Corporation, Milford, MA*
- TPW 434 **Characterization of Hydrophobic Peptides by Photoionization-Mass Spectrometry and Tandem Mass Spectrometry;** Arnaud Delobel¹; Frederic Halgand¹; Henry Snijder²; Olivier Laprevote¹; ¹*ICSN-CNRS, Gif-Sur-Yvette, France*; ²*Sciex-Applied Biosystems, Toronto, Canada*
- TPW 435 **New Strategies Towards the Identification and Characterization of Membrane Proteins from Membrane Protein Supercomplexes;** Isam Rais¹; Hermann Schägger²; Michael Karas¹; ¹*Institute of Pharmaceutical Chemistry, J.W. Goethe-University, Frankfurt, Germany*; ²*Center for Biological Chemistry, J.W. Goethe-University, Frankfurt, Germany*
- TPW 436 **Two-Dimensional Liquid Chromatography for Integral Membrane Proteomics;** Rodrigo Aguilera¹; Stephen Gomez¹; Wim Vermaas²; Kym Faull¹; Julian Whitelegge¹; ¹*UCLA Pasarow Mass Spectrometry Laboratory, Los Angeles, California*; ²*Arizona State University, Tempe, AZ*
- TPW 437 **Detergent and Cyanogen Bromide Free Method for Targeted and Global Proteomic Analysis of Integral Membrane Proteins;** Josip Blonder; Cecilia Rodriguez; George M Janini; Li-Rong Yu; Van M Hoang; Haleem J Issaq; Thomas P Conrads; Howard Young; Timothy D Veenstra; *SAIC -Frederick Inc, Mass Spectrometry Center, Analytical Chemistry La, Frederick, MD*
- TPW 438 **Targeted Proteome Analysis of GPI Anchored Proteins in Plasma Membranes;** Felix Elortza¹; Thomas S. Nühse²; Allan Stensballe¹; Scott C. Peck²; Ole N. Jensen¹; ¹*Dept. of Biochem. and Molec. Biol., Univ. of Southern Denmark, Odense, Denmark*; ²*Sainsbury laboratory, John Innes Centre, Norwich, United Kingdom*
- TPW 439 **Global Profiling of Membrane Proteins with a Novel Proteomics Platform;** Jun Sun; Wen Yu; Arianna Jones; Jing Wei; *Diversa Corporation, San Diego, CA*
- TPW 440 **PST - A Novel Solution for Membran Proteins;** Karsten Kuhn²; Christian Baumann²; Juergen Schaefer²; Thorsten Prinz²; Roger Moraga²; Andrew Thompson¹; Josef Schwarz²; Ute Bauer²; Christian Hamon²; Thomas Neumann²; ¹*Proteome Sciences, Cobham, England*; ²*Xzillion GmbH & Co.KG, Frankfurt am Main, Germany*
- TPW 441 **Chemical Crosslinking as a Tool in Membrane Protein Interaction Studies: Crosslinked Subunits from *Helicobacter pylori* Urease;** Elisabet Carlsohn¹; Michael J Chalmers²; Mark R Emmett²; Alan G Marshall²; Hasse Karlsson¹; Carol L Nilsson¹; ¹*Goteborg University, Inst. of Medical Biochemistry, Goteborg, Sweden*; ²*National High Magnetic Field Laboratory, Tallahassee, FL*
- TPW 442 **Mass Spectrometry Based Analysis of Membrane Proteins from Multiple Myeloma Cells;** Amir M Rahbar¹; Catherine C Fenselau¹; *The University of Maryland, College Park, MD*
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- PROTEOMICS: INSTRUMENTATION AND AUTOMATION**
- TPX 443 **Protein Identification - High Sensitivity and High Throughput with Solid Phase Extraction Microplate;** Mikkel Nissum¹; Ulrich Schneider¹; Sabine Kuhfuss¹; Urs Knecht²; Nick Ingenhoven²; Christoph Eckerskorn¹; ¹*Tecan Munich GmbH, Kirchheim, Germany*; ²*Tecan Switzerland AG, Männedorf, Switzerland*
- TPX 444 **Sensitivity of Chemically Assisted Fragmentation MALDI: Success Rate Versus Gel Spot Intensity;** Lena Hornsten¹; John Prime²; Maria Liminga¹; ¹*Amersham Biosciences, Uppsala, Sweden*; ²*Amersham Biosciences, Amersham, UK*
- TPX 445 **A MALDI-TOF Mass Spectrometer with Orthogonal Injection;** Suzanne Ackloo¹; Joseph Dicesare¹; Alexandre Loboda¹; Francis Vandemark¹; ¹*MDS Sciex, Concord, Canada*; ²*PerkinElmerSCIEX, Concord, Canada*
- TPX 446 **Evaluating Performance of a New Multiple Ion Guide 2D Trap TOF in MS and MS², MS³, MS⁴ Acquisition Modes for Proteomics Applications;** V. Sergey Rakov; Gholamreza Javahery; Oleg V. Borisov; Lisa Cousins; David Welkie; Craig M. Whitehouse; *Analytica of Branford, Inc., Branford, CT*
- TPX 447 **Novel Analytical Strategies in Support of High Throughput Structural Proteomics;** Daniel B. Kassel¹; Colleen Van Pelt²; Kheng Lim¹; ¹*Syrrix, Inc., San Diego, CA*; ²*Advion, Inc., Ithaca, NY*
- TPX 448 **Using a Prototype MALDI-Hybrid Quadrupole Linear Ion Trap for the Analysis of Tryptic Digest;** J.C. Yves Le Blanc; Chris Lock; James W. Hager; *Applied Biosystems|MDS Sciex, Concord, Canada*
- TPX 449 **An Integrated LC-MS Platform for Rapid and Precise Identification of Proteins and their Post-Translational Modifications using a Linear Ion Trap coupled with a Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometer;** S. -L. Wu¹; Andreas Wiegand¹; Wolfgang Metelmann-Strupat¹; Helmut Munster¹; Jens Griep-Raming¹; David Arnott²; ¹*Thermo Electron, San Jose, CA*; ²*Genentech, South San Francisco, CA*
- TPX 450 **Global Proteomic Analysis of *Schizosaccharomyces pombe* by 2DE and MS Using a Novel Integrated Robotic Platform for Automated Sample Preparation;** Malcolm J Saxton¹; James Jones²; Susan Kirby²; Mark Weeks¹; Richard Jacobs¹; Mike D Waterfield¹; John Timms¹; Ranier Cramer¹; ¹*Ludwig Institute for Cancer Research, London, UK*; ²*KBiosystems, Basildon, UK*
- TPX 451 **A Linear Octopole Trap Interface for High-Sensitivity Ion mobility/TOF Techniques: A High-Throughput**

- nano-LC/IMS/TOF Separation of the *Drosophila melanogaster* Proteome;** Sunnie Myung¹; Young J. Lee¹; John A. Taraszka¹; Myeong H. Moon¹; Stormy L. Koeinger¹; Stephen J. Valentine²; Thomas C. Kaufmann³; David F. Miller³; David E. Clemmer¹; ¹*Department of Chemistry, Indiana University, Bloomington, IN*; ²*Beyond Genomics, Waltham, MA*; ³*Department of Biology, Indiana University, Bloomington, IN*
- TPX 452 **Automated Nano-electrospray Mass Spectrometry Analysis of Off-Line Collected Liquid Chromatography Fractions: A Powerful New Technique for Increasing Sequence Coverage;** Colleen K. Van Pelt; Sheng Zhang; Kevin J. Howe; *Advion BioSciences, Inc., Ithaca, NY*
- TPX 453 **Improved Bottom-Up Protein Identification Using A New Two-Dimensional Ion Trap Mass Spectrometer;** Leo E Bonilla¹; Jacob D Jaffe³; Rohan Thakur¹; Andrew Guzzetta¹; James Shofstahl¹; Michael Senko¹; Jae Schwartz¹; ¹*ThermoFinnigan Corporation, San Jose, CA*; ²*Harvard-Partners Center for Genetics and Genomics, Cambridge, MA*; ³*Department of Genetics, Harvard Medical School, Boston, MA*; ⁴*Department of Molecular & Cellular Biology, Harvard University, Cambridge, MA*
- TPX 454 **The Design and Performance of Polypropylene-Based Nanospray Nozzle Chips;** Sau Lan T. Staats; Danny T. Chow; *Phoenix S&T, Inc., Elkton, Maryland*
- TPX 455 **Nanoflow LC/Ion Mobility/CID/TOF for Proteomics: Analysis of a Human Urinary Proteome;** Manolo D. Plasencia¹; Sunnie Myung¹; Myeong Hee Moon²; David E. Clemmer¹; ¹*Department of Chemistry, Indiana University, Bloomington, IN*; ²*Department of Chemistry, Pusan National University, Pusan, South Korea*
- TPX 456 **An Alternative Strategy for Sequencing Peptide Mixtures - Non-Specific Precursor Mass Selection with an Orthogonal-Acceleration Time-of-Flight Mass Spectrometer;** Jon D. Williams¹; Michael Flanagan²; Linda Lopez²; Steve Fischer²; Luke A.D. Miller¹; ¹*GlaxoSmithKline, Inc., Research Triangle Park, NC*; ²*GlaxoSmithKline, Research Triangle Park, NC*; ³*Agilent Technologies, Santa Clara, CA*
- TPX 457 **Enhancement of Peptide Detection in Proteomics Using FAIMS;** Karine Venne¹; Eric Bonneil¹; David A. Barnett²; Pierre Thibault¹; ¹*Caprion Pharmaceuticals Inc., Montreal, Canada*; ²*Ionalytics Corporation, Ottawa, Canada*
- TPX 458 **Increased Sensitivity for Protein Digest Analysis with a High Capacity AP-MALDI Trap;** Patrick D. Perkins; Bryan D. Miller; Christine A. Miller; Alex Mordehai; *Agilent Technologies, Santa Clara, CA*
- TPX 459 **Automated Profiling of Wide-Scale Tyrosine Phosphorylation Events;** Scott B. Ficarro; Arthur Salomon; Lawrence M. Brill; Mridul Mukherji; Dan Mason; Christer Ericson; Eric C. Peters; *Genomics Institute of the Novartis Research Foundation, San Diego, CA*
- TPX 460 **High-Sensitivity and High-Throughput Analysis of 2D Gels;** Andreas Wattenberg¹; Sonja Bailey¹; Ralf Reinhardt¹; Peter Hufnagel²; Claus Köster²; Detlef Suckau²; Martin Blüggel¹; ¹*Protagen AG, Dortmund, Germany*; ²*Bruker Daltonik GmbH, Bremen, Germany*
- TPX 461 **Automated High Pressure MALDI FTMS - Advantages of a New Design;** Bogdan A. Budnik; Susanne C. Moyer; Parminder Kaur; Catherine E. Costello; Peter B. O'Connor; *Boston University, School of Medicine, Boston, MA*
- TPX 462 **Combination of Protein Electronic Transfer with Nanoscale Tryptic Digestion for Ultrasensitive 2D-PAGE Protein Identification Using MALDI-MS;** Jonathan W Cooper¹; Jun Gao¹; Cheng S Lee¹; ¹*University of Maryland, College Park, MD*; ²*Calibrant Biosystems, Rockville, MD*
- TPX 463 **Evaluation and Application of a Microfluidics Device for Gel Sample Preparation and Analysis by AP- and OA-MALDI;** Chris Williams¹; Mustafa Unlu¹; Yi Qian¹; Belle Chang¹; Susanna Wallenborg²; Christina Bender²; Susan M. Green¹; Steven A. Carr¹; ¹*Millennium Pharmaceuticals, Cambridge, MA*; ²*Agilent, Palo Alto, CA*; ³*Gyros, Uppsala, Sweden*; ⁴*Agilent Technologies, Santa Clara, CA*
- TPX 464 **Using Protein and Small Molecule Arrays on Self Assembled Monolayer/Gold Surfaces as Discovery Tool for Target Identification;** Judith A. Jebanathirajah¹; Muhammad Yousef¹; Jennifer Campbell²; Steven Gygi¹; Marvin Vestal²; Marc Kirschner¹; ¹*Harvard Medical School, Dept. of Cell Biology, Boston, MA*; ²*Applied Biosystems, Framingham, MA*
- TPX 465 **Rapid Screening for Peptides using Hypothesis-driven Multistage Mass Spectrometry;** Markus Kalkum; Denise Meagher; Gholson J. Lyon; Brian T. Chait; *The Rockefeller University, New York, NY*
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- PROTEOMICS: LABELS – OTHER ISOTOPES**
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- TPY 466 **Cleavable ICAT.TM. Reagent Studies of Early Stage Differentiation of *Xenopus laevis* Embryonic Cells using LC/MS/MS and LC/MALDI TOF/TOF.TM. Techniques;** Michelle Chen¹; Amy K Sater²; Brian Boucher¹; Xiangping Zhu¹; Fred P Pratt¹; ¹*Applied Biosystems, Framingham, MA*; ²*Applied Biosystems, Framingham, MA*
- TPY 467 **The Search for Tumor Markers in Endometrial Carcinoma – An Application of Isotope-Coded Affinity Tags;** Georg Diehl¹; Jingzhong Guo¹; K. W. Michael Siu¹; ¹*York University, Dept. of Chemistry, Centre for Research in Mass Spec., Toronto, Canada*
- TPY 468 **Quantitative Proteomics: Comparison of DIGE and ICAT. Application to breast cancer differential proteomics;** Cecile Cren-Olive¹; Franck Vandermoere²; Hubert Hondermark²; Christian Rolando¹; ¹*Universite des Sciences et Technologies de Lille, Villeneuve d'Ascq, France*; ²*Universite des Sciences et Technologies de Lille, Villeneuve d'Ascq, France*
- TPY 469 **Automated Statistical Analysis on Protein Ratio for High-throughput Quantitative Proteomics Using Isotopic Labeling and ESI-LC Tandem Mass Spectrometry;** Xiao-jun Li; Hui Zhang; Jeffery A. Ranish; Patrick Pedrioli; Eugene Yi; David Goodlett; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- TPY 470 **Deuterated N-Ethylidooacetamide as a New Alkylating Non Affinity Tag for Protein Quantification by Mass Spectrometry in Proteomic Field;** Christelle Lemaitre-Guillier¹; Rossella Sanvito¹; Fabrice Guillier²; Thierry Rabilloud³; Emmanuelle Leize-Wagner¹; Alain Van Dorsselaer¹; ¹*Laboratoire de Spectrometrie de Masse BioOrganique, Strasbourg, France*; ²*Euroclide, S.A., Strasbourg, France*; ³*Laboratoire de Bioénergétique Cellulaire et Pathologique, CEA, Grenoble, France*
- TPY 471 **Use of Isotope Coded Affinity Tags and Novel Informatic Tools for Global Proteomic Analysis of Interferon Response in Human Liver Cells;** Wei Yan¹; Gina M. Sperrazzo¹; Hookeun Lee¹; Eugene C. Yi¹; Xiao-jun Li¹; Andy Keller¹; Eric Deutsch¹; Catherine A. Lazar³; Nelson Fausto²; Michael Katze³; David R. Goodlett¹; Ruedi Aebersold¹; ¹*Institute for Systems Biology, Seattle, Washington*; ²*University of Washington, Microbiology, Seattle, Washington*; ³*University of Washington, Pathology, Seattle, Washington*
- TPY 472 **Use of Deuterium-Labelled Lysine for the Quantitative MS-Analysis of Peroxiredoxins Submitted to a Strong Oxidative Stress;** Elsa Wagner¹; Thierry Rabilloud²;

- Mireille Chevallet²; Alain Van Dorsselaer¹; Emmanuelle Leize-Wagner¹; ¹*Laboratoire de Spectrométrie de Masse Bio-organique - ULP, Strasbourg, France*; ²*CEA - Laboratoire de Bioénergétique Cellulaire et Pathologique, Grenoble, France*
- TPY 473 **MIDPaD â€“ Mixed Isotope Distribution Pattern Decomposition for Quantitative Protein Expression Profiling**; Steven H. Seeholzer¹; Thomas Davis¹; Anthony Yeung¹; Anders Lund²; Randy Strich¹; Adrian Canutescu¹; ¹*Fox Chase Cancer Center, Philadelphia, PA*; ²*Waters - Micromass, Beverly, MA*
- TPY 474 **Silent Stable Isotope Labeling by ¹⁵N₀ and ¹³C' Amino Acids in Cell Culture for Relative Protein Quantitation in Tandem Mass Spectra**; Jesper V. Olsen; Jens S. Andersen; Shao-En Ong; Matthias Mann; *CEBI, BMB, University of Southern Denmark, Odense, Denmark*
- TPY 475 **A New ICAT Reagent that can be Cleaved Directly from Avidin Beads**; Carlos A Gartner; Steven P Gygi; *Harvard Medical School, Boston, MA*
- TPY 476 **Quantitative MALDI-TOF-MS of Proteins Using ¹³C₆-Labeled and Unlabeled Iodoacetanilides**; Sadamu Kurono¹; Satomi Niwayama²; Hiroyuki Matsumoto¹; ¹*University of Oklahoma Health Sciences Center, Oklahoma City, OK*; ²*Oklahoma State University, Stillwater, OK*
- TPY 477 **Quantification of Membrane Proteins Expressed in Mammalian Cell Lines by LC/MS/MS Using Proteolysis and Stable Isotope Labeled Synthetic Peptides**; Edward A. Dratz¹; Leo E. Bonilla²; Rohan Thakur²; Phillip J. Reeves³; H. Gobind Khorana³; ¹*Department of Chemistry and Biochemistry, Montana State University, Bozeman, MT*; ²*Thermo Finnigan Corporation, San Jose, CA*; ³*Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA*
- TPY 478 **A Mass Defect Label for Improved Specificity in Identifying Proteins in Shotgun Proteomic Analysis**; Stacey Boltz; Melanie Brown; Sarah Niehauser; Robert Phillips; Jeremy Wolff; I. Jonathan Amster; *Department of Chemistry, University of Georgia, Athens, GA*
- TPY 479 **Mass Spectrometric Survey of Protein Expression Changes in Rat Synaptic Membrane upon Exposure to Morphine**; Stanley M Stevens Jr; Alventina Zharikova; Laszlo Prokai; *University of Florida, Gainesville, FL*
- TPY 480 **Metabolic Labeling of Mammalian Organisms With Stable Isotopes for Quantitative Proteomic Analysis**; Christine C. Wu¹; Michael J. MacCoss¹; Kathryn E. Howell²; Dwight E. Matthews³; John R. Yates, III¹; ¹*The Scripps Research Institute, La Jolla, CA*; ²*The University of Colorado Health Sciences Center, Denver, CO*; ³*The University of Vermont, Burlington, VT*
- TPY 481 **Quantitative Analysis of Globally Labeled Tryptic Peptide Mixtures Using Electrospray Ionisation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Charlotte Hagman¹; Margareta Ramström²; Per Håkansson¹; Jonas Bergquist²; ¹*Div. of Ion Physics, Uppsala University, Uppsala, Sweden*; ²*Department of Analytical Chemistry, Uppsala University, Uppsala, Sweden*
- TPY 482 **Quantitative Analysis of Protein Complexes Using Solid-Phase Isotope Tags (SPIT)**; W. Andy Tao; Jeffrey Ranish; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- TPY 483 **A Mass Spectrometric Approach for Absolute Quantification of Expressed Fusion Tagged Proteins**; Donna L Potts¹; Frank Moffatt²; Susan Crosland²; Marina Golovanova¹; Lu-Yun Lian¹; Simon J Gaskell¹; *UMST, Manchester, UK*; ²*Syngenta, Bracknell, UK*
- TPY 484 **Targeted Comparative Proteomics by Combined Liquid Chromatography-Fourier Transform Tandem Mass Spectrometry**; Christophe Masselon; Ljiljana Pasa-Tolic; Gordon A. Anderson; Bogdan Bogdanov; Andrey N. Vilkov; Mary S. Lipton; David G. Camp; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- TPY 485 **Quantitative Proteomic Analysis of Cortical Neuron Cell Death**; Li-Rong Yu¹; Mark D. Johnson²; Takuma Uo²; Richard S. Morrison²; Timothy D. Veenstra¹; Thomas P. Conrads¹; ¹*SAIC-Frederick, Inc, National Cancer Institute at Frederick, Frederick, MD*; ²*University of Washington School of Medicine, Seattle, WA*
- TPY 486 **Quantitative Profiling Protein Expression in p53-Regulated Apoptosis in Human DLD1 Cells Using Amino Acid Coded Mass-Tagging**; Sheng Gu¹; Songqin Pan¹; Zhihe Liu²; Or Amit²; Chien-An A Hu²; Xian Chen¹; ¹*Bioscience Division, Los Alamos National Laboratory, Los Alamos, NM*; ²*Dept. of Biochem. & Molecular Bio., The University of New Mexico, Albuquerque, NM*
- TPY 487 **Normal Compared to Sepsis Plasma Proteins: Profiles and Patterns by DIGE, ProteoSep and ICAT**; Michael B. Martinez; Yan Zhang; LeeAnn Higgins; Bruce Witthuhn; Gary L. Nelsestuen; *University of Minnesota, St. Paul, MN*
- TPY 488 **Stable Isotope Labeling of Peptides by Amine Reactive Reagents**; Hui Zhang; Benedict M. Bart; Jimmy Eng; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- TPY 489 **Quantitative Proteomics via Isotopically Differentiated Derivatization**; Steven J Locke; Devanand M Pinto; Elden Rowland; *Institute for Marine Biosciences, National Research Council of Canada, Halifax, Nova Scotia, Canada*
- TPY 490 **Reliable Automated Protein Expression Measurements Using a Hybrid Quadrupole Linear Ion Trap Mass Spectrometer and ICAT.TM. Reagents**; Alpesh A Patel¹; Christie L Hunter¹; Tina A Settineri¹; Sean L Seymour¹; Sally U¹; Wilfred H Tang¹; Daniel A Schaeffer¹; ¹*Applied Biosystems, Foster City, CA*; ²*MDS Sciex, Toronto, Canada*
- TPY 491 **Studying Differential Protein Complex Formation by 18O Labeling and Mass Spectrometry**; Marcus Bantscheff; Birgit Duempelfeld; Bernhard Kuster; *Cellzome AG, Heidelberg, Germany*
- TPY 492 **Investigation of a Mammalian Cellular Model for Differential Protein Expression Analysis Using 1-D PAGE and Cleavable ICAT.TM. Reagents**; Sylvia Yuen¹; Lynn R. Zieske¹; Brian Boucher²; Lolita Evangelista¹; Julia Michelotti¹; Sasi Pilai²; Kefei Zheng²; Andrew Tomlinson²; Scott Daniels²; Babu Purkayastha²; Pau-M. Yuan¹; ¹*Applied Biosystems, Foster City, CA*; ²*Applied Biosystems, Framingham, MA*
- TPY 493 **A Nitro-Tyrosine Specific ICAT Method**; Tyler H Heibeck¹; Christian Schoneich²; Mark E. McComb¹; Amareth Lim¹; Richard A. Cohen¹; Catherine E. Costello¹; ¹*Boston University School of Medicine, Boston, MA*; ²*University of Kansas, Lawrence, KS*
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- PROTEOMICS: NEW AND IMPROVED METHODS**
- TPZ 494 **Chemically Assisted Fragmentation of Peptides by ESI-MS/MS**; Henrik Wadensten; Staffan Renlund; Maria Liminga; Jonas Astrom; Anders Tangen; David Fenyo; *Amersham Biosciences AB, Uppsala, Sweden*
- TPZ 495 **PRISM: A Generic Large-Scale Proteomics Investigation Strategy for Mammals**; Thomas Kislinger¹; Khaled Rahman²; Dragan Radulovic³; Brian Cox⁴; Janet Rossant⁴; Andrew Emili¹; ¹*University of Toronto, Toronto,*

- Canada; ²University of Calgary, Calgary, Canada; ³Yale University, New Haven, CT; ⁴Samuel Lunenfeld Research Institute, Toronto, Canada
- TPZ 496 **Characterization of the Low Molecular Weight Serum Proteome; Radhakrishna S Tirumalai;** King Chan; Haleem J Issaq; Thomas P Conrads; Timothy D Veenstra; SAIC-Frederick Inc., NCI-Frederick, Frederick, MD
- TPZ 497 **Sub-cellular Proteomics of E. coli Ribosome using a Top Down Approach in Conjunction with Capillary Electrophoresis /Electrospray Ionization-Mass Spectrometry; Hsiao-Ling Huang;** Mehdi Moini; University of Texas, Austin, TX
- TPZ 498 **Esterification of Tryptic Protein Digests for Improving the Identification of Proteins in MALDI-TOF Mass Spectrometry; Tae-Young Kim;** James P. Reilly; Department of Chemistry, Indiana University, Bloomington, IN
- TPZ 499 **Characterization of Bacteria Using a Biological Sample Processing System-Mass Spectrometer with a Relational Database Management System; Samir V. Deshpande¹;** A. Peter Snyder²; Waleed M. Maswadeh²; Rabih E. Jabbour³; ¹Science & Technology Corporation, Edgewood, MD; ²U. S. Army, Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD; ³Geo-Centers, Inc., Aberdeen Proving Ground, MD
- TPZ 500 **A Miniaturized Sample Processing Platform for Intact Proteins Analysis Using Q-FTMS for Automated "Top Down" Proteomics; Yi Du;** Leah Chatterjee; Fanyu Meng; Carl Lindberg; Lihua Jiang; Neil Kelleher; Department of Chemistry, University of Illinois, Urbana, IL
- TPZ 501 **Identification of Colon Cancer Associating Protein in Plasma Using MALDI-TOF Mass Spectrometry; Georgia Dolios;** John Roboz; Rong Wang; Mount Sinai School of Medicine, New York, NY
- TPZ 502 **A High Throughput Proteomic Approach to Identify Cancer Biomarkers Using Two-Dimensional Gel Electrophoresis and Mass Spectrometry; Lishun Wang¹;** Lishun Wang²; Jianning Yin¹; Xiaoli Feng¹; Jianmin Shao¹; Xun Zhu²; Si-qi Liu¹; Xiaohang Zhao³; Rong Wang¹; ¹Beijing Genomics Institute, Chinese Academy of Sciences, Beijing, China; ²School of Medical Sciences, Jilin University, Changchun, China; ³Cancer Institute & Hospital, Chinese Academy of Medical Sciences, Beijing, China
- TPZ 503 **Peptide Derivatization for Routine Improvement in Identification of Proteins from 1D and 2D Gels; Isabel Riba;** Simon J. Gaskell; UMIST, Manchester, UK
- TPZ 504 **Predictive Protein Purification Design Using Chemically Modified SELDI Protein Biochip Array Surfaces; Luc Bourgeois¹;** Patrick Santambien¹; Egisto Boschetti¹; Scot R Weinberger²; ¹Ciphergen Biosystems, Process Division, Cergy, France; ²Ciphergen Biosystems, Fremont, CA
- TPZ 505 **Shotgun Proteomics of Methanococcus Maripaludis Using ¹⁵N-Labeling and Accurate Mass Measurement; Bryan A. Parks¹;** Stacey Boltz¹; Iris Porat²; William B. Whitman²; Michael L. Easterling³; J. Paul Speir³; I. Jonathan Amster¹; ¹Department of Microbiology, University of Georgia, Athens, GA; ²Department of Chemistry, University of Georgia, Athens, GA; ³Bruker Daltonics, Billerica, MA
- TPZ 506 **Combined Use of Photochemical Crosslinking and Mass Spectrometry to Determine the Contact Points between DNA and Proteins Contained in a Functional Subset of a Proteome; Martha D. Stapels;** Douglas F. Barofsky; Oregon State University, Corvallis, OR
- TPZ 507 **Transcription Factor Analysis by Mass Spectrometry; Thomas K. Bane;** Jeanne M. LeBon; Terry D. Lee; Arthur D. Riggs; Beckman Research Institute of The City Of Hope National Medical Center, Duarte, CA
- TPZ 508 **Development of a Method for the Detection of the Phosphotyrosine Proteome; Melissa D. Zolodz;** Karl V. Wood; Robert L. Geahlen; Fred E. Regnier; Purdue University, West Lafayette, IN
- TPZ 509 **Functional Profiling of Multiple Kinases and Phosphoproteome Analysis Using Surface Enhanced Laser Desorption/Ionization (SELDI) Based MS Technology ; Vanitha Thulasiraman¹;** Della Wang¹; Shyamal Kapadia²; John Bradley²; Michael Molstad³; Lee Lomas¹; Guang Fan³; Steve Finkbeiner²; Tai Tung Yip¹; ¹Ciphergen Biosystems, Fremont, CA; ²Gladstone Institute of Neurological Disease, University of California, San Francisco, CA; ³Oregon Health Science University, Portland, OR
- TPZ 510 **Detection of Ultra-trace P and S by ICP-DRC-MS in Application to Quantitation of Phosphorus in Biologically Active Materials; Dmitry R. Bandura¹;** Vladimir I. Baranov¹; Linda Liao²; Olga I. Ornatsky²; Zoe A. Quinn¹; Scott D. Tanner¹; ¹PerkinElmer-SCIEX, Concord, Canada; ²MDS Proteomics, Toronto, Canada
- TPZ 511 **Organelle-Based Proteomics Using 2D-LC-MS-MS for the Identification of Low Abundance Plasma Membrane Markers; Eric Bonneil;** Sylvain Brunet; Michel Jaquinod; Pierre Thibault; Caprion Pharmaceuticals Inc, Montreal, QC
- TPZ 512 **Phosphopeptide Isolation and Characterization Using High-Binding Capacity Magnetic Particles; Brian J Agnew;** Tamara G Nyberg; Thomas H Steinberg; Wayne F Patton; Molecular Probes, Inc., Eugene, OR
- TPZ 513 **Probing Protein-Protein Interaction in Muscle Cells Using Tandem Affinity Purification (TAP) Combined with a Lentiviral Expression System; Min Du¹;** David M Cox¹; Xu Guo⁴; John C McDermott³; KW Michael Siu²; ¹Department of Biology and Centre for Research in Mass Spectrometry, Toronto, Canada; ²Department of Chemistry and Centre for Research in Mass Spectrometry, Toronto, Canada; ³Department of Biology, Toronto, Canada; ⁴MDS SCIEX, Concord, Canada
- TPZ 514 **Application of High-Throughput LC-MALDI-MSMS Analysis for Analysis of Virulence Factors in Candida albicans and Aeromonas salmonicida; Devanand M. Pinto¹;** H. Stewart McKinnon¹; Joel Muzzerall¹; Roger Ebanks¹; Jay Corr²; Peter Kovarik²; ¹National Research Council, Institute for Marine Biosciences, Halifax, Canada; ²MDS-Sciex, Toronto, Canada; ³MDS-Sciex, Toronto, Ontario
- TPZ 515 **Sensitivity Study of Bacteria Identification by Protein Mass Mapping; Xinlei Yu;** Lidan Tao; Liang Li; Dept. of Chemistry, Univ. of Alberta, Edmonton, Canada
- TPZ 516 **Increasing Quantitative Proteome Coverage with an Acid-cleavable ICAT Reagent and Modified Data Acquisition Scheme; Eugene C. Yi¹;** Xiaojun Li¹; Kelly Vaughn¹; Hookuen Lee¹; Brian Raught¹; Andrew M. Page²; Philip Hieter²; Ruedi Aebersold¹; Dave R. Goodlett¹; ¹Institute for Systems Biology, Seattle, WA; ²Institute for Systems Biology, Seattle, WA
- TPZ 517 **Characterization of Protein Variants and Posttranslational Modifications: ESI MSⁿ Analyses of Intact Proteins Eluted from SDS PAGE Gels Using an Ion Trap Mass Spectrometer; Stephane Claverol;** Odile Burlet-Schiltz; Jean Edouard Gairin; Bernard Monsarrat; Institut de Pharmacologie et de Biologie Structurale, CNRS, Toulouse, France
- TPZ 518 **Top-Down Proteomic Strategies for Use in a Quadropole-Time of Flight Mass Spectrometer; Joy M**

- Ginter; Murray V Johnston; *University of Delaware, Newark, DE*
- TPZ 519 **Multidimensional Separation Strategies for Characterizing Changes of Yeast Nucleoporin Interacting Proteins During the Cell Cycle**; Robert J. Chalkley¹; Kirk C. Hansen¹; Lan Huang¹; Nadia P. Allen²; Michael Rexach²; A. L. Burlingame¹; ¹*University of California, San Francisco, CA*; ²*Stanford University, Stanford, CA*
- TPZ 520 **Quantitative Mass Spectrometry to Define Subcellular Fractions: Insights to Peroxisome Biology**; David R. Goodlett¹; Marcello Marelli¹; Eugene C. Yi¹; Samuel M. Donohoe¹; Jennifer J. Smith¹; Richard A. Rachubinski²; John D. Aitchison¹; ¹*Institute for Systems Biology, Seattle, WA*; ²*University of Alberta, Edmonton, Canada*
- TPZ 521 **High Throughput Analysis of Serine Hydrolase Activity using Novel Chemical Probes & Tandem Mass Spectrometry**; Jennifer E Hanson¹; Jennie R. Lill²; Tyzoon Nomanbhoy²; Lisa Morera²; ¹*San Diego State University, San Diego, CA*; ²*ActivX Biosciences, La Jolla, CA*
- TPZ 522 **Evaluation of an Automated Nanoelectrospray Device Coupled to Offline**; Henrik Molina; Dario Kalume; Troels Z. G. Kristensen; Mads Grønberg; Akhilesh Pandey; *Johns Hopkins University, Baltimore, MD*
- TPZ 523 **Quantitative Proteomics in 2D-LC/MS: Automated Quantitative Profiling and Identification of Low-Abundance Proteins in Human Serum**; Sushmita M. Roy; Praveen Kumar; Markus Anderle; Gary Frenzel; Hua Lin; Haihong Zhou; Lander R. Hill; Weixun Wang; Thomas Shaler; Christopher Becker; *SurroMed, Mountain View, CA*
- TPZ 524 **A New Mass Spectrometry Method for the Study of Post-Translational Modifications of Low-mass Proteins**; Chengjie Ji; Zhengping Wang; Liang Li; *University of Alberta, Edmonton, Canada*
- TPZ 525 **Characterisation of Proteins Present in a HEK Soluble Fraction Using 1-D Gel Electrophoresis in Combination with MALDI Mass Spectrometry**; Matthew Willetts¹; James Langridge¹; Therese McKenna¹; Robert McIver²; Jeff McIver²; Jyoti Choudhary³; ¹*Waters Corporation, Manchester, UK*; ²*IonSpec Corporation, Lake Forest, CA*; ³*Cellzome, Elstree, UK*
- TPZ 526 **Cataloguing the Proteome of Schizosaccharomyces Pombe: An Analysis of Multiple Approaches Used in the Study, MDLC/MS/MS, ICAT, 2-D gel's**; Cheni Krishnan; *Applied Biosystems, Framingham, MA*
- TPZ 527 **MS Proteomic Method to Determine Binding Partners of NASP (Nuclear Autoantigenic Sperm Protein)**; Oleg Alekseev¹; Richard T. Richardson¹; David Loiselle²; Carol Parker²; Christoph Borchers²; Marshall Pope²; Michael G. O'Rand¹; ¹*University of North Carolina, Dept. of Cell and Developmental Biology, Chapel Hill, NC*; ²*Univ. of North Carolina, Depart. of Biochemistry and Biophysics, Chapel Hill, NC*
- TPZ 528 **Two-Dimensional Liquid Chromatography Combined with High-Resolution ES-FTICR-MS for Top-Down Characterization of Bacterial Proteomes**; Robert Hettich¹; Kyle Ellrott²; Nathan VerBerkmoes²; Greg Hurst¹; Patricia Lankford³; Dale Pelletier³; Frank Larimer³; ¹*Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee*; ²*Genome Science and Technology Graduate School, University of Tennessee, Knoxville, TN*; ³*Life Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN*
- TPZ 529 **High-Throughput Identification of Subcellular Proteins of Rat Liver Using 2D-LC-MS/MS**; Xiao-Sheng Jiang; Hu Zhou; Lei Zhang; Qi-Chang Xia; Rong Zeng; *Shanghai Institutes for Biological Sciences, Shanghai, China*
- TPZ 530 **Multiplexed, Fluorescent Detection and Identification by Orthogonal MALDI TOF MS of Differentially Expressed Proteins in Alzheimers Brain Samples**; Mary F Lopez¹; Simon Melov²; Elena Chernokalskaya⁴; Alvydas Mikulskis¹; Eva Golenko¹; Suzanne Ackloo⁵; Susan Kramer¹; Dan Sissors¹; Mark Bobrow¹; David A Bennet³; ¹*PerkinElmer Life and Analytical Sciences, Boston, MA*; ²*Buck Institute for Age Research, Novato, CA*; ³*Rush Alzheimer's Disease Center, Chicago, IL*; ⁴*Millipore Corp., Danvers, MA*; ⁵*MDS SCIEX, Toronto, ON Canada*
- TPZ 531 **Identification of Secondary and Low-Abundance CFTR-Associated Proteins**; William R Thelin; Phillip Elms; M Jackson Stutts; Christoph Borchers; Sharon L Milgram; *University of North Carolina, Chapel Hill, NC*
- TPZ 532 **Characterization of Chloroplast Proteins of Arabidopsis Thaliana by Top-Down Mass Spectrometry**; Vlad Zabrouskov¹; Lisa Giacomelli²; Klaas J. van Wijk²; Fred W. McLafferty¹; ¹*Dept. of Chemistry and Chemical Biology, Cornell University, Ithaca, NY*; ²*Dept. of Chemistry, Cornell University, Ithaca, NY*; ³*Dept. of Plant Biology, Cornell University, Ithaca, NY*

WEDNESDAY POSTERS

Wednesday posters should be set up 7:30 – 8:00 am on Wednesday and removed 7:30 – 8:00 pm on Wednesday. Authors of odd numbered posters (i.e., 001, 003, 005) present 8:45 – 10:15 am on Wednesday. Authors of even numbered posters (i.e., 002, 004, 006) present 1:30 – 3:00 pm on Wednesday.

ANTITERRORISM MS

- WPA 001 **Advancements in the Detection of Pathogenic Bacteria by Bacteriophage Amplification Coupled With MALDI-MS;** Jon C. Rees¹; Kent J. Voorhees¹; Ted L. Hadfield²; ¹Colorado School of Mines, Golden, CO; ²Armed Forces Institute of Pathology, Washington, DC
- WPA 002 **MALDI Ion Mobility Time-of-Flight Mass Spectrometry for Biological Agent Identification;** J. Albert Schultz¹; Michael Ugarov¹; Shelley N. Jackson²; Jae-Kuk Kim²; Sushama Mishra²; Kermit K. Murray²; ¹Ionwerks, Inc., Houston, Texas; ²Louisiana State University, Baton Rouge, LA
- WPA 003 **Mass Spectrometry Based Immunoassays for Detection of Biological Pathogens and Warfare Agents;** Dobrin Nedelkov¹; Avraham Rasooly²; Randall W. Nelson³; ¹Intrinsic Bioprobes Inc., Tempe, AZ; ²FDA, CFSAN, College Park, MD
- WPA 004 **Qualitative and Quantitative Analysis of Bacterial Proteins Using an In-House Biological Sample Processing System-Ion Trap Mass Spectrometer;** Rabih E. Jabbour¹; Waleed M. Maswadeh²; Samir V. Deshpande³; A. Peter Snyder²; ¹Geo-Centers, Inc., Aberdeen Proving Ground, MD; ²U. S. Army, Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD; ³Science & Technology Corporation, Edgewood, MD
- WPA 005 **A Novel Approach for Identification of Bacteria Using Shotgun Proteomics and Searching a Database Translated from All Sequenced Bacterial Genomes;** Jacek P. Dworzanski¹; A. Peter Snyder²; Rui Chen³; Haiyan Zhang³; David Wishart³; Liang Li³; ¹Geo-Centers, Inc., Aberdeen Proving Ground, MD; ²Geo-Centers, Inc., Aberdeen Proving Ground, MD; ³U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD
- WPA 006 **Optimal Fusion of MALDI MS Spectra for Rapid and Reliable Detection of Biological Warfare Agents;** Jeffrey S. Lin; Plamen A. Demirev; Anshu Saxena; Andrew B. Feldman; Johns Hopkins University Applied Physics Laboratory, Laurel, MD
- WPA 007 **Forensic Characterization of Agar in Bacillus Spore Samples;** Faith A Hays¹; Kristy J Reynolds¹; Catherine Fenselau¹; Dean Fetterolf²; David Wilson²; ¹University of Maryland, College Park, MD; ²FBI, Quantico, VA
- WPA 008 **Identification of Bacteria and Bacterial Mixtures by MALDI-TOF-MS Marker Ion Patterns;** Kristi J. Oberbroeckling¹; Jim Robertson²; Brian A. Eckenrode²; ¹Oak Ridge Institute for Science and Education, Oak Ridge, TN; ²FBI Academy, Quantico, VA
- WPA 009 **Application of a MALDI Quadrupole Ion Trap Time-of-Flight Mass Spectrometer to Sequence Analysis of Tryptic Peptides Generated *in situ* from Microorganism Mixtures;** Kathryn Jackson¹; Bettina Warscheid²; Chris Sutton¹; Catherine Fenselau²; ¹Kratos Analytical by Shimadzu Biotech, Manchester, UK; ²University of Maryland, Department of Chemistry and Biochemistry, College Park, MD
- WPA 010 **Laboratory MS Identification of Biomarkers from a Fielded Pyrolysis-Gas Chromatography-Ion Mobility Spectrometry (Py-GC-IMS) Bioaerosol Detector;** A. Peter Snyder¹; Waleed M. Maswadeh¹; Ashish Tripathi²; Jacek P. Dworzanski²; ¹U.S. Army Edgewood Chemical

Biological Center, Aberdeen Proving Ground, MD; ²Geo-Centers, Inc., Aberdeen Proving Ground, MD

- WPA 011 **Preserving and Recovering Peak Intensity Reproducibility in the Pyrolysis MAB and MALDI Mass Spectra of Intact Microbial Cells;** Jon G. Wilkes¹; Fatemeh Rafii²; Rajesh Nayak²; Susan A. McCarthy³; Alexandre A. Shvartsburg¹; Larry G. Rushing¹; Michael Beaudoin⁴; Jean-Francois Gagnon⁵; Daniel A. Buzatu¹; ¹Chemistry Division/NCTR/FDA, Jefferson, AR; ²Microbiology Division/NCTR/FDA, Jefferson, AR; ³Dauphin Island/CFSAN/FDA, Dauphin Island, AL; ⁴Logicon, Jefferson, AR; ⁵Dephy Technologies, Montreal, Canada
- WPA 012 **Detection of Protein Fingerprints of Eukaryotic Opportunistic Pathogens by MALDI-TOF MS and Proteome Database Search;** Hercules Moura¹; Adrian R. Woolfitt²; Maria Ospina²; Michael J. Arrowood³; Govinda S. Visvesvara³; John R. Barr²; ¹Battelle Memorial Institute & Centers for Disease Control & Prevention, Atlanta, GA; ²CDC/NCEH, Atlanta, GA; ³CDC/NCID, Atlanta, GA
- WPA 013 **Detection of Microbial Biomarkers Using a Micro-Fabricated Pyrolyzer Interfaced to a Quadrupole Ion Trap Mass Spectrometer;** Crystal D. Havey¹; Franco Basile¹; Curtis Mowry²; Kent J. Voorhees¹; ¹Colorado School of Mines, Golden, CO; ²Sandia National Laboratories, Albuquerque, NM
- WPA 014 **Toward Understanding the Ionization of Biomarkers by Bio-Aerosol Mass Spectrometry;** Scott C. Russell¹; Gregg Czerwieniec¹; Dave Ferguson²; Herb Tobias²; Maurice Pitesky²; Joanne Horn²; Matthias Frank²; Paul Steele²; Keith Koffee²; Eric Gard²; Carlito B. Lebrilla¹; ¹University of California, Davis, Davis, CA; ²Lawrence Livermore National Laboratory, Livermore, CA
- WPA 015 **A Universal, Rapid and Automated Method for Microbial Identification Using Py-MAB-TOF;** Simon Letarte¹; Kelly Monastiriakos¹; Pascal Martin¹; Jon G Wilkes²; Michel J. Bertrand³; ¹Dephy Technologies, Montreal, Canada; ²University of Montreal, Montreal, Canada; ³FDA, National Center for Toxicological Research, Jefferson, AR
- WPA 016 **On line MALDI of Bioaerosols;** Sushama Mishra; Shelley N Jackson; Kermit K Murray; Louisiana State University, Baton Rouge, LA
- WPA 017 **Reagentless Real-Time Identification of Individual Microorganisms by Bioaerosol Mass Spectrometry;** David P. Ferguson¹; Keith R. Coffee¹; Maurice E. Pitesky¹; Herbert J. Tobias¹; Paul T. Steele¹; Gregg A. Czerwieniec²; Scott C. Russell²; Carlito B. Lebrilla²; Joanne M. Horn¹; Matthias Frank¹; Eric E. Gard¹; ¹The Lawrence Livermore National Laboratory, Livermore, CA; ²The University of California, Davis, CA
- WPA 018 **Rapid Characterization of Microorganism Mixtures From the Genus Bacillus by *in situ* Proteolytic Digestion and MALDI-TOFMS Analysis;** Bettina Warscheid; Catherine Fenselau; University of Maryland, College Park, MD
- WPA 019 **Proteomic Strategies for the Identification of Spore-Specific Protein Biomarkers in Bacillus;** Danielle N. Dickinson¹; William Haskins²; David H. Powell¹; James D. Winefordner¹; Kasthuri Venkateswaran³; Myron T. LaDuc³; ¹Department of Chemistry, University of Florida, Gainesville, FL; ²McKnight Brain Institute, University of Florida, Gainesville, FL; ³Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
- WPA 020 **Identification of Bacterial Cell Biomarkers Using Bio-Aerosol Mass Spectrometry;** Gregg Czerwieniec¹; Scott Russell¹; Herbert Tobias¹; David Ferguson²; Maurice Pitesky²; Joanne Horn²; Matthias Frank²; Paul Steele²;

- Keith Koffee²; Eric Gard²; Carlito Lebrilla¹; ¹University of California, Davis, CA; ²Lawrence Livermore National Lab, Livermore, CA
- WPA 021 **Rapid Identification of *Bacillus* Spore Species via Tryptic Peptide Mapping on a Miniature MALDI TOF Mass Spectrometer;** Robert D English¹; Bettina Warscheid²; Catherine Fenselau²; Robert J Cotter¹; ¹The Johns Hopkins University School of Medicine, Baltimore, MD; ²University of Maryland, College Park, MD
- WPA 022 **Identification of Bacteria by Electrospray Ionization Mass Spectrometry;** Bo Zhang; Fumin Li; Dan Armstrong; R. S. Houk; *Ames Laboratory USDOE, Dept. of Chemistry, Iowa State University, Ames, IA*
- WPA 023 **Use of Mass Spectrometry to Detect and Identify *Francisella tularensis*, a Potential Biological Weapon;** Timothy D. Cummins¹; Kevin Carrick²; David Loiselle²; Marshall Pope²; Christoph Borchers²; Edward J. Collins¹; ¹Dept. of Microbiology and Immunology, UNC-CH, Chapel Hill, NC; ²Dept. of Biochemistry and Biophysics, UNC-CH, Chapel Hill, NC
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- APCI AND LC-MS SAMPLE PREPARATION**
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- WPB 024 **Selective Removal of PEG by Turbulent Flow Chromatography in Pharmaceutical Bioanalysis;** Tony M Edge¹; Sveinn Briem²; Eivor Eklund²; ¹Cohesive Technology, Milton Keynes, UK; ²Astra Zeneca, Sodertälje, Sweden
- WPB 025 **Low Picogram Automated and Selective LC-MS/MS Bioanalytical Assay for Unconjugated Estrone, Equilin and 17-beta-Estradiol in Human Plasma;** Yves G. Leblanc¹; Serge Bourg¹; Christian Lemoyne¹; Lynda Letarte¹; Chris Sartwell²; Vinny Andalaro²; Holly Lusk²; Erica Carnes²; Charles Grandmaison¹; ¹MDS Pharma Services, Bioanalytical, Montreal, Canada; ²MDS Pharma Services, Bioanalytical, Lincoln, NE
- WPB 026 **Direct Analysis of RH-1 and 5-Aza-2'-Deoxycytidine in Plasma using In-Line Protein Exclusion HPLC/MS/MS;** Gregory S Gorman; Lori Coward; Lara A Cook; Corenna Kerstner-Wood; *Southern Research Institute, Birmingham, AL*
- WPB 027 **Determination of AZD3582, a New COX-Inhibiting Nitric Oxide Donator (CINOD), and Its Major Metabolite Naproxen in Plasma by Coupled Column LC/MS/MS;** Cecilia Weistrand¹; Maria Bertilsson¹; Birgitta Pettersson¹; Erika Skoglund¹; Kerstin Lanbeck Vallen¹; Margareta Bielenstein¹; ¹AstraZeneca R&D Södertälje, Södertälje, Sweden; ²AstraZeneca R&D Sodertälje, Sodertälje, Sweden
- WPB 028 **A Sample Preparation Technique and LC/MS/MS Method for the Analysis of Therapeutic Levels of Acetaminophen Extracted From Human Plasma;** Elda Marsh; Kathrin Copley; Richard Hiles; *Amylin Pharmaceuticals, Inc., San Diego, CA*
- WPB 029 **Determination of Atrasentan (Abbott-147627) in Human Plasma Using a Dual-Column LC-MS/MS Method for High Throughput;** Perry G. Wang; Raymond C. Wieboldt; Jack S. Wei; Min S. Chang; Tawakol A. El-Shourbagy; *Abbott Laboratories, Abbott Park, IL*
- WPB 030 **Optimisation, Prediction and Control of Formation of Molecular Ion Species Versus Dimer in Three Modes of Atmospheric Pressure Ionisation;** Alan P. McKeown¹; Melvin R. Euerby¹; Helen Lomax¹; Karine Redeuil²; ¹AstraZeneca R&D Charnwood / Lund, Pharmaceutical and Analytical R&D, Loughborough, England; ²Department of Pharmaceutical Sciences, University of Strathclyde, Glasgow, Scotland
- WPB 031 **An LC-MS/MS Method for the Determination of Clindamycin in Mouse Plasma Using Automated On-**
- Line Turbulent Flow Extraction;** Laura Cojocar¹; Ardeshir Khadang; Marc Moussallie; Carl Bates; *Huntingdon Life Sciences, Somerset, NJ*
- WPB 032 **Sample Preparation of Human Serum Combined with Cleavable ICAT™ Reagents to Enhance Low Level Protein Analysis;** Lynn R. Zieske¹; Sally U¹; Subodh Nimkar¹; Sylvia Yuen¹; Brian Boucher²; ¹Applied Biosystems, Foster City, CA; ²Applied Biosystems, Framingham, MA
- WPB 033 **Quantitation of Linezolid (Zyvox™, PNU-100766) and Two Metabolites in Human Plasma by Step Gradient HPLC/MS/MS;** Nancy K. Hopkins²; Gail L. Jungbluth²; Richard A. Johnson¹; Michael A. Glavanovich¹; ¹AvTech Laboratories, Kalamazoo, MI; ²Pharmacia Corporation, Kalamazoo, MI
- WPB 034 **Determination of Caco-2 Permeability using a High-Throughput Parallel *in vitro* Assay with LC/MS Detection;** Ying Jiang¹; Bo Liu¹; Sammantha Sevidal¹; Kerry D Nugent²; Caroline Lee¹; Eric Milgram¹; ¹Pfizer, San Diego, CA; ²Michrom BioResources, Auburn, CA
- WPB 035 **LC/MS Method for the Determination of Epricubicin in Human Plasma;** Daryl Murry¹; Robert Classon²; ¹Purdue University, Indianapolis, IN; ²Shimadzu Scientific Instruments, Columbia, MD
- WPB 036 **LC/MS to Support Caco-2 Cell Culture Screening: Challenges Associated with Low Solubility Development Compounds;** Joelle M. Onorato¹; Lillian S. Chou²; Gloria Kwei¹; Henry Wu¹; ¹Merck, West Point, PA; ²Rutgers College of Pharmacy, Piscataway, NJ
- WPB 037 **High Throughput and Rational Method Development of an Ultra-Sensitive and Ultrafast LC-MS/MS Method - Analysis of Bupivacaine in Human Plasma;** John (Jiongwei) Pan; Heiko Junga; Sun Hua; Xiangyu Jiang; Naidong Weng; *Covance Laboratories, Inc., Madison, WI*
- WPB 038 **Quantitation of Acrylamide in Commercially Available Snack Food Products by LC/MS/MS;** Marian Twohig; Thierry, D. Mann; Nicholas, J. Ellor; *Waters MS Technical Center, Beverly, MA*
- WPB 039 **Eliminating Ionization Suppression in Plasma Extracts;** Richard King; Elizabeth Mahan; *Merck & Co., Inc., West Point, PA*
- WPB 040 **Quantitative Analysis of Dihydropyridines in Plasma and Tissue Using Turbulent-Flow Chromatography/Tandem Mass Spectrometry;** Christine M. Kosara; Voon Ong; Kevin Cook; William Brubaker; *Memory Pharmaceuticals, Montvale, NJ*
- WPB 041 **Correlation Between Peripheral Blood Mononuclear Cells Versus Plasma Concentrations of Total Tenofovir Using Mass Spectrometric Detection;** John Chapdelaine¹; Brian Kearney²; Art Switchenko¹; Kenneth Gee¹; Francis Beaudry⁵; ¹MDS Pharma Services, St-Laurent, Canada; ²Gilead Sciences, Foster City, CA
- WPB 042 **Comparing ESI and APCI for the LC/MS/MS Assay of Acrylamide;** Kevin J McHale; Witold Winnik; Gary Paul; *Thermo Finnigan, Somerset, NJ*
- WPB 043 **Determination of Flavonoids by HPLC-ESI/MS/MS in Human Plasma;** Hong Deng; Milton Furtado; Francis Beaudry; *MDS Pharma Services, Montreal, Canada*
- WPB 044 **An LC-MS/MS Method for the Simultaneous Determination of Sulfacetamide and Sulfanilamide in Human Plasma;** Laura Cojocar; Ardeshir Khadang; Marc Moussallie; Cyrus Zarabadipour; *Huntingdon Life Sciences, East Millstone, NJ*
- WPB 045 **Ion Trap LC/MS/MS and Chemical Derivatization for Metabolic Profiling of GM Foodstuffs;** Thomas Groeger¹; Anna M. Przyborowska³; Daniel Waterman²; Peter M. Bramley²; Paul D. Fraser²; Marianne Tuechler¹; Raj K.P. Patel¹; John M. Halket¹; ¹Specialist Bioanalytical

Services, Royal Holloway, Univ. London, Egham, UK;
²*Biological Sciences, Royal Holloway, Univ. London,*
Egham, UK; ³*Drug Control Centre, King's College,*
London, UK

- WPB 046 **Expanded Use of Microtainers Increases the Efficiency of Pharmacokinetic Sample Procurement, Preparation and Analysis by LC/MS/MS;** Josephine S Villa; Robert T Cass; *Theravance, Inc, South San Francisco, CA*

BIOPOLYMER INTERACTIONS

- WPC 047 **Noncovalent Interactions in ESI-MS: A method for Interpreting Broad Overlapping Peaks;** Silke Wendt; Gregor McCombie; Renato Zenobi; *Laboratory for Organic Chemistry, ETH Zurich, Zurich, Switzerland*
- WPC 048 **Probing Self-Association Properties of Various Insulins by H/D Exchange and ESI-MS;** Raghu K. Chitta; Don L. Rempel; Michael L. Gross; *Washington University in Saint Louis, Saint Louis, MO*
- WPC 049 **Development and Validation of an Ultra-High Throughput Affinity Mass Spectrometry Based Assay for Screening Protein Receptors;** Paul D. Schnier; Gregory Woo; David Semin; Janet Cheetham; *Amgen, Thousand Oaks, CA*
- WPC 050 **Collisional Cooling of Large Ions in Electrospray Mass Spectrometry;** Bruce A. Thomson; Igor V. Chernushevich; *MDS Sciex, Concord, Canada*
- WPC 051 **Developing a MALDI Mass Spectrometry Approach for Probing Ribosomal Assembly and Interactions;** Moo-Jin Suh; Patrick A Limbach; *University of Cincinnati, Cincinnati, OH*
- WPC 052 **Detection of New Adducts in Cisplatin and Metallothionein Reactions: Nanospray Tandem Mass Spectrometry and HPLC/ICP-MS Studies;** Rupasri Mandal; Guifeng Jiang; Xing-Fang Li; *University of Alberta, Edmonton, Canada*
- WPC 053 **Structural Determination of a 13-Subunit Yeast Cyclosome using *in vitro* and *in vivo* Biochemistry Coupled with Mass Spectrometry.;** Matthew P. Torres; Malena M. Taylor; Mark C. Hall; Nikolay Dokholyan; Christoph H. Borchers; *University of North Carolina, Chapel Hill, NC*
- WPC 054 **The Accuracy and Precision of a New MALDI- and H/D Exchange-Based Technique for Measuring the Thermodynamic Properties of Protein-Ligand Complexes in Solution;** Michael C. Fitzgerald; Kendall D. Powell; Liyuan Ma; Michael Z. Wang; Jagat Shetty; Suzy Dai; *Duke University, Durham, NC*
- WPC 055 **Characterization of Carceplexes Using APCI, ESI and MALDI Mass Spectrometry;** Cindy Chiao-Yuan Lee; Pamela Miller; Lufiani Madilao; Marshall Lapawa; Yun Ling; *Department of Chemistry, University of British Columbia, Vancouver, Canada*
- WPC 056 **Mapping the Binding Interface Between Urokinase Plasminogen Activator (uPA) and Its Cellular Receptor (uPAR) by ESI-MS and Amide Hydrogen/Deuterium Exchange;** Thomas J.D. Jorgensen¹; Michael Ploug²; Peter Roepstorff¹; ¹*University of Southern Denmark/Dept. of Biochemistry and Mol.Biology, Odense, Denmark;* ²*Rigshospitalet/The Finsen Laboratory, Copenhagen, Denmark*
- WPC 057 **Development of an Interaction Difference Mapping (IDM) Methodology for Assessing Myocardial Infarction Severity using SEDLI-TOF Mass Spectrometry;** Lee O Lomas¹; Jane Ding¹; Ralf Labugger²; Zheng Wang¹; Jennifer Van Eyk²; ¹*Ciphergen Biosystems Inc., Fremont, CA, USA;* ²*Cardiomics Inc., Queen's University, Kingston, Canada*

- WPC 058 **Structure, Conformation and Dynamics of Nucleic Acid Binding Proteins Using Multiple Mass Spectrometric Techniques;** R. Benjamin Jones¹; Kari B. Green-Church¹; Hari B. Kamadurai¹; William P. Boomershine²; Craig A. McElroy²; Mark P. Foster¹; ¹*The Ohio State University Mass Spectrometry and Proteomics Facility, Columbus, OH*
- WPC 059 **Tandem Mass Spectrometry of Molecular Machines;** Leopold L. Ilag¹; Lars Westblade²; Annie Kolb³; Steve Busby²; Andrew Carter⁴; Venki Ramakrishnan⁴; Carol V. Robinson¹; ¹*University of Cambridge, Cambridge, UK;* ²*University of Birmingham, Birmingham, U.K.;* ³*Pasteur Institute, Paris, France;* ⁴*MRC-LMB, Cambridge, UK*
- WPC 060 **Unraveling Ffh-FtsY Complex Interface Using Chemical Cross-linking and Mass Spectrometry;** Feixia Chu¹; Shu-Ou Shan²; Peter Walter²; Alma L. Burlingame¹; ¹*Mass Spectrometry Facility, University of California, San Francisco, CA;* ²*Department of Biochemistry, University of California, San Francisco, CA*
- WPC 061 **Automated Nano-electrospray Mass Spectrometry From a Chip for Protein-ligand Screening by Noncovalent Interaction Applied to Human H-FABP and A-FABP.;** Kurt Benkestock¹; Collen K Van Pelt⁴; Thomas Åkerud³; Alistair Sterling⁵; Per-Olof Edlund¹; Johan Roeraade²; ¹*Biovitrum AB, Stockholm, Sweden;* ²*Royal Institute of Technology, Stockholm, Sweden;* ³*University of Lund, Lund, Sweden;* ⁴*Advion Biosciences Inc, Ithaca, NY;* ⁵*Advion Biosciences Limited, Norwich, UK*
- WPC 062 **Detection of Non-Covalent Complexes Between Farnesyl Protein Transferase (FPT) and Its Inhibitors by Electrospray Ionization Mass Spectrometry;** Urooj A. Mirza; Chen Guodong; Birendra N. Pramanik; Ronald J. Doll; Viyyoor M. Girijavallabhan; William T. Windsor; Hung V. Lee; *Schering-Plough Research Institute, Kenilworth, NJ*

COMPUTER APPLICATIONS

- WPD 063 **Development of an Excel-Based Macro for Automatic Data Processing to Support High-Throughput Screening;** Eliza N. Fung; Inhou Chu; Amin Nomeir; *Schering-Plough Research Institute, Kenilworth, NJ*
- WPD 064 **New MS/MS Spectra Database Concept With a Sample Library;** Robert Mistrik¹; Alexej Nikiforov²; Ernst Pittenauer³; Milos Suchy¹; Juraj Lutisan¹; ¹*HighChem, Ltd., Bratislava, Slovakia;* ²*Institute of Organic Chemistry University of Vienna, Vienna, Austria;* ³*Federal Office & Research Center for Agriculture, Vienna, Austria*
- WPD 065 **Web Based Direct Access LC/MS and Data Review to Accelerate Drug Development;** John Warrander¹; Simon Ashton¹; Kiyoshi Shimizu²; Norio Mukai²; Yuji Katsuyama²; Junko Iida²; ¹*Shimadzu Corporation, Manchester, UK;* ²*Shimadzu Corporation, Kyoto, Japan*
- WPD 066 **PRIME: Information Management Environment For High-Throughput Proteomics Laboratories;** David H. Lentz; Hsueh-Ling Chang; Luciana Pelosi-Kilby; Angela K. Walker; John R. Strahler; Peter J. Ulintz; Panagiotis G. Papoulias; Philip C. Andrews; *University of Michigan, Ann Arbor, MI*
- WPD 067 **DBParser: A Perl Program for Proteome Data Analysis;** Vijay Dondetti¹; Rebecca Dezube²; Xiaoyu Yang¹; Dawn M. Maynard¹; Sanford P. Markey¹; Lewis Geer³; Jonathan Epstein²; Jeffrey A. Kowalak¹; ¹*National Institute of Mental Health, Bethesda, MD;* ²*National Institute of Child Health and Human Development, Bethesda, MD;* ³*National Center for Biotechnology Information, Bethesda, MD*

- WPD 068 **Hunting Small Yeast ORFs Using Virtual 2D Gels and MALDI TOF-TOF**; Gary A Ryman; Angela K Walker; Philip C Andrews; *University of Michigan, Ann Arbor, MI*
- WPD 069 **Automation in Data Acquisition, Interpretation, and Reporting for High Throughput LC/MS/PDA/ELSD**; Baiwei Lin; Min Wan; Min Wan; Min Wan; *Berlex Biosciences, Richmond, CA*
- WPD 070 **PeptideProphet and ProteinProphet: Software for Automated Identification of Proteins by Tandem Mass Spectrometry**; Andrew Keller; Alexey I. Nesvizhskii; Robert Hubley; Jimmy Eng; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- WPD 071 **Statistical Approach for Prefiltering of Raw MS/MS Spectra**; Ilan Vidavsky; Michael L. Gross; *Washington University, St. Louis, MO*
- WPD 072 **A Comparative Study of Peptide Sequencing Software Tools for MS/MS**; Chengzhi Liang¹; Jeffrey C Smith²; Christopher Hendrie¹; Ming Li¹; K. W. Michael Siu²; ¹*Bioinformatics Solutions Inc., Waterloo, Canada*; ²*Centre for Research in Mass Spectrometry, York University, Toronto, Canada*
- WPD 073 **Development and Evaluation of LC/Ion Trap MSⁿ Mass Spectral Libraries**; Robert D. Voyksner; Jennifer A. Townsend; *LCMS Limited, Raleigh, NC*
- WPD 074 **A Remotely Interactive MALDI-MS System with Automated Internet Enabled Features**; Min Yang; Micheal Pawliszyn; Gary Impey; Ron Bonner; *Applied Biosystems/MDS Sciex Instruments, Concord, Canada*
- WPD 075 **Using Genetic Algorithms for the Construction of de novo Peptide Sequences.**; Alejandro Heredia-Langner; William R. Cannon; Kenneth D. Jarman; Kristin H. Jarman; *Pacific Northwest National Laboratory, Richland, WA*
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- DRUG METABOLISM: QUANTITATION**
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- WPE 076 **Column-Switching Analysis for High-Throughput LC/MS/MS Using Prospekt II : Direct Plasma Injection Versus Sample Pre-Treatment Strategies**; Emmanuel Bourgogne; Chantal Grivet; Gerard Hopfgartner; *University of Geneva, School of Pharmacy, Geneva, Switzerland*
- WPE 077 **Development and Evaluation of a Solid Phase Microextraction Probe for in vivo Pharmacokinetic Studies**; Heather L Lord¹; Markus Walles¹; Russell P Grant²; Bev Inledon²; Brian Fahie³; Janusz B Pawliszyn¹; ¹*University of Waterloo, Waterloo, Canada*; ²*Eli Lilly Canada Inc., Scarborough, Canada*; ³*Eli Lilly Corporate Center, Indianapolis, IN*
- WPE 078 **Evaluation of the Analytical Performance Characteristics of a High-Field Asymmetric Waveform Ion Mobility Spectrometer (FAIMS) Coupled to a Tandem Quadrupole Mass Spectrometer**; Themis Flarakos¹; Ari Gritsas¹; Edward J. Daly¹; Donald Chun¹; Mark L. J. Reimer¹; Tim Hoffman²; Tom Covey²; David A. Barnett³; Randy W. Purves³; ¹*MDS Pharma Services, Montreal, Canada*; ²*MDS Sciex, Toronto, Canada*; ³*Ionalytics, Ottawa, Canada*
- WPE 079 **Drug Metabolism Studies Utilizing a Nanosplitting Device with Multiple On-line Mass Spectrometric, Radiometric and Diode-array Detection**; Christine L. Andrews; Paul Vouros; *Barnett Institute, Northeastern University, Boston, MA*
- WPE 080 **Routine Micro-Sampling for LC-MS/MS Quantitation in Drug Discovery**; Elizabeth A. Mahan; Carmen Fernandez-Metzler; Anne Taylor; *Department of Drug Metabolism, Merck Research Laboratories, West Point, PA*
- WPE 081 **Analysis of Fetal Rat Plasma, Tissue and Amniotic fluid by LC-MS/MS and Whole Body Autoradiography in**
- Early Drug Discovery**; Sam Wainhaus; Kimberly Dunn-Meynell; Ian Knemeyer; Roger Casale; Mark Wirth; Kimberly Treinen; Raymond Liu; *Schering Plough Research Institute, Kenilworth, NJ*
- WPE 082 **Development of an LC/MS/MS Assay for the Quantification of Aplidin®, a Novel Marine-derived Antineoplastic, in Human Plasma**; Jianming Yin¹; Pablo Aviles²; William Lee¹; Carl Ly¹; Glynn Faircloth¹; ¹*PharmaMar USA, Inc., Cambridge, MA*; ²*PharmaMar S.A., Colmenar Viejo, Spain*
- WPE 083 **Quantitation of Sumatriptan in Human Plasma via HPLC with MS/MS Detection**; Floyd Vest; Christopher Huntington; Michael Waldron; Bruce Hidy; *PPD Development, Richmond, VA*
- WPE 084 **Identification and Rejection of Calibration Standard Curve Outliers During Quantification of Xenobiotics Using LC/MS/MS**; Qimin Li¹; Kirk D. Knotts¹; Kenneth J. Ruterbories¹; Darlene K. Satonin¹; Thomas A. Walker²; Enaksha R. Wickremsinhe¹; ¹*Eli Lilly and Company, Indianapolis, IN*; ²*Eli Lilly Canada, Danforth, Canada*
- WPE 085 **Quantitation of Total Phenylephrine in Human Plasma via HPLC with MS/MS Detection**; Zong-Ping Zhang; James Waltrip; Sandra Miller; Jason DiNatale; Bruce Hidy; *PPD Development, Richmond, VA*
- WPE 086 **A Combined GC/MS/MS and LC/MS/MS Bioanalytical Method for the Quantitation of Estradiol, Estrone, Estrone Sulfate, Testosterone and Androstenedione**; Bhaskar Sundaram; James A. Settlege; Susan K. Ohorodnik; Paul A. Taylor; *Taylor Technology, Inc., Princeton, NJ*
- WPE 087 **Application of APPI Interface for High Throughput Quantitation Bioanalysis of Pharmaceutical Compounds**; Jim Shen; Hui Lin; Patrick Rudewicz; *Schering-Plough Research Institute, Kenilworth, NJ*
- WPE 088 **Validation of Critical Factors in Tandem Ion Trap MS/MS Method for Screening of Anabolic Agents**; Juan Francisco Sanchez Bruzon; *Antidoping Laboratory, Havana City, Cuba*
- WPE 089 **Liquid Chromatography / Tandem Mass Spectrometry for the Determination of Metoclopramide in Maternal Plasma, Amniotic Fluid, Coelomic Fluid and Fetal Tissue**; Perpetua E. Tan; April S.Y. Wong; Matthew T.V. Chan; Tony Gin; *Dept. of Anaesthesia and ICU, Chinese University of Hong Kong, Shatin, Hong Kong*
- WPE 090 **A DPC 083 LC/MS Method in a CSF/HSA Matrix Utilizing In-Source CID on a Single Quadrupole Mass Spectrometer**; Jinnan Cai; P.Jane Gale; Steve Unger; *Bristol-Myers Squibb, Princeton, NJ*
- WPE 091 **LC/MS/MS Bioanalysis of Basic Analytes Using Normal Phase Columns and Aqueous/Organic Mobile Phases - Eliminating Evaporation and Reconstitution Steps for Liquid/Liquid Extractions**; Kenneth J Ruterbories; Andre S Negahban; *Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN*
- WPE 092 **Fully Automated High-Throughput LC/MS/MS Screening for Cytochrome P450 Inhibition with a Custom Setup/Processing Software**; Petia Shipkova; Robert Langish; Jonathan Josephs; Tatyana Zvyaga; Mary Ellen Salyan; Lee McLaughlin; Cheryl Klakouski; Jay Knipe; Sanna Lehtinen-Oboma; *Bristol-Myers Squibb, Princeton, NJ*
- WPE 093 **Study of the Interconversion Kinetics and Equilibrium of the Lactone and Carboxylate Forms of SN38 by HPLC-MS/MS**; Lana Rodenhiser¹; Milton Furtado¹; Susan Paulson²; Stephen Wanski²; Francis Beaudry¹; ¹*MDS Pharma Services, Montreal, Québec, Canada*; ²*Neopharm, Lake Forest, IL*

- WPE 094 **Ultra Sensitive Assay to Measure Rapamycin in Whole Blood and Paclitaxel in Swine Plasma;** Jakal M. Amin; Luke Utley; Mark Netsch; Wendy Couture; Sue Netsch; *Charles River, Worcester, MA*
- WPE 095 **Simultaneous Determination of Gemcitabine and its Deaminated Metabolite in Animal Plasma by Normal Phase LC-MS/MS Analysis;** Jun Shen; Xue Ge; Taegen Clary; Ying Cheng; Cynthia Sun; Tom Kirkland; Babu Subramanyam; Jih-Lie Tseng; *Berlex Biosciences, Richmond, CA*
- WPE 096 **LC- MS/MS - A Highly Sensitive and Selective Method for the Determination of Hyperforin in Mice Brain;** Jan-Henning Keller¹; Mona Tawab¹; Gunter Eckert³; Dietrich A. Volmer⁴; Walter E. Mueller³; Theodor Dingermann²; Manfred Schubert- Zsilavec¹; Michael Karas¹; ¹*Inst. of Pharmaceutical Chemistry/ J.W.Goethe- University, Frankfurt, Germany*; ²*Inst. of Pharmaceutical Biology/ J.W. Goethe- University, Frankfurt, Germany*; ³*Inst. of Pharmacology/ J.W. Goethe- University, Frankfurt, Germany*; ⁴*Inst. for Marine Biosciences/ National Research Council, Halifax, Canada*
- WPE 097 **Analysis of Cisplatin and its Hydrated Complexes by ESI-MS and High-Field Asymmetric Waveform Ion Mobility Spectrometry;** Meng Cui; Luyi Ding; Zoltan Mester; *National Research Council of Canada, Ottawa, Canada*
- WPE 098 **Monitoring the Ammonium Adduct Ion Provides the LC/MS/MS Sensitivity Necessary to Quantify Troglitazone in EDTA Rat Plasma;** Julie D McCulloch; Andre S Negahban; Kenneth J Ruterbories; *Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN*
- WPE 099 **Application of a TSQ Quantum Ultra Triple Quadrupole Mass Spectrometer for the Quantification of Novel Anti-HIV Agents in Peripheral Blood Mononuclear Cell (PBMCs);** Cheng Y Yang¹; Yujin Wang¹; Maurizio Splendore²; Rohan A. Thakur²; ¹*Gilead Sciences, Foster City, CA*; ²*ThermoFinnigan, San Jose, CA*
- WPE 100 **Quantitation of Plasma Estrogen Metabolites by LC/Electron Capture Atmospheric Pressure Chemical Ionization/Tandem Mass Spectrometry After Oral Estradiol Administration;** Ye Tian; Seon Hwa Lee; Alejandro Gutierrez; Santosh Tilve; Peter O'Dwyer; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*
- WPE 101 **Identification and Quantitation of a Phase II Diabetes Drug, CLX-0921 and Metabolites in Monkey Bile;** Purvi Jejurkar; Coleman Gross; Partha Neogi; Lesley Pickford; Jan Rydzewski; *Calyx Therapeutics, Inc, Hayward, CA*
- WPE 102 **Cohesive Online Mass Spectrometric Determination of Clindamycin in Multiple Biological Matrices;** Adlai E. Niggebrugge; Lisa A. Ford; David S. Parker; Glenn D. Tabolt; Michael Zhou; Anthony S. Chilton; *Cardinal Health, RTP, NC*
- WPE 103 **High-Throughput Tissue Sample Bioanalysis Using Automation Coupled with On-Line High-Flow Column Switching LC/MS/MS;** Hang Zeng; Joanne Nguyen; Jing-Tao Wu; *Millennium Pharmaceuticals, Inc, Cambridge, MA*
- WPE 104 **Urine Drug Testing for Multiple Opioids, Cocaine, and Metabolites by Direct Injection LC-APCI-MS/MS;** Riet Dams²; Constance M. Murphy¹; Willy E. Lambert²; Marilyn A. Huestis¹; ¹*Chemistry and Drug Metabolism, National Institute on Drug Abuse, Baltimore, MD*; ²*Laboratory of Toxicology, Ghent University, Ghent, Belgium*
- WPE 105 **Direct Injection of Plasma Samples Using a Single RAM Column and LC-MS/MS Detection for Quantitative Drug Analysis;** Robert Papp; Wayne M. Mullett; Elizabeth Kwong; *Pharmaceutical Research and Development, Merck Frosst Canada & Co., Montreal, Canada*
- WPE 106 **An LC-MS/MS Method for the Determination of Tipifarnib, A Novel Farnesyltransferase Inhibitor, in Human Plasma.;** Tom Verhaeghe; Ronald de Vries; Jan de Jong; *Johnson & Johnson Pharmaceutical Research and Development, Beerse, Belgium*
- WPE 107 **Semi-Automated Quantification of Ivermectin in Rat Plasma Using Protein Precipitation and Filtration with Liquid Chromatography-Turbo Ion Spray Tandem Mass Spectrometry;** Tony Pereira; Steve Chang; Ray Bakhtiar; Shuet-Hing L Chiu; *Merck Research Laboratories, Rahway, NJ*
- WPE 108 **Quantitation of Drugs and Vitamins using PhotoSpray™ Ionization on a QqTOF Instrument;** Jeffrey D. Miller; James A. Ferguson; *Applied Biosystems, Framingham, MA*
- WPE 109 **A Rapid and Ultrasensitive LC-MS/MS Method for the Quantitation of Capsaicin in Human Plasma Using Monolithic Reversed Phase Chromatography;** Erica Carnes; Holly Lusk; Daryl Grafelman; Chris Sartwell; Vinny Andalaro; Jean Lee; Patrick Lin; *MDS Pharma Services, Lincoln, NE*
- WPE 110 **Development and Validation of an LC-MS/MS Method for Quantification of Caffeine and Selected Metabolites for NAT2 Phenotype Determination;** Garnet McRae¹; Mihran G. Boudakian²; Johanne Bouchard¹; Keith Goodman³; Michael D. Harvey²; ¹*CTBR, Senneville, Canada*; ²*Theranostics – A Subsidiary of Xanthus Life Sciences, Montreal, Canada*; ³*Xanthus Life Sciences, Inc., Cambridge, MA*
- WPE 111 **The Determination of Sulfasalazine and its Metabolites in Human Plasma by High Performance Liquid Chromatography Mass Spectrometry;** Vy Ha; Anita Towers; Nicola Hughes; *Biovail Contract Research, Toronto, Canada*
- WPE 112 **A Simple and Sensitive LC/MS/MS Method for Paclitaxel Quantification in Mouse Plasma and Tissues to Support Pharmacokinetics/Tissue Distribution Studies of a Liposome Based Formulation of Paclitaxel (LEP-ETU);** Sumsullah Khan; Wei Guo; Jenifer Johnson; Ateeq Ahmad; Imran Ahmad; *NeoPharm Inc., Waukegan, IL*
- WPE 113 **Determination of R216073 in Human Plasma Using LC-MS/MS to Support Pharmacokinetic Studies in Healthy Volunteers;** Johan van Zijtveld; Marc De Meulder; Petra Vinck; Annemie Noels; Ilse Van Lommel; Liesbeth Vereyken; Philip Timmerman; *Johnson & Johnson PRDBE, Beerse, Belgium*
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- ENVIRONMENTAL**
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- WPF 114 **Selected Ion Chemical Ionization (SICI) using Glow Discharge with a Quadrupole Ion Trap;** Christine N Dalton¹; Gary L. Glish¹; ¹*University of North Carolina, Chapel Hill, NC*; ²*University of North Carolina, Chapel Hill, NC*
- WPF 115 **Analysis of Atmospheric Aerosol Particles With the Single Particle Analysis and Sizing System (SPASS);** Nicole Erdmann¹; Paolo Cavalli¹; Carsten Gräning¹; Nicolò Omenetto²; Frank Raes¹; Rita Van Dingenen¹; ¹*European Commission JRC Institute for Environment and Sustainability, Ispra (VA), Italy*; ²*University of Florida, Dept. of Chemistry, Gainesville, FL*
- WPF 116 **Detection of Nitro-substituted Polynuclear Aromatic Hydrocarbons and their Derivatives using Electron Capture Negative Ion Methods;** Jennifer Y Francis; Robert D Guy; Lou Ramaley; *Dalhousie University, Halifax, Canada*

- WPF 117 **Real -Time Monitoring of Trichloroethylene using a Mobile TAGA LPCI/MS/MS;** Nicholas S. Karellas; Dan B. Orr; Rebecca K. Milburn; Gary B. DeBrou; Qing-Feng Chen; *Ontario Ministry of the Environment, Toronto, Canada*
- WPF 118 **The Use of Gas Chromatography/Mass Spectrometry for Determination of Hydraulic Fluid Contamination in Lubricating Oil on The Space Shuttle;** Timothy P Griffin; *National Aeronautic and Space Administration (NASA), Kennedy Space Center, FL*
- WPF 119 **Diesel Engine Emissions as a Function of Engine Operating Conditions, a Single Particle Mass Spectrometry Study;** Deborah S. Gross¹; Alexandra M. Schmitt¹; Amy M. Silverberg¹; James J. Schauer²; David E. Foster²; Martin M. Shaeffer²; Chol-Bum Kweon³; Shusuke Okada⁴; ¹*Carleton College, Northfield, MN*; ²*University of Wisconsin, Madison, WI*; ³*Gas Technology Institute, Des Plaines, IL*; ⁴*Yanmar Company Ltd., Japan*
- WPF 120 **Qualitative and Quantitative Analysis of Organic Compounds in Particles Using Electron-Impact Mass Spectrometry;** Philip J. Silva; *Utah State University, Logan, UT*
- WPF 121 **The Identification of Nitropolycyclic Aromatic Hydrocarbons in Mainstream Tobacco Smoke Using Electron Monochromator Mass Spectrometry;** A. John Dane¹; Kent J. Voorhees¹; Robert B. Cody²; ¹*Colorado School of Mines, Golden, CO*; ²*JEOL USA, Inc., Peabody, MA*
- WPF 122 **Real-Time Analysis of Trace Combustion Gases from a Well-Stirred Reactor Using Tandem Mass Spectrometry and Selected Ion Storage;** Richard F. Reich¹; Scott D. Stouffer²; Howard T. Mayfield³; ¹*Air Force Research Laboratory, Wright-Patterson AFB, OH*; ²*University of Dayton Research Institute, Dayton, OH*; ³*Air Force Research Laboratory, Tyndall AFB, FL*
- WPF 123 **Assessment Of Tobacco-Specific Nitrosamines In Bidi Cigarette Smoke Using Isotope Dilution/Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry,** Weijia Wu; David Ashley; Clifford Watson; *Centers for Disease Control and Prevention, Atlanta, GA*
- WPF 124 **Aerospace and Environmental Applications of Small Mass Spectrometer Systems;** C Richard Arkin¹; Timothy P. Griffin²; Charles H. Curley¹; David P. Floyd¹; Guy R. Naylor¹; Frederick W. Adams²; William D. Haskell¹; Duke W. Follistein²; ¹*Dynaacs Inc, Kennedy Space Center, FL*; ²*NASA, Kennedy Space Center, FL*
- WPF 125 **A Unique and Sensitive Ionization Method for Nitrated Polycyclic Aromatic Hydrocarbons using Negative Ion APCI LC/MS;** Jerry Zweigenbaum; Michael Woodman; *Agilent Technologies, Inc., Wilmington, DE*
- WPF 126 **A Nano-LC-MS Electron Ionization Approach for Environmental Analysis;** Pierangela Palma; Achille Cappiello; Giorgio Famiglini; Antonella Siviero; Filippo Mangani; *Istituto di Scienze Chimiche Università di Urbino, Urbino, Italy*
- WPF 127 **Field and Laboratory Test of a Miniature Double Focusing Mass Spectrometer Sensor for Landfills Gas Management;** Enrico Davoli; Luigi Cappellini; Roberto Fanelli; *Mario Negri Pharmacological Research Institute, Milano, Italy*
- WPF 128 **Determination of Oxy-PAHs in Airborne Particulate Matter Using Liquid Chromatography Tandem Mass Spectrometry Coupled with Dual Probes of Electrospray and Atmospheric Pressure Chemical Ionization;** Xinghua Fan¹; Nathalie Sauret-Szczepanski²; Scott A. Mabury¹; Douglas A. Lane²; Jeffrey R. Brook²;

- ¹*University of Toronto, Toronto, Canada*; ²*MSC of Environment Canada, Toronto, Canada*
- WPF 129 **Studies on Organic Aerosols From the α -Pinene Ozonolysis by Ion Trap- and Fourier-Transform-Mass Spectrometry;** Wolfgang Schrader¹; Bettina Warscheid²; Thorsten Hoffmann²; ¹*Max-Planck-Intitut für Kohlenforschung, Mülheim/Ruhr, Germany*; ²*Institut für Spektrochemie und angewandte Spektroskopie, Dortmund, Germany*
- WPF 130 **Workplace Monitoring of Isocyanates Using Ion Trap LC/MS/MS;** Erik Vangronsveld¹; Friedrich Mandel²; ¹*Huntsman Polyurethanes, Everberg, Belgium*; ²*Agilent Technologies, Waldbronn, Germany*

HIGH THROUGHPUT ROBOTICS

- WPG 131 **Application of Precision 2000 in Rapid Rat Pharmacokinetic Screen: Automated Standard and Sample Preparation;** Hong Mei; Cymbelene Nardo; Ganfeng Wang; Yunsheng Hsieh; *Schering Plough Research Institute, Kenilworth, NJ*
- WPG 132 **High-throughput 36 Second LC/MS/MS Analysis of Plasma Samples Using the New SPEXpress System;** Bradford Commons¹; Russell House³; Sanjay Patil²; Robert Pranis²; Miryam Kadknodayan¹; ¹*Genentech, Inc, South San Francisco, CA*; ²*3M Company, St. Paul, MN*; ³*TomTec, Hamden, CT*
- WPG 133 **High Capacity Analysis of Digoxin by Cohesive Turbulent Flow Mass Spectrometry;** Adlai E. Niggebrugge; Lisa A. Ford; Glenn D. Tabolt; Michael Zhou; Anthony S. Chilton; *Cardinal Health, RTP, NC*
- WPG 134 **High Throughput Purification: Making Purification the Rate-Limiting Step;** John J. Isbell¹; Yingyao Zhou¹; Brad Backes¹; Mark Weslak¹; Matthew Rynd¹; Jim Chang¹; Shumei Jiang¹; Jared Ek¹; Andrew Brailsford²; Darcy Shave²; ¹*Genomics Institute of the Novartis Research Foundation (GNF), San Diego, CA*; ²*Waters Corporation, Milford, MA*
- WPG 135 **Interfacing Capillary/Nano LC with MALDI/MS for High-Throughput Proteomics;** Mark van Gils²; Remco van Soest²; Dale Patterson³; Remco Swart¹; Jean-Pierre Chervet¹; ¹*LC Packings - A Dionex Company, Amsterdam, The Netherlands*; ²*LC Packings (USA) - A Dionex Company, San Francisco, CA, USA*; ³*Applied Biosystems, Framingham, MA*
- WPG 136 **LC Plumbing Strategies for Reducing Carryover in LC/MS/MS Methods;** Theodore Brus¹; Brian D. Beato¹; Saber H. Maleki²; ¹*Covance, Indianapolis, IN*; ²*Covance, Biolink, Indianapolis, IN*; ³*Covance, Madison, WI*
- WPG 137 **Solutions for Different Challenges in High Throughput LC/MS Analysis;** Stefan Schuette; Angelika Gratzfeld - Huesgen; Mark Stahl; *Agilent Technologies, Waldbronn, Germany*
- WPG 138 **Automation of the In-Gel Digestion Process Using a Tecan Genesis™ RSP 150 Workstation;** Marcy Engelstein¹; Anja Dedeo¹; John McCool²; Libby Kellard¹; ¹*Millipore Corporation, Danvers, MA*; ²*Tecan US, Research Triangle Park, NC*
- WPG 139 **Direct Plasma Analysis Using On-Line Extraction. A Simple LC/MS/MS Method Using High Sample Throughput For Early Discovery and Development;** Mirva Boothe; Scott Womble; *Roche Palo Alto, Palo Alto, CA*

INSTRUMENTATION:

MASS ANALYZERS (QUADRUPOLES & TRAPS)

- WPH 140 **Signal Processing Approaches in the Miniature Cylindrical Ion Trap Mass Spectrometer;** Jack E. Fulton³; M. Todd Griffin³; Leah S. Riter¹; Rong Gao²; Lefteri H. Tsoukalas²; R. Graham Cooks¹; ¹*Department of*

- Chemistry, Purdue University, Lafayette, IN; ²School of Nuclear Engineering, Purdue University, Lafayette, IN; ³Naval Surface Warfare Center, Crane Division, Crane, IN
- WPH 141 **High Resolution Modeling of the Entrance and Exit Apertures in a Quadrupole Ion Trap Using SIMION 7.0.**; Christopher K. Hilton; Richard A. Yost; University of Florida, Gainesville, FL
- WPH 142 **Comparison of the Selectivity of Deconvolution Software and Quadrupole Ion Trap MS/MS and their Limitations in Sample Matrix.** Diana Baker¹; Ghislain Gerard²; Gail Harkey³; Jane Klassen⁴; Jane Klassen⁴; ¹ThermoElectron, Austin, TX; ²ThermoElectron, West Palm Beach, FL; ³Florida Department of Agriculture, Tallahassee, FL; ⁴ThermoElectron, Schaumburg, IL; ⁵National Institute of Standards and Technology, Gaithersburg, MD
- WPH 143
- WPH 144 **Dynamics of a Single Ion Packet Transport in the RF-Only Collisional Quadrupole of the MALDI-Linear Trap Mass Spectrometer.** Viatcheslav V. Kovtoun; ThermoFinnigan, San Jose, CA
- WPH 145 **Overcoming SRM Blindness with the Linear Ion Trap.** Richard W Gundersdorf; Carmen L Fernandez-Metzler; Rick C King; Merck & Co. Inc., West Point, PA
- WPH 146 **A Pulsed-Down Cavity for Efficient Low Energy Extraction of Ions Injected into a Very Large Paul Trap at High Energy.** Abdol Mohammad Ghalambor Dezfūli¹; Robert B. Moore²; ¹Research Institute of Applied sciences(ACECR), Tehran, Iran; ²McGill University, Montreal, Canada
- WPH 147 **The Application of Mass Spectrometry to Biological Problems: A Historical Perspective.** Michael A. Grayson; Washington University, St Louis, MO
- WPH 148 **Practical Quadrupole Theory: Quadrupole Acceptance and Emittance Characteristics.** Randall E Pedder; ABB Inc Analytical – Extrel QMS, Pittsburgh, PA
- WPH 149 **Facile Detection of PFB-Eicosanoid Regulatory Lipids with GC/ECNCI/ITMS at fg/μL Sensitivity From Piglet Breath Condensate as Non-Invasive Inflammatory Response Monitors.** Gail A Harkey¹; Roland Geyer²; Tina A Tynan²; David C White²; Jennifer Smol³; Joany Jackman³; Sachin Mani⁴; Marti Jett⁴; Keiji Asano⁵; ¹Thermo Electron Analytical Instruments Div., Schaumburg, IL; ²U of TN, Center for Biomarker Analysis, Knoxville, TN; ³The Johns Hopkins University Applied Physics Laboratory, Laurel, MD; ⁴Walter Reed Army Institute of Research, Silver Spring, MD; ⁵Oak Ridge National Laboratory, Oak Ridge, TN
- WPH 150 **A New Higher-Capacity 3D Quadrupole Ion Trap.** Alex Mordehai; Bryan Miller; Frank Kuhlmann; Agilent Technologies, Santa Clara, CA
- WPH 151 **9.4 T FT-ICR MS Instrument Configured for Compositional Analysis of Non-Polar Petrochemical Components.** Tanner M Schaub²; Christopher L Hendrickson¹; Kuangnan Qian³; Ryan P Rodgers¹; Alan G Marshall¹; ¹National High Magnetic Field Laboratory, Tallahassee, FL; ²Florida State University, Tallahassee, FL; ³ExxonMobil Research and Engineering Company, Annandale, NJ
- WPH 152 **Analytical Approach for the Description of Ion Motion, Ion Energy and Collisional Relaxation in Quadrupole Mass Spectrometry.** Vladimir I Baranov; MDS SCIEX, Concord, Canada
- WPH 153 **Electrospray and Matrix-Assisted Laser Desorption Ionization Mass Spectrometry of Some Organometallic Compounds.** Pauline J Vollmerhaus; Qing Yang; Takeo Sakuma; MDS Sciex, Concord, Canada
- WPH 154 **Operation of a Linear Quadrupole Ion Trap Mass Spectrometer Under High Space Charge Conditions.** Michael W. Senko¹; Jae C. Schwartz¹; Andreas Wiegand²; ¹Thermo Electron, San Jose, CA; ²Thermo Electron, Bremen, Germany
- WPH 155 **Orbitrap Mass Analyzer: Analytical Performance and Simulations.** Hongyan Li¹; Alexander Makarov²; Robert J. Noll¹; Mark Hardman³; Guangxiang Wu¹; R. Graham Cooks¹; ¹Purdue University, West Lafayette, IN; ²ThermoFinnigan, Bremen, Germany; ³ThermoFinnigan, San Jose, CA
- WPH 156 **0.1 ppm Mass Accuracy for Polypeptides: The Next Milestone in Fourier Transform Mass Spectrometry.** Mikhail M Savitski¹; Igor A Ivonin¹; Youri O Tsybin²; Per Håkansson²; Roman A Zubarev¹; ¹Laboratory for Biological & Medical Mass Spectrometry, Uppsala Box 534, Ångström Lab, Sweden; ²Material Science, Ion Physics, Uppsala Box 534, Ångström Lab, Sweden
- WPH 157 **Novel Miniature FTMS for Analysis of Corrosives and Chemical Warfare Agents.** Wayne V Rimkus; Dean V Davis; Kenneth Gallaher; Siemens Applied Automation, Bartlesville, OK
- WPH 158 **Simultaneous Determination of Psychotropics in Blood Using a New Quadrupole-Linear Ion Trap Mass Spectrometer.** Tomoko Nembai¹; Hajime Miyaguchi²; Hitoshi Sekine²; Makiko Komatsu¹; Tetsuo Kokaji¹; Sumie Ando¹; ¹Applied Biosystems Japan Ltd., Tokyo, Japan; ²Saitama Prefectural Police Headquarters, Saitama, Japan
- WPH 159 **A New High Energy Dynode Design for LC-MS.** Dick Stresau; Wayne Sheils; Kevin Hunter; ETP Electron Multipliers, Ermington, Australia
- WPH 160 **The Impact of the Cone of Reflection on Mass-Selective Axial Ejection from a Linear Quadrupole Ion Trap.** Frank A. Londry; MDS Sciex, Concord, Canada
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- ION ACTIVATION: DISSOCIATION**
- WPI 161 **Fragmentation Reactions of Protonated Aromatic Amino Acids: Formation of Radical Cations.** Houssain El Aribi; Alan C. Hopkinson; Michael K. W. Siu; York University, Toronto, Canada
- WPI 162 **Comparison of Fragmentation of Ionized Volatile Organic Compounds by CID vs SID for Resolution of Isobars.** Michael L. Alexander¹; Peter Prazeller¹; Julia Laskin¹; Elena Boscaini²; Jean H. Futrell¹; ¹Pacific Northwest National Laboratory, Richland, WA; ²Institute for Ion Physics, University of Innsbruck, Innsbruck, Austria
- WPI 163 **Calibration of Ion Effective Temperatures Achieved by Resonant Activation In a Quadrupole Ion Trap Mass Spectrometer.** Valérie Gabelica¹; Michael Karas¹; Edwin De Pauw²; ¹Johann-Wolfgang Goethe Universität Frankfurt, Frankfurt am Main, Germany; ²Université de Liège, Liège, Belgium
- WPI 164 **Theoretical & Experimental Evidences for the Intramolecular Electrophilic Aromatic Substitution Reaction of Protonated LB42908 in the Gas-Phase.** Yong-Hyeon Yim¹; Sik Lee²; Tae Geol Lee¹; Byungjoo Kim¹; Hun-Young So¹; ¹Korea Research Institute of Standards and Science, Daejeon, South Korea; ²KISTI, Daejeon, South Korea
- WPI 166 **Classical Kinetic Theory of Electric Field Excitation in Quadrupole Ion Traps.** Douglas E. Goeringer¹; Larry A. Viehland²; ¹Oak Ridge National Laboratory, Oak Ridge, TN; ²Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN; ³Division of Science, Chatham College, Pittsburgh, PA; ⁴Chatham College, Pittsburgh, PA

- WPI 167 **Fragmentation Of Protonated Conjugated Amides at the C—C(O) Bond: an Ion-Neutral Complex Identified by the Kinetic Method;** Ya-Ping Tu; Roche Pharmaceuticals, Palo Alto, CA
- WPI 168 **High Sensitivity Infrared Multiphoton Dissociation Using a Pulsed Gas Nozzle in a Quadrupole Ion Trap Mass Spectrometer;** Yuichiro Hashimoto¹; Hideki Hasegawa¹; Izumi Waki¹; Kiyomi Yoshinari²; ¹Hitachi, Ltd., Hitachi Research Laboratory, Hitachi, Japan; ²Hitachi, Ltd., Central Research Laboratory, Tokyo, Japan
- WPI 169 **Comparison of SORI-CID and MSAD for Top-Down Protein Dissociation;** Karin M. Keller¹; Jennifer S. Brodbelt¹; Robert L. Hettich²; Gary J. Van Berkel²; ¹The University of Texas, Austin, TX; ²Oak Ridge National Laboratory, Oak Ridge, TN
- WPI 170 **CAD and Computational Studies of Doubly- and Triply-Charged Metal/DMSO complexes;** John A. Stone¹; Timothy Su²; Dragic Vukomanovic²; ¹Queen's University, Kingston, Canada; ²University of Massachusetts Dartmouth, North Dartmouth, MA
- WPI 171 **Cu(II)-Catalyzed Reactions in Ternary Cu(II)-Amino Acid Monocations;** Ping Wang; Chrys Wesdemiotis; The University of Akron, Akron, OH
- WPI 172 **Tandem Mass Spectrometry of Isomeric Hexaaza-Macrocyclic Ni(II) Complexes based on S-substituted-isothiocarbohydrazides;** Sergiu P. Paliu¹; Anatol A. Dobrov²; Nicolae V. Gerbeleu²; Dmitri V. Zagorevskii³; John R. Eyster¹; ¹UF, Gainesville, Florida; ²Department of Chemistry, University of Florida, Gainesville, FL
- WPI 173 **Dynamics of Ion Selection and Collision Induced Dissociation in a New Electrospray Multiple Quadrupole 2-D Trap Time-Of-Flight Mass Spectrometer;** V. Sergey Rakov; Lisa M. Cousins; Gholamreza Javahery; Craig M. Whitehouse; Analytica of Branford Inc., Branford, CT
- WPI 174 **The Generation and Detection of Succinimidooxy Radical by Tandem Mass Spectrometry;** Dmitri Zagorevski; Jerry Abrams; Curt Breneman; Rensselaer Polytechnic Institute, Troy, NY
- WPI 175 **Arrhenius Activation Parameters for the Loss of Nucleobase from Deprotonated Oligonucleotide Ions in the Gas Phase;** Rambod Daneshfar; John S Klassen; University of Alberta, Edmonton, Canada
- WPI 176 **Time Delayed Fragmentation of Peptide Ions Using Tandem Linear Ion Traps;** James W. Hager; MDS SCIEX, Concord, Canada
- WPI 177 **Application of Thermally Assisted-Collision Induced Dissociation to Molecules Resistant to Low Energy Collision Induced Dissociation at Ambient Temperature;** Alawee H. Racine; Gary L. Glish; University of North Carolina, Chapel Hill, NC
- WPI 178 **Fragmentations of Negative Ions Produced by Electrospray Ionization of Polyfunctional Amino Acids;** J. Stuart Grossert; Paul D. Fancy; Robert L. White; Dalhousie University, Halifax, Canada
- WPI 179 **Determination of Relative Cooling Rates using Infrared Multiphoton Photodissociation in a Quadrupole Ion Trap;** David M. Black; Anne H. Payne; Gary L. Glish; University of North Carolina, Chapel Hill, NC
- WPI 180 **Surface-Induced Dissociation (SID) and Surface-Induced Dissociative Charge Inversion of Nitrobenzene;** Jormarie Alvarez; Hongyan Li; R. Graham Cooks; Purdue University, West Lafayette, IN
- WPI 181 **The Formation of Gas and Liquid Phase Metal Cation/Pyocyanin Complexes;** Dragic Vukomanovic¹; Timothy Su¹; Diana Tatrou¹; Eric Steele¹; John A. Stone²; ¹U. of Massachusetts Dartmouth, North Dartmouth, MA; ²Queen's University, Kingston, Canada
- WPI 182 **Metastable Ion Decay in IR-MALDI: Charge State and Desorption Wavelength Effects;** Robert S. Brown; Edward E. Durrant; Utah State University, Logan, UT
- WPI 183 **Wavelength and Time-Resolved Luminescence Spectroscopy of the Matrix Assisted Laser Desorption Process;** Tassilo Muskat; Dirk Walbrodt; Juergen Grotemeyer; Institute for Physical Chemistry, University Kiel, Kiel, Germany
- WPI 184 **Violation of the Even-Electron Rule in the CID of Taxoid Core Skeleton Prepared by Cone-Voltage Induced Decomposition;** Alain Lesimple¹; Lolita Zamir²; Qing Shi²; Orval Mamer¹; ¹MS Unit, McGill University, Montreal, Canada; ²INRS - Institut Armand-Frappier, Laval, Canada
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- ION MOLECULE REACTIONS**
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- WPJ 185 **Gas-Phase Structure of Four-Coordinate Divalent Metal Complexes from Ion-Molecule Reactions;** Marianny Y Combariza; Richard W Vachet; University of Massachusetts, Amherst, MA
- WPJ 186 **Gas-Phase Measurements of the Kinetics of Ligation of First Row Transition-Metal Ions with Pyridine and the Molecular Gases O₂, CO and CO₂;** Michael J. Y. Jarvis; Voislav Blagojevic; Diethard K. Bohme; York University, Department of Chemistry, Toronto, Canada
- WPJ 187 **The Gas-Phase Chemical Behavior of Positively Charged Phenyl Radicals Towards Lysine, Phenylalanine, Tryptophan and Tyrosine;** Yiqun Huang; Hilka Kenttamaa; Purdue University, West Lafayette, IN
- WPJ 188 **Generation, Characterization and Ion/Molecule Reactions of the Phenyl Nitrenium Ion;** Hao Chen; Xubin Zheng; Pengxiang Yang; R. Graham Cooks; Purdue University, West Lafayette, IN
- WPJ 189 **Effect of Hydroxyl Substituents on the Reactivity of m-Benzyne Analogs in FT-ICR;** Katrina E. Nizzi; F. Sedinam Amegayibor; Jason M. Price; Hilka I. Kenttamaa; Purdue University, West Lafayette, IN
- WPJ 190 **Comparison of the Chemical Properties of o-Benzynes to Other Biradicals by Using the Distonic Ion Approach and FT-ICR;** Karinna M. Campbell; F. Sedinam Amegayibor; John J. Nash; Hilka I. Kenttamaa; Purdue University, West Lafayette, IN
- WPJ 191 **The Gas Phase Reactivity of Transition Metal-Phenanthroline Complexes;** Angela M. Fahey; Richard W. Vachet; University of Massachusetts, Amherst, MA
- WPJ 192 **Examination of the Reactivity of the Cyclopentadienyl Cobalt Radical Cation (CpCo⁺) with Cyclic Hydrocarbons Using Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry: Application for the Identification of Hydrocarbons Produced from Pyrolyses of Benzenesulfonate Esters;** Putuma Gqamana; J. Larry Campbell; Hilka I. Kenttamaa; Kate Pease Williams; John J. Nash; Department of Chemistry, Purdue University, West Lafayette, IN
- WPJ 193 **A Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Study of the Gas Phase Host/Guest Chemistry of Some New Calix-[4]-Pyrroles;** Xue Kui Ji; David S.C. Black; Stephen B. Colbran; Donald Craig; Gary D. Willett; The University of New South Wales, Sydney, Australia
- WPJ 194 **Gas Phase Energetics of the Interactions Between Water and Amino Acids;** Nancy E Vieira; John J Gilligan; Alfred L Yergey; NICHD, National Institutes of Health, Bethesda, MD
- WPJ 195 **FT-ICR Studies on the Reactivity of Aromatic Biradical Towards DNA Components;** Anthony Adeuya; Linan Yang; F. Sedinam Amegayibor; Hilka I. Kenttamaa; Purdue University, West Lafayette, IN

- WPJ 196 **FT-ICR Studies on Phenyl Radicals' Attack on Simple Amino Acids and Quantitative Analysis of Site Selectivity in H-Abstraction;** Linhong Jing; Leonard P. Guler; Hilka I. Kenttämaa; *Purdue University, West Lafayette, IN*
- WPJ 197 **Kinetic Analysis of Metastable Decay and Ion-Molecule Reactions for Selected Terpene Isomers: Cold and Hot Ions;** LeRae B. Graham; Justin B. Bennett; Jan E. Szulejko; Touradj Solouki; *Department of Chemistry, University of Maine, Orono, ME*
- WPJ 198 **Relative Proton Affinities from Kinetic Energy Release Distributions for Dissociation of Proton-Bound Dimers;** Julia Laskin; John J Hache; Jean H Futrell; *Pacific Northwest National Laboratory, Richland, WA*
- WPJ 199 **Wrangling the Intricacies of a Chen Nozzle Coupled to an FT-ICR;** Amber L. Russell; David Read; Don L. Rempel; Peter P. Gaspar; Micheal L. Gross; *Washington University, Department of Chemistry, St. Louis, MO*
- WPJ 200 **On the Clustering Kinetics of Benzene with Lanthanide Cations and Subsequent Oxidation Reactions;** Gregory K. Koyanagi; Diethard K. Bohme; *York University Department of Chemistry, Toronto, Canada*
- WPJ 201 **Catalyzed Decarbonylation of Carbonylic Radical Cations;** Philippe Mourgues; Guillaume van der Rest; Hristo Nedev; Henri E. Audier; *CNRS/DCMR/Ecole Polytechnique, Palaiseau, France*
- WPJ 202 **The Chemistry of Ion-molecule Pairs: Acetaldehyde-Solvated Conventional and Distonic Methanol Cations;** Xian Wang; John L. Holmes; *University of Ottawa, Ottawa, Canada*
- WPJ 203 **The Reaction of Diacetylene Radical Cation with Ethylene;** Daniel J Goebbert; Xiping Liu; Paul G Wenthold; *Purdue University, West Lafayette, IN*
- WPJ 204 **A Reactivity and Mechanistic Study of Halocarbyne Cations, CX+(X = F, Cl, and Br), with Acetylene, Phenylacetylene, and Benzene in the Gas-Phase;** Xinping Liu; Peter P. Gaspar; Michael L. Gross; *Washington University, St. Louis, MO*
- WPJ 205 **Reactivity Studies of Di- and Trinucleotides with Charged Phenyl Radicals in FT-ICR;** Ji-ang Liu; Christopher J. Petzold; Luis E. Ramirez-Arizmendi; Hilka Kenttämaa; *Purdue University, West Lafayette, IN*
- WPJ 206 **Flow Tube Studies of N⁺ and N₂⁺ with NO and O₂ from 300-1400 K;** Anthony J. Midey²; Thomas M. Miller²; A. A. Viggiano¹; ¹*Air Force Research Laboratory, Hanscom AFB, MA*; ²*Visidyne, Inc., Burlington, MA*

IONIZATION MECHANISMS

- WPK 207 **Investigation of MALDI Ion Formation Dynamics Using Simultaneous Ion Neutral Measurement;** Zhaoyang Liu; Lloyd W. Sumner; *The Samuel Roberts Noble Foundation, Ardmore, OK*
- WPK 208 **Laser Pulse Length Dependence of Internal Energy Transfer in MALDI;** Guanghong Luo; Ioan Marginean; Louise Ye; Akos Vertes; *Department of Chemistry, George Washington University, Washington DC*
- WPK 209 **Matrix Suppression and Cationization in MALDI MS;** Juan Zhang; Vladimir Frankevich; Renato Zenobi; *Swiss Federal Institute of Technology (ETH Zürich), Zürich, Switzerland*
- WPK 210 **Studies of Ion Formation from Matrix Assisted Laser Desorption / Ionization at Atmospheric Pressure;** Jian Bai; Jean-Luc Truche; Alex Mordehai; Pat Perkins; *Agilent Technologies, Santa Clara, CA*
- WPK 211 **Role of the Gas Phase Basicity and Acidity of Matrices on the Internal Energy Distribution on Ions Produced from MALDI Experiments;** Jean-Claude Tabet¹; Sandra Alves¹; Vincent Livadaris¹; Françoise Fournier¹; Carlos

Afonso¹; Jean-Claude Blais¹; ¹*Laboratoire de chimie structurale organique et biologique, U.P.M.C., Paris, France*; ²*Laboratoire de chimie structurale organique et biologique, U.P.M.C., Paris, France*

- WPK 212 **Multiply Charged Ions and Fragmentation in MALDI;** Vladimir E Frankevich; Juan Zhang; Antonis Koubenakis; Renato Zenobi; *Department of Chemistry, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland*
- WPK 213 **IR-MALDI from Ice: Wavelength Dependence of Ion Yields;** Michelle L Baltz-Knorr; Kenneth E Schriver; Richard F Haglund; *Vanderbilt University, Nashville, TN*
- WPK 214 **Exciton Mobility in UV-MALDI Matrices;** Patrick D. Setz¹; Richard Knochenmuss²; ¹*Dept. of Chemistry, Swiss Federal Inst. of Technology, Zurich, Switzerland*; ²*Novartis Pharma, Basel, Switzerland*
- WPK 215 **Formation of Singly Charged Metal Complexes in the Gas Phase;** Sasa Kazazic; Leo Klasinc; Marko Rozman; Dunja Srzic; *Institute Rudjer Boskovic, Zagreb, Croatia*
- WPK 216 **Laser Pulse Length Dependence of Ionization Processes in UV-MALDI-MS;** Yong Chen; Akos Vertes; *George Washington University, Washington, DC*
- WPK 217 **Study of Fatty Acids and Sulfonic Acids by Desorption/Ionization on Silicon Mass Spectrometry;** Natali Budimir¹; Françoise Fournier¹; Jean-Claude Blais¹; Franck Wind²; Jean-Claude Tabet¹; ¹*Laboratoire de Chimie Structurale Organique et Biologique, PARIS VI, Paris, France*; ²*Centre d'Etudes du Bouchet, Vert-le-Petit, France*
- WPK 218 **Using FTIR-ATR to Probe Infrared Laser Desorption Ionization Mechanisms;** Jorge L. Laboy¹; Mark W. Little²; Kermit K. Murray²; ¹*University of Puerto Rico-Mayaguez, Mayaguez, PR*; ²*Louisiana State University, Baton Rouge, LA*
- WPK 219 **Nanoparticle Detection as an Evidence of Ion Precursor Existence in MALDI;** Sandra Alves; Markus Kalberer; Renato Zenobi; *ETH Honggerberg, Zurich, Switzerland*
- WPK 220 **Modeling Nanosecond Non-Acivated Thermal Decay of MALDI Matrices Containing Preformed Analyte Ions and Partially Ionized Matrix Molecules as the Origin of Pneumatic Assistance;** Victor L. Talroze¹; Ilya O. Leipunsky²; A. L. Burlingame¹; Michael A. Baldwin¹; ¹*Mass Spectrometry Facility, University of California, San Francisco, CA*; ²*Russian Academy of Sciences, Moscow, Russia*

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- WPL 221 **Analysis of Hydroperoxides and Peroxides Products by Li⁺ Coordination Tandem Mass Spectrometry.;** Florence Guerard; Cecile Cren-Olive; Veronique Nardello-Rataj; Jean-Marie Aubry; Christian Rolando; *Universite des Sciences et Technologies de Lille, UMR CNRS 8009, LCOM, Villeneuve d'Ascq, France*
- WPL 222 **Simultaneous Analysis of Prostaglandins and Prostaglandin Glycerol Esters by Electrospray LC-MS-MS;** Philip J Kingsley; Samir Saleh; Lawrence J Marnett; *Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, TN*
- WPL 223 **Identification of Urinary Leukotriene B₄ Metabolites in Human Subjects;** Karin A. Zemski Berry¹; L. Flamand²; J. Gosselin²; P. Borgeat²; Robert C. Murphy¹; ¹*National Jewish Medical and Research Center, Denver, CO*; ²*Virocell Inc., Quebec, Canada*
- WPL 224 **Identification of the Time Sequence of a Natural Autoxidation Process of Methyl linoleate by GC-MS;** Ting Wang; Min Wan; Patrick R. Jones; *University of the Pacific, Stockton, CA*
- WPL 225 **Identification of Novel Nitro Lipids by Electrospray LC/MS/MS;** Jordi López Fernández; Javier Parcerisa

- Egea; Michael Balazy; *New York Medical College, Valhalla, NY*
- WPL 226 **LC-MS-MS Determination of Adducts of 1,3-Diethyl-2-Thiobarbituric Acid and Malonaldehyde as a Measure of Lipid Peroxidation;** Dongwei Zhu¹; Wenkui Li¹; Yongmei Li¹; Richard B van Breemen¹; ¹*Univ. of Illinois at Chicago, College of Pharmacy, Chicago, IL*
- WPL 227 **Breath Condensate Lipids as Non-Invasive Biomarkers for Respiratory Pathophysiology;** David C. White¹; Roland Geyer¹; Tina A. Tynan¹; Erin Terry²; Jennifer Smoll³; Sacchin Mani⁴; Marti Jett⁴; Joany Jackman³; Michael D. Karlstad⁵; Jason D. Morrow²; ¹*Center for Biomarker Analysis, The University of Tennessee, Knoxville, TN*; ²*Vanderbilt University Medical Center, Nashville, Tennessee*; ³*The Johns Hopkins University Applied Physics Laboratory, Laurel, MD*; ⁴*Walter Reed Army Institute of Research, Silver Spring, Maryland*; ⁵*The University of Tennessee Medical Center, Knoxville, TN*
- WPL 228 **Analysis of Bioactive Lipids by Liquid Chromatography/Electron Capture Atmospheric Pressure Chemical Ionization/Mass Spectrometry;** Seon Hwa Lee¹; Michelle Williams¹; Raymond N. DuBois²; Ian A. Blair³; ¹*Center for Cancer Pharmacology, University of Pennsylvania, Philadelphia, PA*; ²*Department of Medicine, Vanderbilt University, Nashville, TN*
- WPL 229 **Use of Stable Isotope Analogs to Identify a Synthetic Pathway of 5-oxo-EETE unique for 5-Hydroperoxyicosatetraenoic Acid in the Murine Macrophage;** Simona Zarini; Robert C. Murphy; *National Jewish Medical and Research Center, Denver, CO*

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- WPM 230 **Study of Silica-based Gemstones by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Application to the Characterization of Natural and Synthetic Amethysts;** Eric Erel; Frédéric Aubriet; Jean-François Muller; *LSMCL Université de Metz, Metz, France*
- WPM 231 **Study of Bonded Phases Cleaved from Silica-Based Liquid Chromatographic Packing Materials by Electrospray Ionization-Mass Spectrometry;** Yuehong Xu; Thomas H. Walter; *Waters Corporation, Milford, MA*
- WPM 232 **Characterization of a Titanium Oxide Molecular Cluster by ESI-TOF MS.;** Gregory A. Khitrov; Jean-Jacques Gaumet²; Geoffrey F. Strouse¹; ¹*University of California, Santa Barbara, CA*; ²*Universite' de Metz, Metz, France*
- WPM 233 **Characterization and Mapping of Irganox 1010 Oxidation Products Using Electrospray MS/MS;** Carsten W. Møller¹; Laila R. Vo¹; Henrik Olsen²; ¹*Novo Nordisk A/S, Bagsvaerd, Denmark*; ²*Novo Nordisk A/S, Måløv, Denmark*; ³*Novo Nordisk A/S, Måløv, Denmark*
- WPM 234 **An Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Study of Four Isopolyoxodecatungstates;** Simon P. Edwards; Keith J. Fisher; Donald C. Craig; Gary D. Willett; *The University of New South Wales, Sydney, Australia*

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- WPN 235 **Laser Ablation Particle Ejection from MALDI Matrices;** Shelley N Jackson; Sushama Mishra; Kermit K Murray; *Louisiana State University, Baton Rouge, LA*
- WPN 236 **Laser Effects on Mass Signatures from Individual Bacillus Spores in Bio-Aerosol Mass Spectrometry;** Matthias Frank¹; Paul T. Steele¹; Abneesh Srivastava¹; Keith R. Coffee¹; Herbert J. Tobias¹; David P. Fergenson¹; Maurice E. Pitesky¹; Joanne M. Horn¹; Carlito Lebrilla²; Gregg Czerwieniec²; Scott Russell²; Eric E. Gard¹; ¹*Lawrence Livermore National Laboratory, Livermore, CA*; ²*University of California, Davis, CA*

- WPN 237 **LDI (and MALDI) -TOF-MS Monitoring of Simultaneous Inorganic and Organic Heterogeneous Reactions on Particles Levitated in an Electrodynamic Balance in a Laboratory Environment;** George R. Agnes; Allen E. Haddrell; Michael J. Bogan; *Department of Chemistry, Simon Fraser University, Burnaby, Canada*
- WPN 238 **Simultaneous Aerosol Particle Characterization by Two Bipolar TOF Laser Mass Spectrometers LAMPAS 2 and SPASS;** Klaus-Peter Hinz¹; Carsten Grüning²; Paolo Cavalli²; Nicole Erdmann²; Bernhard Spengler¹; ¹*Institute of Inorganic and Analytical Chemistry, University of Giessen, Giessen, Germany*; ²*Institute for Environment and Sustainability, JRC Ispra, Ispra, Italy*

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- WPO 239 **De-novo Interpretation of Peptide Tandem Mass Spectra Using Predicted Ion Intensities;** Roger E. Moore; Mary K. Young; Terry D. Lee; *Beckman Research Institute, City of Hope, Duarte, CA*
- WPO 240 **Investigation of Chemical Derivatization For Peptide CID Using LC-MALDI TOF MS/MS;** Philip L Ross; Yulin Huang; Sasi Pillai; Babu Purkayastha; Igor Smirnov; Darryl Pappin; *Applied Biosystems, Framingham, MA*
- WPO 241 **Ion Dissociation Methods for Sequence Analysis of Phosphopeptides by Mass Spectrometry;** Joshua J. Coon¹; John E. P. Syka¹; Steven M. Patrie²; Jae C. Schwartz³; Neil L. Kelleher²; Jeffrey Shabanowitz¹; Donald F. Hunt¹; ¹*University of Virginia, Charlottesville, VA*; ²*University of Illinois, Urbana, IL*; ³*Thermo Finnigan, San Jose, CA*
- WPO 242 **"De novo" Peptide Sequencing by MALDI-Quadrupole-Ion Trap Mass Spectrometry;** Wenzhu Zhang; Andrew N. Krutchinsky; Brian T. Chait; *The Rockefeller University, New York, NY*
- WPO 243 **Combined Electron Capture Dissociation and Infrared Multiphoton Dissociation Multistage MS/MS for Improved Structural Characterization of Proteolytic Peptides and Their Posttranslational Modifications;** Kristina Hakansson¹; Michael J. Chalmers¹; John P. Quinn¹; Melinda A. McFarland²; Christopher L. Hendrickson¹; Alan G. Marshall¹; ¹*Ion Cyclotron Resonance Program, NHMFL, Florida State University, Tallahassee, FL*; ²*Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL*
- WPO 244 **Theoretical Study on the Electron Capture Dissociation Within Side Chains of Peptide Cations;** Hideyuki Konishi; Taro Ishibashi; *Aichi Kyoiku University, Kariya, Japan*
- WPO 245 **Using Model Peptides and Their Chemically Modified Analogues to Understand Charge State Dependent Fragmentation Behavior;** Sharon J. Pitteri¹; Gavin E. Reid²; Scott A. McLuckey¹; ¹*Department of Chemistry, Purdue University, West Lafayette, IN*; ²*Joint Protein Structure Lab, Ludwig Institute for Cancer Research, Melbourne, Australia*
- WPO 246 **Collision-Activated Cleavage of a Peptide/Antibiotic Linkage: Evidence for Gas-Phase Intramolecular Disulfide Exchange;** Clifton K. Fagerquist; *Eastern Regional Research Center, Agricultural Research Service, USDA, Wyndmoor, PA*
- WPO 247 **Study of Negative Cationized Peptide Complexes: Fragmentation Pathways and Dissociation Energy;** Anne Bossee¹; Françoise Fournier²; Olivier Tasseau³; Bruno Bellier¹; Jean-Claude Tabet²; ¹*Centre d'Etudes du Bouchet, Vert le Petit, France*; ²*Université Paris VI, Paris, France*
- WPO 248 **Rapid Cyclopeptide Analysis by Microwave Enhanced Akabori Reaction;** Yao Hain Ing¹; Li-Kang Zhang¹; Peter

- Bartner¹**; Ajay K. Bose²; Birendra N. Pramanik¹;
¹*Schering-Plough Research Institute, Kenilworth, NJ*;
²*Stevens Institute of Technology, Hoboken, NJ*
- WPO 249 **Evaluation of Different Cysteine Alkylation Derivatives for Use in Precursor Ion Scanning of Tryptic Protein Digest Peptides**; **Christof Lenz**; *Applied Biosystems, Darmstadt, Germany*
- WPO 250 **Fragmentation of Peptides Containing Cysteine, Cysteine Sulfinic Acid, and Cysteine Sulfonic Acid**; **Yinsheng Wang**; Shetty Vivekananda; Qibin Zhang; *University of California at Riverside, Riverside, CA*
- WPO 251 **Enhanced Dissociation of N-terminal Residues from Amidated Peptides and its Application to Protein Identification**; Richard L. Beardsley; Matthew S. Thompson; Weidong Cui; **James P. Reilly**; *Indiana University, Bloomington, IN*
- WPO 252 **Electron Capture Dissociation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Non-Standard Peptides**; **Helen J. Cooper¹**; Robert R. Hudgins²; Alan G. Marshall¹; ¹*ICR Program, NIMH, Florida State University, Tallahassee, FL*; ²*Dept. of Chemistry, York University, Toronto, Canada*
- WPO 253 **Electron Capture Dissociation of Di-Arginine Containing Synthetic Peptides**; T.-W.D. Chan; **Y.M.E. Fung**; *The Chinese University of Hong Kong, Hong Kong SAR, China*
- WPO 254 **De novo Sequencing Identifies a Fe-Deficiency Induced Protein**; Michael Hippler²; Einar J. Stauber²; Andrej Shevchenko³; Peter Suemmen¹; Fernando Maroto¹; **Michaela Scigelova¹**; ¹*Thermo Finnigan, Hemel Hempstead, UK*; ²*Friedrich Schiller University, Jena, Germany*; ³*Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany*
- WPO 255 **Novel Reaction of γ -Lactam Formation in Hot Electron Capture Dissociation: A Complementary Way for Distinguishing Ile and Leu Amino Acid Residues in Polypeptides**; **Frank Kjeldsen¹**; Esben S. Sørensen²; Roman A. Zubarev¹; ¹*Laboratory of biological mass spectrometry, Uppsala University, Uppsala, Sweden*; ²*Laboratory of biological mass spectrometry, Uppsala, Sweden*
- WPO 256 **Improvement of Electron Capture Dissociation Efficiency by Resonant Excitation and Its Application to Sequencing of Modified Peptides**; **Michael Mormann**; Jasna Peter-Katalinic; *Institute of Medical Physics, Muenster, Germany*
- WPO 257 **Enhanced Peptide Sequencing by PSD MALDI-TOF after Derivatization by 4-Sulfophenyl Isothiocyanate**; **Lyuben N Marekov**; Peter M Steinert; *NIH/NIAMS, Bethesda, MD*
- WPO 258 **Automated de novo Sequencing of Isotope-Coded, Charged, N-Terminal Peptide Derivatives Using Characteristic Fragmentation Patterns Induced by Low Energy Collisions**; Jason Rogalski; Robert J. Taylor; Michael Lin; Shujun Lin; **Juergen Kast**; *Biomedical Research Centre, University of British Columbia, Vancouver, Canada*
- WPO 259 **Studies of Hormonal Peptides from Mouse Pancreatic Islets Using Liquid Chromatography Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; **Margareta Ramström¹**; Charlotte Hagman²; Youri O. Tsybin²; Karin E. Markides¹; Per Håkansson²; Albert S. Salehi³; Ingmar Lundqvist³; Rolf Håkansson³; Jonas Bergquist¹; ¹*Department of Analytical Chemistry, Uppsala University, Uppsala, Sweden*; ²*Division of Ion Physics, Uppsala University, Uppsala, Sweden*; ³*Department of Pharmacology, Lund University, Lund, Sweden*
- WPO 260 **Mass Spectrometric Peptide Fragmentation Systematic**; **David Fenyo¹**; Julio C Padovan²; Ron C Beavis³; Brian T Chait²; ¹*Amersham Biosciences AB, Uppsala, Sweden*; ²*Rockefeller University, New York, NY*; ³*University of Manitoba, Winnipeg, Canada*
- WPO 261 **De novo Sequencing of Different Types of Peptides Using MSn and Time Delay Fragmentation Scans**; **Feng Zhong**; Xu Guo; Takeo Sakuma; *Applied Biosystems/MDS SCIEX, Concord, Canada*
- WPO 262 **Fragmentation Chemistry of Oligopeptide Radical Cations**; **Yuyong Ke¹**; Elham Bagheri-Majdi¹; Houssain El Aribi¹; Alan C. Hopkinson¹; K.W. Michael Siu¹; ¹*York University, Toronto, Canada*; ²*Department of Chemistry and CRMS, York University, Toronto, Canada*
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- PHOSPHOPROTEINS**
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- WPP 263 **A Sensitive and Robust Mass Spectrometry Approach for Complete Characterization of Phosphorylated Proteins**; Xia Gao¹; **Shiaw-Lin Wu²**; Shane Atwell¹; Barbara Leon¹; Lester Taylor²; ¹*Structural GenomiX, Inc., San Diego, CA*; ²*LC-MS Division of Thermo Electron, San Jose, CA*
- WPP 264 **Identification and Circumvention of Free Cysteine-Containing Peptide Contaminants Isolated and Derivatized During Fe(III)-IMAC/ β -Elimination of Phosphopeptides**; **Andrew J. Thompson**; Rainer Cramer; *The Ludwig Institute for Cancer Research, London, United Kingdom*
- WPP 265 **Selective Enrichment of Low-Abundance Phosphopeptides from Tryptic Digests of Complex Biological Mixtures Using Immobilized Metal Affinity Chromatography**; **Michael G. Jennings**; Gary W. Lange; Bernard N. Violand; John J. Finnessy; James A. Carroll; *Pharmacia, Chesterfield, MO*
- WPP 266 **Open Tubular IMAC Combined with MALDI MS and MS/MS for Phosphoprotein Characterization**; **Huaizhi Liu¹**; Jing Zheng¹; Bernd Keller¹; Brenda Booth²; Larry Fliegel²; Liang Li¹; ¹*Department of Chemistry, University of Alberta, Edmonton, Canada*; ²*Department of Biochemistry, University of Alberta, Edmonton, Canada*
- WPP 267 **Evaluation of Methods for Phosphorylation Site Determination**; **Anita Izrael-Tomasevic**; Kathy Stults; David Arnott; *Genentech, Inc., South San Francisco, CA*
- WPP 268 **Negative and Positive AP-MALDI Analysis of Synthetic Phosphopeptides and Bovine beta-Casein Using Immobilized Metal Affinity Chromatography Ga(III) IMAC**; **Nelli I. Taranenko¹**; Anna V. Pashkova²; Vladimir M. Doroshenko¹; ¹*MassTech, Burtonsville, MD*; ²*Northeastern University, Boston, MA*
- WPP 269 **A Method for Selectively Enriching/Purifying Phosphopeptides and Improving Procedure of Phosphosite Mapping**; **Fan Xiang¹**; Jim Schilling¹; Wenkui L. McEldoon²; Marcus J. Horn²; ¹*SUGEN, Inc., South San Francisco, CA*; ²*BioMolecular Technologies, Inc, Sunnyvale, CA*
- WPP 270 **Characterization of Phospho-Peptides in the Multifunctional Enzyme CAD**; **Eric M. Wauson¹**; Jun Han¹; Kevin L. Carrick²; Marshall Pope²; Lee M. Graves¹; ¹*Univ. of North Carolina, Dept. of Pharmacology, Chapel Hill, NC*; ²*Univ. of North Carolina, Dept. of Biochemistry and Biophysics, Chapel Hill, NC*
- WPP 271 **Post-Translational Modifications in Clinical Endometrial Carcinoma Samples**; **Leroi V DeSouza¹**; Prem S. Nellipudi¹; K. W. Michael Siu¹; ¹*York University, Chemistry Dept., Centre for Research in Mass Spec., Toronto, Canada*; ²*York University, Toronto, Canada*

- WPP 273 **ABRF-PRG03: Survey of Current Practices and Capabilities for Determining Sites of Protein Phosphorylation;** Thomas A. Neubert¹; David P. Arnott¹; Mary Ann Gawinowicz¹; Ray A. Grant¹; Len C. Packman¹; Kaye Speicher¹; Kathy Stone¹; Christoph W. Turck¹; ¹Association of Biomolecular Resource Facilities, Santa Fe, NM; ²New York University, New York, NY
- WPP 274 **MALDI TOF MS and LC-MS/MS Strategies for Identification of Direct Protein Kinase Substrates;** Erol E. Gulcicek; Isabelle M. Gusev; Jin Duan; *Cellular Genomics, Inc., Branford, CT*
- WPP 275 **Dissecting the Phosphorylation Pattern of a Myogenic Regulator (MEF2A) by Mass Spectrometry;** David M. Cox¹; Min Du¹; Michaela Marback¹; Eric C.C. Yang¹; Joseph Chan¹; Jenny C.Y. Chan³; Ivan K. Chu³; John C. McDermott¹; K.W. Michael Siu²; ¹Department of Biology, York University, Toronto, Canada; ²Department of Chemistry, York University, Toronto, Canada; ³Department of Chemistry, University of Hong Kong, Hong Kong, China
- WPP 276 **Rapid Identification and Mapping of Phosphopeptides by Combined Immobilized Metal Ion Chromatography and MALDI TOF-TOF Analysis;** Peter S. Backlund, Jr¹; Roland S. Annan³; Francesca Zapacasta³; Therese Sterner³; Jeffrey A. Kowalak²; Alfred L. Yergey¹; ¹NIMH, NIH, Bethesda, MD; ²NICHHD, NIH, Bethesda, MD; ³GlaxoSmith Kline, King of Prussia, PA
- WPP 277 **Analysis of Serine-/Threonine-Phosphorylation Sites via Peptide Derivatization;** Joerg Reinders¹; Albert Sickmann¹; Detlev Suckau²; Katrin Marcus³; Denise Grillmaier²; Helmut E. Meyer³; ¹Rudolf-Virchow-Center for Experimental Biomedicine, Wuerzburg, Germany; ²Bruker Daltonik, Bremen, Germany; ³Medical Proteom Center, Ruhr-University, Bochum, Germany
- WPP 278 **Aspects of Mass Spectrometric Phosphorylation Analysis With an Emphasis on the Intact Protein;** Martin Zeller; Simone König; ICCR, Core Group Integrated Functional Genomics, Münster, Germany
- WPP 279 **Sequencing of a Phosphorylated Peptide with a High Arginine Content Corresponding to Residues 260-276 of Connexin 43 by Nanospray and MALDI-MS/MS;** Vincent C. Chen¹; Keding Cheng²; Oleg Krohkin³; Werner Ens³; Kenneth G. Standing³; James I. Nagy⁴; Helene Perreault¹; ¹Department of Chemistry, University of Manitoba, Winnipeg, Canada; ²Department of Chemistry, University of Manitoba, Winnipeg, Canada; ³Department of Physiology, University of Manitoba, Winnipeg, Canada; ⁴Manitoba Center for Proteomics, Winnipeg, Canada
- WPP 280 **Evaluation of Commercially Available IMAC Kits: Millipore ZipTip_{MC}, Eprogen IPAC Beads and Pierce Swellgel Gallium Chelated Disks;** Azita Kaffashan; Chenhui Zeng; Department of Analytical Biochemistry, Biogen Inc., Cambridge, MA
- WPP 281 **Mapping of the Phosphoproteome - A Chemoenzymatic Approach for Rapid Phosphorylation Site Identification using Phosphospecific Proteolysis and Mass Spectrometry;** Zachary A. Knight¹; Birgit Schilling²; Richard H. Row²; Bradford W. Gibson²; Kevan M. Shokat³; ¹University of California, Chemistry / Chemical Biology, San Francisco, CA; ²Buck Institute for Age Research, Novato, CA; ³University of California Cell. and Mol. Pharmacology, San Francisco, CA
- WPP 282 **Confirmed Identification of Phosphopeptides Captured by IMAC and Prepared for MALDI MS Analysis Within a CD Microlaboratory;** Rikard Kånge¹; Therese Sennerfors¹; Eva Werner¹; Karolina Österlund¹; Allan Stensballe²; Ole Jensen²; Magnus Gustafsson¹; ¹Gyros AB, Uppsala, Sweden; ²University of Southern Denmark, Odense, Denmark
- WPP 283 **Using MALDI-TOF and Q-TOF MS to Identify Phosphoproteins and their Phosphorylation Sites in Plant Storage Tissues.;** Ian J Tetlow¹; Robin Wait²; David Knight³; Caroline G Bowsher³; Dyanne Brewer¹; Michael J Emes¹; ¹Department of Botany/Molecular Biology, University of Guelph, Guelph, Canada; ²Kennedy Institute of Rheumatology Division, Imperial College, London, United Kingdom; ³School of Biological Sciences, University of Manchester, Manchester, UK
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- PROCESS MONITORING**
- WPQ 284 **Mass Spectral Evidence for an Anhydride Intermediate in the Catalysis Of Thioester Hydrolysis by WT Arthrobacter Thioesterase;** Zhili Li¹; Zhihao Zhang²; Debra Dunaway-Mariano²; Karen S Anderson²; ¹Department of Pharmacology, Yale University, New Haven, CT; ²Department of Chemistry, University of New Mexico, Albuquerque, NM
- WPQ 285 **Identification of MLN608 Impurities by Ion Chromatography Mass Spectrometry;** Elizabeth Baronas¹; Debby Feder²; Frank Hsieh¹; Teresa Pekol¹; ¹Millennium Pharmaceuticals, Cambridge, MA; ²Millennium Pharmaceuticals, San Francisco, CA
- WPQ 286 **Development of an Ion-Pairing LC/MIMS Method for the Analysis of Small Molecules;** Narasimhan Kasthurikrishnan¹; Patrick Furcolo²; Stephen Colgan¹; ¹Pfizer Inc, Groton, CT; ²Stone Hill College, Easton, MA
- WPQ 287 **Process Monitoring for a Manufactured DOTA Conjugated Anti-PSMA Antibody;** Sharon X. Lu; Edward Takach; Marjorie Solomon; Qing Zhu; Kathy Mills; Say-Jong Law; Frank Hsieh; Millennium Pharmaceuticals Inc., Cambridge, MA
- WPQ 288 **Impurity Detection and Identification by HPLC-TOF-MS Utilizing Accurate Mass Measurements;** Benjamin J. Cutak¹; Tom C. Hassell¹; Alan Mischo²; Trevor Bee³; David Stevens³; ¹Sigma-Aldrich Corporation, Saint Louis, MO; ²Sigma-Aldrich Corporation, Milwaukee, WI; ³Sigma-Aldrich Corporation, Gillingham, UK
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- PROTEINS: GENERAL**
- WPR1 289 **Characterization of the C-Terminal Heterogeneity of a Recombinant Monoclonal Antibody Using MALDI-TOF-MS;** Alexandru C. Lazar; Marek A. Kloczewiak; Istvan Mazsaroff; EMD Pharmaceuticals, Lexington, MA
- WPR1 290 **Top Down Characterization of Proteins by Electron Capture Dissociation Mass Spectrometry: Mechanistic Enzymology of Thiamin Biosynthesis;** Huili Zhai; Pieter Dorrestein; Joo-heon Park; Tadhg, P. Begley; Fred, W. McLafferty; Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY
- WPR1 291 **Systematic Characterization of C. elegans Polypeptides;** Roger Palfree¹; Gurusamy Chinnasamy¹; Alexandre Zougman²; Mike Aguiar³; Robert Masse³; Bernard F Gibbs³; ¹McGill University, Montreal, Canada; ²MDS Pharma Services, Montreal, Canada; ³MDS Proteomics, Toronto, Canada
- WPR1 292 **Characterization of Human Asparagine Synthetase by FT-ICR MS;** Susan E. Abbatiello; John R. Eyler; Nigel G. Richards; David H. Powell; Jemy A. Gutierrez; Mihai Ciustea; Lukasz Koroniak; University of Florida, Gainesville, FL
- WPR1 293 **Whole Protein MS/MS to Characterize Extent of Calmodulin Oxidation;** Nadezhda A. Galeva; S. Wynn Esch; Todd D. Williams; University of Kansas, Lawrence, KS
- WPR1 294 **The Temperature Dependent Proteomic Profiles of Thermoanaerobacter Tengcongensis;** Jingqiang Wang¹;

- Caifeng Zhao¹; Kang Zhao¹; Zhengfeng Zhou¹; Jianmin Shao¹; Hao Wang¹; Yanfen Xue²; Yanhe Ma²; Jianning Yin¹; Rong Wang¹; Siqi Liu¹; ¹Beijing Genomics Institute, Chinese Academy of Sciences, Beijing, China; ²Institute of Microbiology, Chinese Academy of Sciences, Beijing, China
- WPR1 295 **Characterization of the Proteome of Mouse Kidney Glomeruli Using 2-D Gel Electrophoresis and Mass Spectrometry**; Sam Tryggvason; Masatoshi Nukui; Karl Tryggvason; Hans Jörnvall; *Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden*
- WPR1 296 **ProQual: Automated Analysis of High Resolution LC/MS Data from Enzymatic Digests for Quality Control of Protein Reagents**; Lee E. Frego¹; Walter C. Davidson¹; Gary H. Kruppa²; ¹Boehringer Ingelheim Pharmaceuticals, Ridgefield, CT; ²MS Consulting Services, Livermore, CA
- WPR1 297 **The Effects of Supercharging on the Dissociation of Protein Ions**; Anthony T. Iavarone; Sanjay R. Krishnaswamy; Kolja Paech; Osita Udekwo; Evan R. Williams; *University of California, Berkeley, CA*
- WPR1 298 **Quantitative Measurement of Protein Expression in Bacteria**; Tracie L. Williams; John H. Callahan; Steven R. Monday; Peter C.H. Feng; Steven M. Musser; *Center for Food Safety and Nutrition, FDA, College Park, MD*
- WPR1 299 **Use of FTICR Mass Spectrometry in the Characterization of Recombinant Proteins**; Richard D. Burton; Robert W. Johnson; Laura J. Miesbauer; Peter Fruehan; *Abbott Laboratories, Abbott Park, IL*
- WPR1 300 **Analysis of Peanut Allergen Proteins Using Capillary LC and Nano ESI-QTOF Hybrid Mass Spectrometer**; Dorcas F. Weber; Samuel Ben-Rejeb; Dave Davies; Michael Sahl; *Health Canada, Ottawa, Canada*
- WPR1 301 **Protein Footprinting Using Radiolysis and Mass Spectrometry: Expanding the Probes and Target Proteins**; Guozhong Xu; Keiji Takamoto; Rutao Liu; Jing-Qu Guan; Mark R. Chance; *Center for Synchrotron BioSciences, Albert Einstein College of Medicine, Bronx, NY*
- WPR1 302 **Purification and Characterization of Chromophoric Proteins in Marine Organisms**; Nicholas T. Hartman; A. Daniel Jones; Robert D. Minard; *Department of Chemistry, The Pennsylvania State University, University Park, PA*
- WPR1 303 **Time-Course Studies of Protein Auto-Phosphorylation and Limited Proteolysis Using a Fully Automated LCMS System to Aid High Throughput Crystallography Studies**; Kheng B. Lim; Melinda Manuel; Ellen Chien; Daniel B. Kassel; *Syrrix, Inc., San Diego, CA*
- WPR1 304 **De novo Sequencing of Gel-Separated Proteins by Mass Spectrometry**; Nhon Van Nguyen; Peter Hojrup; *Dept. of Biochemistry and Molecular Biology, Univ. of Southern Denmark, Odense, Denmark*
- WPR1 305 **Detection of Intron-Derived Sequences in the Heavy Chain of a Recombinant Antibody by Reversed Phase Liquid Chromatography-Tandem Mass Spectrometry**; Hong Z. Wan; Babita Saxena; Michael Barry; Daniel Velez; Dale Ludwig; S. Joseph Tarnowski; Ann Daus; Qinwei Zhou; *ImClone Systems Incorporated, Somerville, NJ*
- WPR1 306 **Towards Protein Complex Structure via Cross-Linking, Mass Spectrometry and Bioinformatics**; Thomas Taverner; Carol V. Robinson; *Cambridge University, Cambridge, United Kingdom*
- WPR1 307 **Identification of Trace Levels of Protease By Mass Spectrometry**; Steven L. Cohen; Gary Ward; Andrew Goulding; Sharon Wei; *Merck Research Laboratories, West Point, PA*
- WPR1 308 **Identification of SLIC-1 Interacting Proteins Using Affinity Purification and Mass Spectrometry**; Lin Liu¹; Heather Shih²; Gray Shaw²; Rod Hewick¹; Yongchang Qiu¹; ¹Protein Chemistry and Proteomics, Wyeth, Cambridge, MA; ²Musculoskeletal Sciences, Wyeth, Cambridge, MA
- WPR1 309 **A Top Down Approach to Protein Structural Studies Using Chemical Cross-Linking and Fourier Transform Mass Spect**; Petr Novak; Gary H. Kruppa; Joseph Schoeniger; Malin M. Young; *Sandia National Laboratories, Livermore, CA*
- WPR1 310 **Open-Access Protein and Peptide Mass Spectrometry on a Micromass LCT System**; Wendy L. White; Craig D. Wagner; Erin G. Chaney; Bindu A. George; Karen A. Hoffman; John T. Hall; Jon D. Williams; *GlaxoSmithKline, Inc., Research Triangle Park, NC*
- WPR1 311 **Identification of Murine Glutathione S-Transferase Omega and Its Apparent Non-Reducible Homodimer**; Alyson E. Mitchell; Stephanie A. Burns; *University of California, Davis, CA*
- WPR1 312 **Rapid Mass Measurement of Intact Proteins Using ESI-TOF**; Donghui Yi¹; Jon D. Williams²; Michael Flanagan¹; Linda L. Lopez¹; Christine A. Miller¹; ¹Agilent Technologies, Santa Clara, CA; ²GlaxoSmithKline, Research Triangle Park, NC
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- PROTEINS: GLYCOPROTEINS**
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- WPR2 313 **Studies with PNGaseF enzyme: N-linked Deglycosylation and Characterisation of Glycoproteins**; Asgar Electricwala; Ian Wright; Elnor Rathbone; *Sigma-Aldrich Company Limited, Poole, England*
- WPR2 314 **The Use of MALDI-TOF Mass Spectrometry to Determine Glycosylation of Plant-Produced Patient-Specific Single Chain Vaccines in a Phase 1 Clinical Trial**; Earl L. White; Tiffany Bliss; Terri I. Cameron; Stephen J. Garger; Kathleen M. Hanley; Tracey Mahon; Steve J. Reinl; Yonnie Wu; *Large Scale Biology Corporation, Vacaville, CA*
- WPR2 315 **Structure Characterization of Mixtures of Permethylated Carbohydrates by Peak-Parking LC/MSⁿ**; Bhavana Shah; Zhongqi Zhang; Joseph Bordas-Nagy; *Amgen Inc., Thousand Oaks, CA*
- WPR2 316 **Pro-γ-MSH Biology: Insights into Post-translational Effects on Biological Activity**; David Baranowski¹; Hugh P.J. Bennett¹; Alexandre Zougman²; Robert Masse³; Bernard Gibbs³; ¹McGill University, Montreal, Canada; ²MDS Pharma Services, Montreal, Canada; ³MDS Proteomics, Toronto, Canada
- WPR2 317 **O-glycosylation Site Mapping in the EPGs of *Aspergillus niger* by LC/MS**; Min Xie¹; Kumar V.S. Kolli¹; Jacques A.E. Benen²; Jaap Visser²; Carl Bergmann¹; Ron Orlando¹; ¹University of Georgia, Athens, GA; ²Wageningen Agricultural University, Wageningen, The Netherlands
- WPR2 318 **De novo Sequencing and Characterization of an N-Linked Glycosylated Kappa Urinary Light Chain From a Patient Diagnosed With Primary Amyloidosis**; Amareth Lim; Yan Jiang; Andrew B. Dykstra; Lawreen H. Connors; Martha Skinner; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*
- WPR2 319 **Identification and Characterisation of N-Linked Glycosylation Patterns on the E2 Protein From Bovine Viral Diarrhoea Virus (BVDV) using Electrospray Mass Spectrometry**; Mark A. Ritchie¹; Andrew C. Gill²; Munir Iqbal²; Amit Pande²; John MacCauley²; Therese McKenna¹; James I. Langridge¹; ¹Micromass MS Technologies, Manchester, UK; ²Institute for Animal Health, Compton laboratories, Newbury, UK

- WPR2 320 **Glycosylation and Disulfide Bond Study of Turkey (*Meleagris gallopavo*) Prolactin;** Stefan Clerens¹; John A. Proudman²; Peter D. Verhaert²; Lieve Geenen¹; Frans Vandesaende¹; Lutgarde Arckens¹; ¹*Katholieke Universiteit Leuven, Leuven, Belgium*; ²*Agricultural Research Service, USDA, Beltsville, MD*
- WPR2 321 **Mass Spectrometric Characterization of the Recombinant *Boophilus microplus* Bm95 Antigen: A Vaccine Candidate Against Cattle Tick;** Luis J. González; Oscar Boué; Omar Farnós; Yazmin Guanche; Manuel Rodríguez; Ricardo Leonart; Gabriel Padrón; *Center for Genetic Engineering and Biotechnology, Havana, Cuba*
- WPR2 322 **Characterization of a Recombinant Monoclonal Antibody (mAb) with a 12T Fourier Transform Mass Spectrometer;** Keith A Johnson¹; Michael L. Easterling²; Christian B. Berg²; J. Paul Speir²; Jason C. Rouse¹; ¹*Wyeth BioPharma, Andover, MA*; ²*Bruker Daltonics, Inc., Billerica, MA*
- WPR2 323 **Structural Characterization of Glycans Derived from Glycoproteins by Capillary Liquid Chromatography, Capillary Electrochromatography, and Mass Spectrometry;** Yehia Mechref; Jason Starkey; Milos V. Novotny; *Indiana University, Bloomington, IN*
- WPR2 324 **Characterizing the Glycome of *Campylobacter jejuni* NCTC 11168;** John F. Kelly; Jean-Robert Brisson; Martin Young; Christine M. Szymanski; Susan M. Logan; Harold C. Jarrell; David C. Watson; Jianjun Li; Sebastien Voisin; *Institute for Biological Sciences, National Research Council of Canada, Ottawa, Canada*
- WPR2 325 **Structural Glycoproteomics of Human Cerebrospinal Fluid;** Kristina Hakansson¹; Mark R Emmett¹; Alan G Marshall¹; Pia Davidsson²; Carol L Nilsson³; ¹*National High Magnetic Field Laboratory, Tallahassee, Florida*; ²*Goteborg University, Inst. of Clin. Neuroscience, Molndal, Sweden*; ³*Goteborg University, Inst. of Medical Biochemistry, Goteborg, Sweden*
- WPR2 326 **Characterization of Glycosylation of Recombinant Monoclonal Antibodies by ESI-MS; Comparison with MALDI-TOF and Ion-Exchange Chromatography;** Yelena Lyubarskaya; Damian Houde; Joseph Siemiatkoski; Samnang Tep; Rohin Mhatre; *Biogen, Inc., Cambridge, MA*
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- PROTEOMICS: BIOCHEMISTRY**
- WPS 327 **Toxicoproteomics of Bacterial Lipopolysaccharide: A TOF-TOF Study;** Joshua Dubin; Maribel Bruno; Jennifer Madenspacher; Barbara Wetmore; B. Alex Merrick; Kenneth Tomer; *National Institute of Environmental Health Sciences, Research Triangle Park, NC*
- WPS 328 **Large-Scale Proteins Identification in the Protein Mixture Secreted by 3T3-L1 Preadipocytes and Adipocytes;** Hu Zhou; Shang-Yu Hong; Kan Liao; Qi-Chang Xia; Rong Zeng; *Shanghai Institutes for Biological Sciences, Shanghai, China*
- WPS 329 **A Comprehensive Proteomic Approach to Determine the Composition of Mouse Cytomegalovirus Particles;** Benedikt M Kessler¹; Lisa Kattenhorn¹; Ryan Mills²; Alex Lomsadze²; Mark Borodovsky²; Hidde L Ploegh¹; ¹*Harvard Medical School, Harvard University, Boston, MA*; ²*Georgia Institute of Technology, Atlanta, GA*
- WPS 330 **The Proteomics of Sialic Acid Utilization in Pathogenic *Haemophilus*;** Simon Allen¹; Anthony Zaleski²; Michael A. Apicella²; Bradford W. Gibson¹; ¹*Buck Institute for Age Research, Novato, CA*; ²*Dept. of Microbiology, University of Iowa, Iowa City, IA*
- WPS 331 **Characterization of Rainbow Trout Vitellogenin: Intact Protein, Tryptic and Cyanogen Bromide Digestion Analysis by ESI-MS and MALDI-MS;** Joseph H Banoub¹; Pierre Thibault³; Alejandro M Cohen²; Atef Mansour¹; David H Heeley²; Donna Jackman²; ¹*Department of Fisheries and Oceans, St. John's, Canada*; ²*Memorial University of Newfoundland, St. John's, Canada*; ³*Caprion Pharmaceuticals, Montreal, Canada*
- WPS 332 **Use of Nanoflow-LC-MS/MS to Monitor Subcellular Fractionation in Gradient Density Centrifugation;** Thomas A. Shaler; Christopher H. Becker; *SurroMed, Inc., Mt. View, CA*
- WPS 333 **Proteome Analysis of Oxidative Stress Response in Endothelial Cells;** Junko Kimata¹; Tomoya Kinumi²; Noriko Noguchi³; Etsuo Niki²; ¹*Thermo Electron Co., Tokyo, Japan*; ²*Human Stress Singal Res. Ctr, Natl. Inst. of Adv. Ind. Sci. & Technol., Osaka, Japan*; ³*Human Stress Singal Res. Ctr, Natl. Inst. of Adv. Ind. Sci. Technol., Osaka, Japan*
- WPS 334 **Functional Analysis of Proteins with Activity-Based Proteomics;** Jane J. Wu; Mattew P. Patricelli; Eric Okerberg; Babak Samii; Emme Lin; *ActivX Biosciences, Inc, La Jolla, CA*
- WPS 335 **Identification and Characterization of Rat Liver Cytochrome P450 Proteins Isolated From Enriched Rough and Smooth Endoplasmic Reticulum Subcellular Fractions;** Alexander W Bell¹; Jacques Paiement¹; Souad Lesimple¹; Daniel Boismenu¹; Marcos R Di Falco¹; Jennifer N Gushue¹; Annalyn Gilchrist³; Line Roy¹; Orval A Mamer³; Rob Kearney³; John JM Bergeron³; ¹*Montreal Proteomics Centre, McGill University, Montreal, Canada*; ³*Departement de Pathologie et Biologie Cellulaire, Université de Montreal, Montreal, Canada*
- WPS 336 **Proteomic Analysis of Motor Neurons Expressing SOD1 Mutations Linked With Lou Gehrig's Disease;** Kei Fukada; Fujian Zhang; Haining Zhu; *University of Kentucky, Lexington, KY*
- WPS 337 **Global Protein-Expression Profile in Dependence on the Tumor Suppressor DPC4/Smad4: Differential Display of Two Gastrointestinal Carcinoma Cell Lines;;** Kai Stühler¹; P.D. Dr. Stephan A. Hahn²; Prof. Dr. Helmut E. Meyer¹; ¹*Medical Proteom-Center, Bochum, Germany*; ²*Molekulare Gastroenterologische Onkologie, Bochum, Germany*
- WPS 338 **Identification of Low Abundance Proteins in Brain Post-Synaptic Density;** Yueqin Wang¹; Lu Yu¹; Holger Husi²; Seth Grant²; Walter Blackstock¹; Jyoti Choudhary¹; ¹*Cellzome UK, Herts, UK*; ²*University of Edinburgh, Edinburgh, UK*
- WPS 339 **Comparative Proteomics of *Arabidopsis thaliana* Knockouts;** Clark J. Nelson; Adrian D. Hegeman; Amy C. Harms; Michael R. Sussman; *University of Wisconsin, Madison, WI*
- WPS 340 **The Proteomics of the Dense Core Vesicle: Characterization of Biomolecules via Subcellular Fractionation, Chromatography, and Mass Spectrometry;** Mark J. Panepinto¹; Eric A. Berg¹; Mark E. McComb¹; Richard E. Fine¹; Jordan B. Fishman²; Catherine E. Costello¹; ¹*Boston University School of Medicine Mass Spectrometry Resource, Boston, MA*; ²*Atiantis Biopharmaceuticals, Marlboro, MA*
- WPS 341 **Comparative Proteome Analysis by Two-Dimensional Gel-Electrophoresis in Combination with Mass Spectrometry for Determination of Treatment Time of MK-801 in a Rat Model of Schizophrenia.;** Linda Paulson¹; Peter Martin²; Carol Nilsson³; Elisabeth Ljung²; Ann Westman-Brinkmalm¹; Pia Davidsson¹; ¹*Institute of Clinical Neuroscience, Goteborg University, Göteborg, Sweden*; ²*Carlsson Research AB, Göteborg, Sweden*

- ³*Department of Medical Biochemistry, Goteborg University, Göteborg, Sweden*
- WPS 342 **Characterization of the Mitochondrial Proteome in Breast Cancer Cells;** Rachael F Strong; Catherine Fenselau; *University of Maryland at College Park, College Park, MD*
- WPS 343 **Proteomic Analysis of Sperm From *Drosophila Melanogaster*;** Scott A. Busby¹; Heather A. Steele¹; Timothy L. Karr²; Jeffrey Shabanowitz¹; Donald F. Hunt¹; ¹*University of Virginia, Charlottesville, VA;* ²*University of Bath, Bath, UK*
- WPS 344 **Identification by Mass Spectrometry of Streptococcus Bovis Candidate Proteins Promoting Colon Cancerous Lesions;** Sophie Richert¹; Jordane Biarc²; Danièle Thierse¹; Marie Scholler-Guinard²; Jean-Paul Klein²; Alain Van-Dorssele¹; Emmanuelle Leize-Wagner¹; ¹*LSMBO ULP-CNRS, Strasbourg, France;* ²*ULP-Faculte De Pharmacie, Illkirch-Graffenstaden, France*
- WPS 345 **Differential Expression of Proteins in Response to Ceramide Mediated Stress Signals in Human Colon Cancer Cells by 2-D Gel MSMS and ICAT- nanoLC-MSMS;** Marianne Fillet¹; Cécile Cren-Olivé²; Caroline Tokarski²; Franck Vandermoere²; Hubert Hondermark²; Christian Rolando²; ¹*Laboratoire de Chimie Médicale, Université de Liège, Liège, Belgique;* ²*Université des Sciences et Technologies de Lille, UMR CNRS, Villeneuve d'Ascq, France*
- WPS 346 **Proteomic Analysis of Plasmodium Falciparum Proteins Involved in Maurer's Structures;** Sophie Richert¹; Laetitia Vincensini²; Thierry Rabilloud³; Catherine Braun-Breton²; Alain Van Dorssele¹; Emmanuelle Leize-Wagner¹; ¹*LSMBO ULP-CNRS, Strasbourg, France;* ²*CNRS-URA-Pasteur, Paris, France;* ³*CEA, Grenoble, France*
- WPS 347 **Characterization of Host Response to *Yersinia* Pathogens;** Jenny L. Heidbrink; Brett A. Chromy; Arlene D. Gonzalez; Gloria A. Murphy; Loreen C. Zeller; Sandra L. McCutchen-Maloney; *Lawrence Livermore National Laboratory, Livermore, CA*
- WPS 348 **Structural Identification of Biomolecules in Rat Amniotic Fluid Using Tandem Mass Spectrometry and Liquid Chromatography;** William L. Wood; Alexis C. Thompson; Mark B. Kristal; Troy D. Wood; *University at Buffalo, The State University of New York, Buffalo, NY*
- WPS 349 **Characterization of the 46 to 57 kDa Proteins Found in Enriched Rough Membrane Endoplasmic Reticulum Fraction by Different Mass Spectrometry Technologies;** Daniel Boismenu¹; Jacques Paiement²; Souad Lesimple¹; Marcos R Di Falco¹; Jennifer N Gushue²; Line Roy¹; Orval A Mamer³; Robert E Kearney⁴; John J M Bergeron⁵; Alexander W Bell¹; ¹*Montreal Proteomics Center/McGill University, Montreal, Canada;* ²*Montreal Proteomic Center/McGill University, Montreal, Canada;* ³*Montreal Proteomics Center, McGill University, Montreal, Canada;* ⁴*Département de Pathologie Cellulaire, Université de Montreal, Montreal, Canada;* ⁵*Dept de Pathologie et Biologie Cellulaire, Université de Montreal, Montreal, Canada*
- WPS 350 **Proteomic Identification of Extracellular Proteins Secreted by the Rice Blast Fungus;** V.S. Kumar Kolli; Jeremi Johnson; Ron Orlando; Alan Darvill; Peter Albersheim; Sheng-Cheng Wu; *University of Georgia, Athens, GA*
- WPS 351 **Mass Spectrometric Analysis Procedure for Human Eotaxin;** Sung-Ho Kim¹; Jeong-Hwa Lee¹; Seon-Young Cho¹; Jong-Shin Yoo²; Chun-Sik Park³; ¹*Soonchunhyang University, Ansan, South Korea;* ²*Korea Basic Science Institute, Daejeon, South Korea;* ³*Soonchunhyang University Medical School, Buchon, South Korea*
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- PROTEOMICS: CANCER**
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- WPT 352 **Novel Biomarkers for the Detection of Early Stage Ovarian Cancer;** Zhen Zhang²; Xiao-Ying Meng¹; Pete Tornatore¹; Robert Bast³; Daniel Chan²; Scot Weinberger¹; Eric T. Fung¹; ¹*Ciphergen Biosystems, Fremont, CA;* ²*Johns Hopkins Medical Institutions, Baltimore, MD;* ³*MD Anderson Cancer Center, Houston, TX*
- WPT 353 **Charting the Progression of Disease by Mass Spectrometry: A Case of Prostate Cancer;** Stacey R. Oppenheimer; Janni Mirosevich; Robert J. Matusik; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- WPT 354 **Discovery of Ovarian Cancer Biomarkers in Serum using nanoLC-FT-ICR Mass Spectrometry;** H. Robert Bergen, III¹; William Cliby²; George Vasmataz³; Kenneth L. Johnson¹; Ann Oberg⁴; David C. Muddiman¹; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN;* ²*Department of Obstetrics and Gynecology, Mayo Clinic, Rochester, MN;* ³*Division of Experimental Pathology, Mayo Clinic, Rochester, MN;* ⁴*Department of Biostatistics, Mayo Clinic, Rochester, MN*
- WPT 355 **Identification of Novel Histone Post-translational Modifications;** Liwen Zhang; Michael A. Freitas; Ericka E. Eugeni; Mark R. Parthun; *The Ohio State University, Columbus, OH*
- WPT 356 **Purification of Interacting Proteins from Samples of Limited Abundance Using Size-Selection Membrane Micropurification;** Thang T. Pham; Siyu Fu; *Ciphergen Biosystems, Fremont, CA*
- WPT 357 **Analysis of Differential Protein Expression in Sera Obtained from Prostate Cancer Patients Undergoing Chemotherapy with a Goal Towards Understanding Humoral Drug Response;** Manoj Pal¹; David M Lubman¹; Linda Lin²; Tim Barder²; ¹*Dept. of Chemistry, University of Michigan, Ann Arbor, MI;* ²*Eprogen Inc., Chicago, IL*
- WPT 358 **Mass Spectrometry-Based Comparative Proteomic Studies of the Cytosolic Fractions of Doxorubicin Resistant And Susceptible MCF-7 Breast Cancer Cells;** Marion Gehrman; Yetrib Hathout; Catherine Fenselau; *University of Maryland, College Park, MD*
- WPT 359 **SELDI-TOF Mass Spectrometry in Diagnostic Oncoproteomics of Prostate Cancer.;** John Roboz; Steven Lehrer; Shouxun Zhao; Hilda Ding; Edward Diamond; James, F. Holland; *Mount Sinai School of Medicine, New York, NY*
- WPT 360 **Defining Vascular Proteome with Multiple Analytical Techniques Yields More Complete Database;** Yan Li; *Sidney Kimmel Cancer Center, San Diego, CA*
- WPT 361 **Protein Profiling of Metastatic and Nonmetastatic Breast Cancers Using Laser Microdissection and 2D LC Coupled with a High Mass Accuracy Q-ToF Mass Spectrometer;** Anthony G Sullivan¹; Dayin Lin²; Denise Papucnik¹; Richard Katzenhusen¹; Stephen Russell¹; Shane Ottmann³; Craig Shriver³; Anders L Lund²; Richard I Somiari¹; ¹*Windber Research Institute, Windber, PA;* ²*Waters Corporation, Dublin, CA;* ³*Walter Reed Army Medical Center, Washington, DC*
- WPT 362 **Identification of Low-Abundance Cellular Kinases Using Activity-Based Profiling and Tandem Mass Spectrometry;** Jennie R Lill; Jennifer E Hanson; Yongsheng Liu; Wen Z Gai; *ActivX BioSciences Inc., La Jolla, CA*
- WPT 363 **Development of a Proteome Marker Model for Ovarian Cancer Using Direct Analysis of Diluted Serum by Automated Nano-electrospray TOFMS;** Gary A.

- Schultz¹; Sheng Zhang¹; Kevin Howe¹; Colleen Van Pelt¹; Jack D. Henion¹; Emanuel F. Petricoin III⁵; Zhiqi Hao¹; Thomas P. Conrads⁴; Lance Liotta²; Timothy D. Veenstra⁴; Ben A. Hitt³; Emanuel Petricoin²; Peter J. Levine³; ¹*Advion BioSciences, Inc., Ithaca, NY*; ²*FDA-NCI Clinical Proteomics Program, NCI, NIH, Bethesda, MD*; ³*FDA-NCI Clinical Proteomics Program, NCI, NIH, Ithaca, NY*; ⁴*Correlog Systems, Inc., Bethesda, MD*; ⁵*SAIC-Frederick, Frederick, MD*
- WPT 364 **Strategies for Identification of Proteins Enriched on Protein Chips and Analyzed by SELDI-TOF**; Eric C-C Yang¹; Jingzhong Guo¹; Georg Diehl¹; Leroi DeSouza¹; Mary Joe Rodrigues²; Maria G Mendes²; K.W. Michael Siu¹; Alex D Romaschin³; Terence C Colgan²; Cecilia Bolarinho²; ¹*Chemistry & Centre for Research in Mass Spectrometry, York University, Toronto, Canada*; ²*Mount Sinai Hospital and University of Toronto, Toronto, Canada*; ³*Toronto Medical Labs and University of Toronto, Toronto, Canada*
- WPT 365 **Studies for Interlysate Comparison of Expressional Differences of Ovarian Cancer Cell Protein Using a Mass Mapping Technique**; Hyeyeung Kim¹; Haixing Wang¹; Maureen T. Kachman³; Donald R. Schwartz²; David M. Lubman¹; ¹*Department of Chemistry, University of Michigan, Ann Arbor, MI*; ²*Department of Pathology, School of Medicine, University of Michigan, Ann Arbor, MI*; ³*MLSC-Core Technology Alliance, University of Michigan, Ann Arbor, MI*
- WPT 366 **Global Internal Standard Technology Applied to Ovarian Cancer Protein Biomarker Discovery**; Kenneth L. Johnson¹; George Vasmatazis²; William A. Cliby³; David C. Muddiman¹; ¹*W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN*; ²*Division of Experimental Pathology, Mayo Clinic, Rochester, MN*; ³*Department of Obstetrics and Gynecology, Mayo Clinic, Rochester, MN*
- WPT 367 **A MALDI-TOF and H/D Exchange Based Approach to Facilitate the Identification and Characterization of Protein Biomarkers in Lung Cancer**; Michael Z Wang¹; Jagat Shetty¹; Brandon Howard²; Michael J Campa²; Edward F Patz²; Michael C Fitzgerald¹; ¹*Department of Chemistry, Duke University, Durham, NC*; ²*Department of Radiology, Duke University Medical Center, Durham, NC*
- WPT 368 **Automated Deconvolution of LC-ESI-TOF-MS Datasets: A Powerful New Tool for Proteomics**; Nathan S. Buchanan¹; Rick L. Hamler¹; Peter E. Leopold²; David M. Lubman¹; ¹*University of Michigan, Ann Arbor, MI*; ²*Bioanalyte, Inc., Portland, ME*
- WPT 369 **Proteome Analysis of Laser Capture Microdissection Breast Tumor Samples Using ICAT Labeling and Nano-LC-MS/MS**; Li Zang¹; William S. Hancock¹; Alexander R. Ivanov¹; Barry L. Karger¹; Darryl E. Palmer-Toy²; Dennis C. Sgroi²; ¹*Barnett Institute, Department of Chemistry, Northeastern University, Boston, MA*; ²*Barnett Institute, Northeastern University, Boston, MA*
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- WPU 370 **Identification and Relative Quantitation of Protein Mixtures by Enzymatic Digestion Followed by Two-Dimensional Liquid Chromatography – Tandem Mass Spectrometry**; Dirk Chelius; Terry Zhang; Guanghui Wang; Rong-Fong Shen; *Thermo Finnigan, San Jose, CA*
- WPU 371 **New Alkylating Reagents Allowing Simultaneous Biochemical Characterisation and Relative Quantitation of Proteins**; Carla Pasquarello; Jennifer A. Burgess; Jean-Charles Sanchez; Denis F. Hochstrasser; Garry L. Corthals; *Geneva Proteomics Research Centre, Geneva University Hospital, Geneva, Switzerland*
- WPU 372 **A Novel Approach for Quantitative Proteomics – Multiplexed ICPL**; Alexander Schmidt; Josef Kellermann; Cornelia Ciosto; Hakan Sarioglu; Friedrich Lottspeich; *Max-Planck-Institute of Biochemistry, Martinsried, Germany*
- WPU 373 **Peptide Mapping of the Human Androgen Receptor Ligand-Binding Domain Using Mass Spectrometry**; Zengru Wu¹; Casey Bohl¹; Natalie Goldberger¹; Duane Miller²; James Dalton¹; ¹*College of Pharmacy, The Ohio State University, Columbus, OH*; ²*College of Pharmacy, University of Tennessee, Memphis, TN*
- WPU 374 **Protein Differential Expression Analyses in Yeast after Salt Stress Using SDS-PAGE and Cleavable ICAT Reagent**; Hanno Steen; Jiaxu Li; Steven P Gygi; *Harvard Medical School - Department of Cell Biology, Boston, MA*
- WPU 375 **Combining Separation Methods and Non-Isotopic Labeling in Comparative Proteomics**; Richard L. Beardsley; James P. Reilly; *Dept. of Chemistry, Indiana University, Bloomington, IN*
- WPU 376 **Comparative Proteomic Analysis of Complex Mixtures**; Ian I Stewart¹; Theo Goh¹; Sam Scozzaro¹; Henry S Duetwel¹; Chris Orsi¹; Moyee Dharsee¹; Zhe Wang¹; Olga Ornatsky¹; Karen Root²; Mark Ross²; Jennifer Caldwell²; Jarrod A Marto²; ¹*MDS Proteomics Inc, Toronto, Canada*; ²*MDS Proteomics Inc, Charlottesville, VA*
- WPU 377 **High Throughput Platform Suitable for Common Proteomic Techniques**; Jodi M. Zobrist; Justin Wildsmith; Richard J. Mehig; Kelly L. Foster; John G. Dapron; Tom C. Hassell; William K. Kappel; *Sigma-Aldrich Biotechnology, St. Louis, MO*
- WPU 378 **Application of Proteomics to the Identification of Surrogate Markers for Huntington's Disease in Serum and Cerebrospinal Fluid**; Kelly R. Vaughn; Julian D. Watts; Hui Zhang; Eugene C. Yi; David R. Goodlett; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- WPU 379 **In vivo Stable Isotope Labeling of Multicellular Model Organisms C. elegans and Drosophila for Quantitative Proteomics**; Jeroen Krijgsveld¹; Rene F. Ketting²; Tokameh Mahmoudi³; Janik Johansen¹; Peter Verrijzer³; Ronald H. Plasterk²; Albert J. R. Heck¹; ¹*Biomol. Mass Spectrometry, Utrecht University, Utrecht, Netherlands*; ²*Hubrecht Laboratory, Netherlands Institute for Developmental Biology, Utrecht, Netherlands*; ³*Molecular and Cellular Biology, LUMC Leiden, Leiden, Netherlands*
- WPU 380 **Pulsed Plasma Polymer Modified Surfaces for Bio-Selective MALDI Probe Preparation**; Gary R. Kinsel; Meiling Li; Ji Zhang; Richard B. Timmons; *University of Texas, Arlington, TX*
- WPU 381 **Affinity Purification of Crosslinked Peptides**; Michael B. Strader; Robert L. Hettich; Gregory B. Hurst; Stephen J. Kennel; Patricia K. Lankford; *Oak Ridge National Laboratory, Oak Ridge, TN*
- WPU 382 **Reduction of Sample Complexity by Metal-Affinity Isolation of Histidine-Containing Peptides for Identification of Proteins in Complex Mixtures**; Niklas Gustavsson; Ekaterina Mirgorodskaya; Hans Lehrach; Johan Gobom; *Max Planck Institute for Molecular Genetics, Berlin, Germany*
- WPU 383 **Precipitation of Large Proteins from Serum with Organic Solvents**; Andrew J. Alpert¹; Ashok K. Shukla²; ¹*PolyLC Inc., Columbia, MD*; ²*Glygen Corp., Columbia, MD*
- WPU 384 **Quantitation of Human GST-A in Complex Matrix by LC-ESI-MS/MS with Signature Peptide**; Fagen Zhang; Michael J. Bartels; *The Dow Chemical Company, Midland, MI*

- WPU 385 **Large Scale Quantitative Profiling of the *Mycobacterium tuberculosis* Proteome**; Kwasi G. Mawuenyega¹; Sheng Gu¹; Karen Dobos²; John T. Belisle²; Jin Chen¹; Morton Bradbury³; Andrew Bradbury¹; Xian Chen¹; ¹Bioscience Division, Los Alamos National Laboratory, Los Alamos, NM; ²Dept of Microbiology, Immunology & pathology, Colorado State Univ., Ft. Collins, CO; ³Dept of Biochem & Molecular Biology, Univ. of California, Davis, CA
- WPU 386 **Novel Fluorescein Affinity Chromatography for Proteomic Analysis using Mass Spectrometry**; Jue-Liang Hsu; Shu-Hui Chen; Department of Chemistry, National Cheng-Kung University, Tainan, Taiwan, ROC
- WPU 387 **Approximate Relative Abundance of Proteins Within a Mixture Determined From LC-MS Data**; Juri Rappsilber; Yasushi Ishihama; Leonard Foster; Gerhard Mittler; Matthias Mann; CEBI, University of Southern Denmark, Odense, Denmark
- WPU 388 **Determination of Glutathione Depletion-Dependent Thiol Oxidation of Mitochondrial Complex I Upon Oxidative Stress Using Stable Isotope Alkylating Reagents**; Birgit Schilling; Bharath Srinivas; Richard H. Row; Julie K. Andersen; Bradford W. Gibson; Buck Institute for Age Research, Novato, CA
- WPU 389 **Derivatization of Peptides for Analysis by High-Throughput LC-MALDI-TOF/TOF MS**; Anna Pashkova; Xin Zhang; Roger Giese; Barry L. Karger; Barnett Institute, Northeastern University, Boston, MA
- WPU 391 **Quantitative Analysis of the Responses of Yeast Proteome Under Challenging Conditions**; Heng Jiang; Ann English; Concordia University, Montreal, Canada
- WPU 392 **Absolute Quantification of Prostate Specific Antigen in Artificial Serum by LC-MS/MS Using Isotope Labeled Synthetic Peptides and Proteolytic Digestion**; David R. Barnidge¹; David C. Muddiman¹; George G. Klee²; Marcia K. Goodmanson²; ¹W.M. Keck FT-ICR Mass Spectrometry Laboratory, Mayo Clinic, Rochester, MN; ²Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, MN
- WPU 393 **Identification and Quantification of Biomolecules and Determination of Binding Specificities Using Ion Energy Loss Spectrometry, Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry and Accelerator Mass Spectrometry**; Magnus Palmblad; Patrick G Grant; Sharon J Shields; Darren J Hillemonds; Graham Bench; John S Vogel; Lawrence Livermore National Laboratory, Livermore, CA
- WPU 394 **Encoding Quantitative Proteomic Data Within MS/MS Spectra**; Richard S. Johnson; Min Shen; Lowell Ericsson; Amgen, Seattle, WA
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- WPV 395 **Proteomic Analysis by MALDI-MS-MS and NanoESI MS-MS: Protein Expression Changes in Muscle Tissue Growth Induced by Selective Androgen Receptor Modulator Response**; John Hughes¹; Showchien Hsieh¹; Tianshun Xu¹; Kathleen MacKenzie¹; Roel van der Schors²; ¹GlaxoSmithKline, Research Triangle Park, NC; ²Vrije University, Amsterdam, Netherlands
- WPV 396 **In vivo Proteome Mapping of Microvascular Endothelium in Rat Lung**; Eberhard Durr¹; Yan Li¹; Lucy Carver¹; Jingyi Yu¹; Karolina Krasinska¹; Phil Oh¹; John R. Yates²; Jan E. Schnitzer¹; ¹Sidney Kimmel Cancer Center, San Diego, CA; ²The Scripps Research Institute, San Diego, CA
- WPV 397 **Proteome Analysis of Oxidative Stress Stimulated by Diesel Exhaust Particles in the Macrophage**; Gary G. Xiao²; Sheng Yin²; James L. Kerwin²; Rachel R. Ogorzalek Loo²; Joseph A. Loo²; Ning Li¹; Andre E. Nel¹; ¹University of California Med-CIA, Los Angeles, CA; ²UCLA, Proteomics and Mass Spectrometry Center, Los Angeles, CA
- WPV 398 **Quantitative Analysis of Plasma Proteome From Atopic Dermatitis Model Mice to Identify the Disease Marker Proteins**; Takao Kawakami; Hisae Anyoji; Atsushi Ogiwara; Toshihide Nishimura; Clinical Proteome Center, Tokyo Medical University, Tokyo, Japan
- WPV 399 **Proteomic Analysis of Retinoic Acid-Induced Differentiation of Human Acute Promyelocytic Leukemia Cells (NB4) by 2D-DIGE and MALDI-TOF-TOF Mass Spectrometry**; Daojing Wang¹; Gurmil Gendeh²; Katherine Willams³; Ronald H. Jensen³; Maria G. Pallavicini³; ¹Lawrence Berkeley National Laboratory, Berkeley, CA; ²Amersham Biosciences, Sunnyvale, CA; ³University of California, San Francisco, CA
- WPV 400 **Analysis of the Human Sputum Proteome**; Begona Casado¹; Lewis Pannell²; Joshua Murray³; Paolo Iadarola⁴; James N Baraniuk⁵; ¹Georgetown University, Washington, DC; ²University of South Alabama, Mobile Alabama, Alabama; ³Universita' di Pavia, Pavia, Italy
- WPV 401 **Biomarker Detection in the Tears of Diabetes Patients**; Brad Walsh¹; Mark Willcox²; Tom Slyker³; ¹Proteomeca, Pty. Ltd., Harbord, Australia; ²Cornea and Contact Lens Research Unit, UNSW, Sydney, Australia; ³Bio-Rad Laboratories, Hercules, CA
- WPV 402 **Use of High Throughput Proteomics to Determine Asymmetric Mitotic Stem Cell Markers**; Heidi A Geiser¹; Janice A Lansita²; James L Sherley²; Vernon N Reinhold¹; ¹University of New Hampshire, Durham, NH; ²Massachusetts Institute of Technology, Cambridge, MA
- WPV 403 **Identification of Putative Cell Surface Protein From P.acnes by Mass Spectrometry**; Yanni Zhang; Jean-Francois Maisonneuve; Ajay Bhatia; John Douglas; Steven Wang; Yasir Skeiky; Jennifer Mitcham; Michael Lodes; Tom Vedvick; David Persing; Corixa, Seattle, WA
- WPV 404 **Liquid Chromatography of Intact Proteins Combined With Peptide Mass Fingerprinting Increases the Overall Flexibility for Cardiac Proteome Analysis From a Swine Model of Heart Failure**; Heather A Brown; Jennifer E Van Eyk; Irina Neverova; Queen's University, Kingston, Canada
- WPV 405 **High-Throughput Molecular Diagnosis of Disease States Using Direct-Tissue MALDI MS Analysis**; Sarah A. Schwartz¹; Bill White¹; Huiming Li¹; Jason Moore¹; Yu Shyr¹; Robert Weil²; Richard M. Caprioli¹; ¹Vanderbilt University Medical Center, Nashville, TN; ²National Institutes of Health, Bethesda, MD
- WPV 406 **Insights Into Phospholipidosis-Induced Changes in the Hepatocyte Proteome**; Ileana M. Cristea¹; Elisabeth George²; Su Evans²; Simon J. Gaskell¹; ¹Michael Barber Centre for Mass Spectrometry, UMIST, Manchester, United Kingdom; ²Cellular and Biochemical Toxicology, GlaxoSmithKline, Ware, United Kingdom
- WPV 407 **Mining Biomarkers in Human Sera Using Proteomic Tools**; Rulin Zhang¹; Lisa Barker¹; Deborah Pinchev²; John Marshall¹; Michele Rasamoeliso¹; Chris Smith¹; Inga Kireeva¹; Leslee Ingratta¹; Louis DeGennaro¹; George Jackowski¹; ¹SynX Pharma Inc., Toronto, Canada; ²University of Guelph, Guelph, Canada
- WPV 408 **MS-Identification and Biological Characterization of an Erythropoietin-Dependent Erythroid Cell Stimulating Protein of Human Bone Marrow Endothelial Cells**; Marcos R Di Falco¹; Luis F Congote¹; Mike Aguiar²; Robert Masse²; Bernard F Gibbs²; ¹McGill University, Montreal, Canada; ²MDS Pharma Services, Montreal, Canada

- WPV 409 **Proteomic Analysis of Human Tears: In Response to Ocular Surface Injury;** Lei Zhou¹; Liqun Huang²; Roger W Beuerman³; Sam FY Li²; FT Chew⁴; Leonard PK Ang⁵; Donald Tan⁵; ¹*Singapore Eye Research Institute, Singapore, Singapore*; ²*Dept. Chemistry, National University of Singapore, Singapore, Singapore*; ³*LSU Eye Center, LSUHSC, New Orleans, LA*; ⁴*Dept. Biological Science, National University of Singapore, Singapore, Singapore*; ⁵*Singapore National Eye Centre, Singapore, Singapore*
- WPV 410 **Identification of TIMP-1 Induced Genes in Human Liver Cells Using Difference Gel Electrophoresis (DIGE);** Stephan Poetsch¹; Bruno Bacher¹; Bettina Jansen²; Elke Roeb²; ¹*Amersham Biosciences Europe, D-79111 Freiburg, Germany*; ²*Medizinische Klinik der RWTH Aachen, D-52057 Aachen, Germany*
- WPV 411 **Integrated Analysis of the Human Cardiac Proteome and Phosphoproteome;** Cristian Ruse¹; Michael Kinter¹; Meredith Bond¹; ¹*Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, OH*; ²*Case Western Reserve University School of Medicine, Cleveland, OH*
- WPV 412 **Global and Glyco-Specific Quantitative Proteomic Analyses of Bronchoalveolar Lavage Fluid. Tools for Understanding Acute Respiratory Distress Syndrome;** Samuel M. Donohoe¹; Lynn M. Schnapp²; Eugene C. Yi¹; Hui Zhang¹; David R. Goodlett¹; Ruedi Aebersold¹; ¹*Institute for Systems Biology, Seattle, WA*; ²*University of Washington School of Medicine, Seattle, WA*
- WPV 413 **Optimized SELDI Profile of Rat Serum;** Avalyn E. Lewis¹; Charles R. Iden¹; ¹*SUNY-Stony Brook, Stony Brook, NY*; ²*Department of Pharmacology, SUNY, Stony Brook, NY*
- WPV 414 **Catalogue of Soluble Proteins in the Human Vitreous Humor By 1D-SDS/PAGE and Iontrap Tandem Mass Spectrometry;** Toyofumi Nakanishi; Reiko Koyama; Tsunehiko Ikeda; Akira Shimizu; *Osaka Medical College, Takatsuki, JAPAN*
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- WPV 415 **Using Genome Fingerprint Scanning for Human Gene Identification;** Michael S. Wisz; Michael C. Giddings; *University of North Carolina, Chapel Hill, NC*
- WPV 416 **High-Throughput Proteomic Analysis of Plasma Membrane Proteins From Breast Cancer Cell Lines;** Keiryn L. Bennett; Eva C. Ø. Nielsen; Vibeke Poulsen; Dan B. Kristensen; Alexandre V. Podtelejnikov; Soren Schandorff Gade-Jorgensen; Christian Ahrens; Mark A. Scheideler; Jacek R. Wisniewski; *MDS Proteomics, Odense, Denmark*
- WPV 417 **Combining Spectrum Matching and *de novo* Sequencing: An Advantageous Approach to the Interpretation of MS/MS Spectra;** Mark W. Duncan¹; Kim Fung¹; Srdjan Askovic¹; S Killcoyne¹; J Jasinski¹; S Hunsucker¹; Maxin Tsybin²; Heinrich Roder²; ¹*BMSF, School of Pharmacy, University of Colorado Health Sciences Center, Denver, CO*; ²*Efekta Technologies, Steamboat Springs, CO*
- WPV 418 **Evaluation of Cross-Linking Followed by Mass Spectrometry Analysis for the Detection of Membrane Protein Associations;** Oliver K Bernhard¹; Margaret M Sheil²; Tony L Cunningham¹; ¹*Centre for Virus Research, WMI, University of Sydney, Sydney, Australia*; ²*Department of Chemistry, University of Wollongong, Wollongong, Australia*
- WPV 419 **An Integrated Approach for Proteomic Analysis Reducing the Workload of Low-Throughput Instruments;** Peter Hufnagel¹; Ulrike Schweiger-Hufnagel¹; Markus Lubeck¹; Detlev Suckau¹; Oksana Gvozdyak²; Axel Ducret³; Hanno Langen³; ¹*Bruker Daltonik, Bremen, Germany*; ²*Bruker Daltonics, Billerica, MA*; ³*F. Hoffmann-La Roche, Basel, Switzerland*
- WPV 420 **An (Off-Line HPLC)-(Orthogonal Injection MALDI)-(QqTOFMS) Instrument Particularly Useful for the Analysis of Post-Translational Modifications. Example: Identification of Two Phosphorylated Sites in Tryptic Peptides From the ABRF PRG03 Sample (Bovine Protein Disulphide Isomerase);** Oleg Krokhin¹; Keding Cheng²; Natalia Bykova¹; Werner Ens¹; John Wilkins²; Kenneth Standing¹; ¹*University of Manitoba, Department of Physics and Astronomy, Winnipeg, Canada*; ²*Manitoba Centre for Proteomics, Winnipeg, Canada*
- WPV 421 **Frequency Analysis of MALDI-TOF Spectra for Noise Filtering and Internal Calibration;** Thomas Kreitler; Eryk Wolski; Ekaterina Mirgorodskaya; Hans Lehrach; Johan Gobom; *Max Planck Institute for Molecular Genetics, Berlin, Germany*
- WPV 422 **Extending the Coverage of Proteomic Samples by Nano LC/MS/MS and Advanced Information Dependent Acquisition (IDA) Approaches;** Brian J. Boucher; Andy J. Tomlinson; Brian L. Williamson; Cheryl E. Murphy; *Applied Biosystems, Framingham, MA*
- WPV 423 **Identification of Oxidant Sensitive Cysteine-Containing Proteins by Mass Spectrometry;** Mahadevan Sethuraman¹; Tyler Heibeck¹; Takeshi Adachi¹; Amareth Lim¹; Mark E McComb¹; Catherine E Costello¹; Richard A Cohen¹; ¹*Boston University School of Medicine, Boston, MA*; ²*Vascular Biology Unit, Boston University School of Medicine, Boston, MA*
- WPV 424 **Parallel Monitoring of Protein and Drug Expression in Tissues by MALDI MS;** Michelle L. Reyzer; Jennifer A. Pietsenpol; Carlos L. Arteaga; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- WPV 425 **Improved Mudpit Proteomics Analyses by Combined Sequest and Mascot Database Searching;** Katheryn A Resing; Karen Meyer-Arendt; Lauren Aveline-Wolf; Alex Mendoza; Natalie Ahn; *University of Colorado, Boulder, CO*
- WPV 426 **Analysis of Liquid Chromatography Fractions Using the Molecular Scanner;** Tim Nadler; Barrie Wagenfeld; Yulin Huang; Robert Lotti; Carlton Paul; George Vella; *Applied Biosystems, Framingham, MA*
- WPV 427 **HPLC Profiling in Proteomic Analysis of Monocyte to Macrophage Differentiation;** Leticia Cano¹; Andrew Alpert²; Terry D Lee¹; Susan Kovats¹; ¹*City of Hope Graduate School, Duarte, CA*; ²*PolyLC Inc., Columbia, MD*
- WPV 428 **Pep-Miner: High Throughput Proteomics Made Easy;** Ilan Beer¹; Eilon Barnea¹; Guy Korland¹; Moriel Lechtman¹; Itay Maman¹; Tamar Ziv²; Arie Admon²; ¹*IBM Haifa Research Laboratory, Haifa, Israel*; ²*Technion - Israel Institute of Technology, Haifa, Israel*
- WPV 429 **Non-Redundant Mass Spectrometry (NRMS): Improving Data Coverage and Quality in Proteomics;** Alexander Scherl¹; Patrice Francois²; Veronique Converset¹; Manuela Bento²; Jean-Charles Sanchez¹; Denis F Hochstrasser¹; Jacques Schrenzel²; Garry L Corthals¹; ¹*Geneva Proteomics Research Centre, Geneva University Hospital, Geneva, Switzerland*; ²*Division of Infectious Diseases, Geneva University Hospital, Geneva, Switzerland*
- WPV 430 **Control Software for the Automated Identification of Protein Mixtures by Orthogonal MALDI Mass Spectrometry;** Keith Ashman¹; Chris Lock¹; Adam Lau¹; Calvin Lau¹; Pavel Metalnikov²; ¹*MDS Sciex, Concord, Canada*; ²*Samuel Lunenfeld Institute, Toronto, Canada*

- WPW 431 **MALDI QIT ToF MSn is a Versatile Tool for the Identification of Disease-Relevant Protein Modifications in Human Proteome Research.**; Cornelia Koy¹; Stefan Mikkat¹; Martin Resch²; Emmanuel Raptakis³; Chris Sutton³; Koichi Tanaka³; Michael O. Glocker¹; ¹Proteome Center Rostock, Rostock, Germany; ²Shimadzu Biotech, Duisburg, Germany; ³Shimadzu Biotech, Manchester, UK
- WPW 432 **Guilty Until Proven Innocent: Protein Identifications Based on Non-Tryptic Peptides in Trypsin Peptide-Based Proteomics Experiments are Suspect**; Kenneth C. Parker; Brian L. Williamson; Jason Marchese; Peter Juhasz; Stephen Martin; *Applied Biosystems, Framingham, MA*
- WPW 433 **Off-Line Multi Dimensional LC/MS as Effective and Flexible Tool for Proteomics Research**; Ralf Moritz; Edgar Nägele; Patric Hörth; Martin Vollmer; *Agilent Technologies, Waldbronn, Germany*
- WPW 434 **Use of Mass Spectrometry and Date Base Search for Identification of Proteins From Organisms With Unsequenced Genomes**; Maja Matis¹; Marija Zakelj-Mavric²; Jasna Peter-Katalinic³; ¹IMMAG, Medical College of Georgia, Augusta, GA; ²Institute of Biochemistry, Medical Faculty, University of Ljubljana, Ljubljana, Slovenia; ³Institute for Medical Physics and Biophysics, University of Münster, Münster, Germany
- WPW 435 **Dependence of Database Search Score and Sequence Coverage Attained on Ionization Mode and Ionization Polarity**; Paul M Bigwarfe Jr¹; Troy D Wood¹; ¹State University of New York, Buffalo, NY; ²Roswell Park Cancer Institute, Buffalo, NY
- WPW 436 **A New Algorithm to Correlate MS/MS Spectra with Theoretical Peptide Fragmentations**; Nehal Pfeiffer; Fernando Maroto; Colette Rudd; Amy Zumwalt; Jim Shofstahl; *Thermo Electron, San Jose, CA*
- WPW 437 **Implementation and Performance of a Protein Identification Algorithm for Intact Protein MALDI/TOF/TOF Spectra**; Kevin L Schey; John Schwacke; *Medical University of South Carolina, Charleston, SC*
- WPW 438 **Universal Deposition Device for Off-line Coupling of LC to MALDI MS and MS/MS**; Tomas Rejtar¹; Hsuan-shen Chen²; Eugene Moskovets¹; Lingyun Li²; Viktor Andreev¹; Barry L. Karger¹; ¹Barnett Institute, Boston, MA; ²Department of Chemistry, Northeastern University, Boston, MA
- WPW 439 **Direct from Polyacrylamide Gel Infrared Laser Desorption Ionization**; Yichuan Xu; Mark W. Little; David J. Rousell; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
- WPW 440 **Use of Support Vector Machine Learning for Evaluation of Peptide MS/MS Spectra and SEQUEST Scores in Shotgun Peptide Sequencing.**; D.C. Anderson¹; Weiqun Li²; William Stafford Noble³; ¹Institute of Molecular Biology, University of Oregon, Eugene, OR; ²Rigel Inc., South San Francisco, CA; ³Dept. of Genome Sciences, University of Washington, Seattle, WA
- WPW 441 **An Imaging Approach for PTM Discovery by Using An Automated Information Dependent LC/MALDI QqTOF MS Acquisition System**; Xu Guo; Min Yang; Feng Zhong; *MDS SCIEX, Toronto, Canada*
- WPW 442 **Improving Confidence of Automated Protein Identification Using Rule-Based Assessment of Probabilistic Database Search Results**; Markus Schirle; Marcus Bantscheff; Manfred Raida; Markus Boesche; Bernhard Kuster; *Cellzome AG, Heidelberg, Germany*
- WPW 443 **Development and Validation of an *in-vivo* Inhibition Assay for Bacterial Methionine Aminopeptidase by SELDI-TOF Mass Spectrometry**; Songtao Zhou; Gerlinde Layh-Schmitt; Kenneth Greis; *Procter & Gamble Pharmaceutical, Mason, OH*
- WPW 444 **Protein Mass Mapping Combined with MS-Derived Protein Mass Database for Bacterial Identification**; Lidan Tao; Xinlei Yu; Liang Li; *University of Alberta, Edmonton, Canada*
- WPW 445 **The Accuracy of Protein Identification Using Chemically Assisted Fragmentation (CAF) and Tandem Mass Spectrometry**; Thomas Keough¹; Martin P. Lacey¹; Dionne P. Swift¹; Kenton D. Juhlin¹; Paul E. Correa²; ¹The Procter & Gamble Company, Cincinnati, OH; ²P&G Pharmaceuticals, Cincinnati, OH
- WPW 446 **Complex Protein Mixture Analysis by LC-MALDI-TOF Hybrid Mass Spectrometry: Evaluating the Performance and Potential for High Throughput Proteomic Analysis**; Timothy J. Griffin¹; Xiaojun Li¹; Chris M. Lock²; Iryna Chervetsova²; Marcello Marelli¹; John D. Aitchison¹; Hui Zhang¹; Ruedi Aebersold¹; ¹Institute for Systems Biology, Seattle, WA; ²MDS Sciex, Concord, Canada
- WPW 447 **Intensity-Based Probability Scorer for Peptide Tandem Mass Spectra**; Yingying Huang¹; Joseph M. Triscari²; Gordon A. Anderson³; Ljiljana Pasa-Tolic³; Vicki H. Wysocki¹; Richard D. Smith³; Mary S. Lipton³; ¹University of Arizona, Tucson, AZ; ²Science Application International Corporation, Tucson, AZ; ³Pacific Northwest National Laboratory, Richland, WA
- WPW 448 **Iterative Exclusion and Directed MS-MS from Trace-Level Protein Digests of Differentiated Cell Extracts**; Joseph Pok Man Hui; Sylvain Tessier; Heather Butler; Jonathan Badger; Paul Kearney; Alain Carrier; Pierre Thibault; *Caprion Pharmaceuticals, Montreal, Canada*
- WPW 449 **Comprehensive Proteome Analysis by Multi-Dimensional Separation Coupled to High Mass Accuracy MALDI-MS and MALDI-MS/MS**; Hsuan-shen Chen; Tomas Rejtar; Eugene Moskovets; Victor Andreev; Barry L. Karger; *Barnett Institute and Department of Chemistry, Northeastern University, Boston, MA*
- WPW 450 **The Use of Photochemical Cross-linking and Mass Spectrometry to Investigate Proteins Interacting with DNA Polymerase η** ; Cameron O. Scarlett; Mark C. Hall; Jody Havener; Nana Nikolaishvili; J. Michael Dial; Marila Cordeiro-Stone; Stephen Chaney; Christoph H. Borchers; *University of North Carolina, Chapel Hill, NC*
- WPW 451 **Use of Involatile Salts to Enhance Peptide Separation and MS Performance in LCMALDI Experiments**; Hari Nair; Xiangping Zhu; Igor Smirnov; Ioannis Papayannopoulos; Darryl Pappin; Andy Tomlinson; *Applied Biosystems, Framingham, MA*
- WPW 452 **PMF Meta-Search - A New Approach That Enables Sophisticated MS Protein Identification in High-Throughput Proteomics**; Daniel C. Chamrad¹; Gerhard Koerting¹; Herbert Thiele²; Helmut E. Meyer¹; Martin Blueggel¹; ¹Protagen AG, Dortmund, Germany; ²Bruker Daltonik GmbH, Bremen, Germany
- WPW 453 **Large-Scale Differential Proteomic Analysis of Hep G2 cells using ICPL-Labeling-Technique- A Multidimensional Separation Platform followed by MALDI-TOF-TOF Mass Spectrometry-**; Hakan Sarioglu; Josef Kellermann; Cornelia Ciosto; Alexander Schmidt; Friedrich Lottspeich; *Max-Planck-Institute of Biochemistry, Martinsried, Germany*

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WPX 455	“Gel-Free” Tryptic Digestion and Mass Spectrometric Identification of Mammalian Immunoprecipitated Protein Complexes; Bay Sheldrick ¹ ; Kathleen Binns ¹ ; Paul O'Donnell ¹ ; Christine LeRoy ¹ ; Miriam Barrios-Rodiles ¹ ; Pavel Metalnikov ¹ ; Jeffrey L. Wrana ¹ ; Keith Ashman ² ; ¹ <i>Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada</i> ; ² <i>MDS Sciex, Concord, Canada</i>
WPX 456	Mixed Mode Solid Phase Extraction (MMSPE) for Proteomic Sample Preparation in Micro and Nano-Liter volumes; Ashok K. Shukla ¹ ; Mukta M. Shukla ¹ ; Eric D. Stover ² ; Andreas F. Huhmer ³ ; ¹ <i>Glygen Corp., Columbia, MD</i> ; ² <i>ThermoHypersil-Keystone, Bellefonte, PA</i> ; ³ <i>ThermoFinnigan, San Jose, CA</i>
WPX 457	Identification of Marker Proteins in Colon Cancer by MALDI-MS Using a Compact Disc Microfluidic System; Daniel Hirschberg ¹ ; Uwe Roblick ² ; Susanne Becker ² ; Gert Auer ² ; Hans Jörnval ¹ ; Tomas Bergman ¹ ; ¹ <i>Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden</i> ; ² <i>Cancer Center Karolinska, Stockholm, Sweden</i>
WPX 458	Implementation of CAF-Enhanced MALDI-PSD Sequencing Using a CD Microlaboratory; Ulf Hellman ¹ ; Bo Ek ² ; ¹ <i>The Ludwig Institute of Cancer Research, Uppsala, Sweden</i> ; ² <i>Gyros AB, Uppsala, Sweden</i>
WPX 459	A Novel Mass Spectrometric Protein Chip Technology For Rapid Determination of Differentially-Expressed Protein Profiles; Phillip J. Elms ; Carol E. Parker; Christoph H. Borchers; <i>Department of Biochemistry and Biophysics, UNC, Chapel Hill, NC</i>
WPX 460	Protein Microarrays by Ion Soft-Landing; Zoltan Takats ¹ ; Zheng Ouyang ¹ ; Bogdan Gologan ¹ ; Thomas Blake ¹ ; Andrew J. Guymon ¹ ; V. Jo Davisson ² ; R. Graham Cooks ² ; ¹ <i>Department of Chemistry, Purdue University, West Lafayette, IN</i> ; ² <i>Department of Medicinal Chemistry, Purdue University, West Lafayette, IN</i>
WPX 461	MS and MS/MS Performance of an AP-MALDI Ion Trap Mass Spectrometer for Proteomics; Belle Chang; Mustafa Unlu; Yi Quan; Melissa Saylor; Terri Addona; Steven A. Carr; Karl Clauser ; <i>Millennium Pharmaceuticals, Inc., Cambridge, MA</i>
WPX 462	An Automated Three Dimensional-LC Platform for Global Proteome Profiling; Arianna Jones ; Jun Sun; Wen Yu; Jay Short; Jing Wei; <i>Diversa Coproration, San Diego, CA</i>
WPX 463	Rapid and High Quality Peptide Mapping using Nano-Monoliths in Capillary LC-MS/MS; Sven Andrecht ; Anja Seiler; Dieter Lubda; Ludwig Jakobi; Jonas Anders; Rob Hendriks; <i>Merck KGaA / LSP R&D MDA Proteomics, Darmstadt, Germany</i>
WPX 464	Improved Method of Continuous Deposition of Peptide Eluents for Subsequent MALDI TOF MS and MS/MS Analysis; Philip J Savickas; Hari Nair; Stephen J Hattan; Igor Smirnov; Todd Taylor ; <i>Applied Biosystems, Framingham, MA</i>
WPX 465	Quantitative Analysis of Glycoproteins from Serum and Membrane Proteins; Hui Zhang ; Ruedi Aebersold; <i>Institute for Systems Biology, Seattle, WA</i>
WPX 466	Coupling Surface Plasmon Resonance and Mass Spectrometry for Binding Experiments; Jens Grote ¹ ; Nico Dankbar ¹ ; Erk Gedig ² ; Simone Koenig ¹ ; ¹ <i>University</i>

WPX 467	<i>of Muenster, Muenster, Germany</i> ; ² <i>XanTec Bioanalytics, Muenster, Germany</i> Polymethylmethacrylate (PMMA) Microfabricated Devices for Mass Spectrometry; Wendy D Dominick ; Patrick A Limbach; <i>University of Cincinnati, Cincinnati, OH</i>
WPX 468	MALDI TOF MS and Quadrupole Ion Trap TOF-MS Analysis of Peptide Digests from Proteins Electroblotted onto Immobilon™ Membranes; Andrew A Gooley ¹ ; Femia G Hopwood ¹ ; Janice L Duff ¹ ; Cameron Hill ¹ ; Eiji Ando ² ; K Sugiyama ² ; David B Wallace ³ ; Patrick W Cooley ³ ; ¹ <i>Proteome Systems Ltd, Sydney, Australia</i> ; ² <i>Shimadzu Biotech, Kyoto, Japan</i> ; ³ <i>MicroFab Technologies, Dallas, TX</i>
WPX 469	Coupling of Open Channel Capillary Isoelectric Focusing to Matrix Assisted Laser Desorption/Ionization Mass Spectrometry for Proteome Analysis; Newman S-K. Sze ; Jonathan B-C. Phua; Michael K-T. Wee; Michelle L-S. Mok; <i>Genome Institute of Singapore, Singapore, Singapore</i>
WPX 470	Integration of Capillary Isoelectric Focusing with Capillary Reversed-Phase Liquid Chromatography as Multidimensional Concentration/Separation Platform for Ultrasensitive Proteome Analysis; Jinzh Chen ¹ ; Brian M. Balgley ¹ ; Donald L. DeVoe ³ ; Eric H. Baehrecke ² ; Cheng S. Lee ¹ ; ¹ <i>Department of Chemistry and Biochemistry, University of Maryland, College Park, MD</i> ; ² <i>College of Life Sciences, Mass Spectrometry Facility, University of Maryland, MD</i> ; ³ <i>Dept. of Mechanical Engineering and Institute for System Research, University of Maryland, MD</i>
WPX 471	Quantitative Chemical Proteomics for Identifying Candidate Drug Targets; Yoshiya Oda ¹ ; Takashi Owa ¹ ; Toshitaka Sato ¹ ; Brian Boucher ² ; Scott Daniels ² ; Hidenori Yamanaka ³ ; Yasuhiro Shinohara ³ ; Akira Yokoi ¹ ; Junro Kuromitsu ¹ ; Takeshi Nagasu ¹ ; ¹ <i>Eisai Co., Ltd., Tsukuba, Japan</i> ; ² <i>Applied Biosystems, Framingham, MA</i> ; ³ <i>Amersham Biosciences K.K., Tokyo, Japan</i>
WPX 472	Digestion of Proteins and MALDI-TOF Analysis on Intact IPG Strips; Srinivas Iyer ¹ ; Jose Olivares ¹ ; ¹ <i>Bioscience Division, Los Alamos National Laboratory, Los Alamos, NM</i> ; ² <i>Los Alamos National Laboratory, Los Alamos, NM</i>
WPX 473	Analysis of Low Level Protein Mixtures Using Cleavable 13C9/12C9-ICAT Reagent; Kirk Hansen ; Robert Chalkley; Gerold Schmitt-Ulms; Jan Hirsch; Michael Baldwin; Al Burlingame; <i>University of California San Francisco, San Francisco, CA</i>
WPX 474	Interfacing NanoLC and MALDI-TOF MS for the Analysis of Complex Peptide Mixtures; Ekaterina Mirgorodskaya ; Corina Braeuer; Klaus-Dieter Kloeppel; Hans Lehrach; Johan Gobom; <i>Max Planck Institute for Molecular Genetics, Berlin, Germany</i>
WPX 475	On-Line Reaction Monitoring of Enzymatic Conversions By Means of Flow Injection Mass Spectrometry; André Liesener ; Uwe Karst; <i>University of Twente, Department of Chemical Analysis, Enschede, The Netherlands</i>
WPX 476	Thin-Chip Microspray System for High-Performance Fourier-Transform Ion-Cyclotron Resonance Mass Spectrometry of Biopolymers; Nikolay I. Youhnovski ¹ ; Joel S. Rossier ³ ; Niels Lion ² ; Eugen Damoc ¹ ; Susanne Becker ¹ ; Frederic Reymond ³ ; Hubert H. Girault ² ; Michael Przybylski ¹ ; ¹ <i>University of Konstanz, Dep. of Chemistry, Konstanz, Germany</i> ; ² <i>Ecole Polytechnique Federale de Lausanne, Lab. of Electrochemistry, Lausanne, Switzerland</i> ; ³ <i>DiagnoSwiss S.A., Monthey, Switzerland</i>

- WPX 477 **Progress Towards the Comprehensive Sequence Analysis of the Hela Cell Nucleus**; Steven P Gygi; Judit Villen; Joshua E Elias; Daniel Schwartz; Sean Beausoleil; Robert Duarte; Mark Jedrychowski; *Harvard Medical School, Boston, MA*
- WPX 478 **Optimization of In-Gel Digestion System in Combination with Thin Gel Separation and Negative Staining in 96-Well Plate Format**; Hiroyuki Katayama; Yoshiya Oda; Takeshi Nagasu; *Laboratory of Seeds Finding Technology, Eisai Co. Ltd., Tsukuba, Ibaraki, Japan*
- WPX 479 **The Impact of Ion Exchange Parameters on Protein Identification in 2D LC-MS/MS Systems**; Martin Vollmer; Patric Hoerth; Bernd Glatz; *Agilent Technologies Deutschland GmbH, Waldbronn, Germany*
- WPX 480 **A Microarray Fabrication System Using Ion Soft-Landing from a Linear Ion Trap Mass Analyzer**; Thomas A. Blake; Zheng Ouyang; Andrew J. Guymon; Sameer Kothari; Zoltan Takats; Bogdan Gologan; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- WPX 481 **Nano-HPLC/Mass Spectrometric Analysis of Proteins from Affinity-Purified Plasma Membrane**; Yingxin Zhao; Wei Zhang; Michael White; Yingming Zhao; *UT Southwestern Medical Center, Dallas, TX*
- WPX 482 **Towards Single Cell Proteomics: Developing Methodology to Dose One or More Cells with One or More Micrometer-Sized Droplets from an EDB, with MALDI-TOF-MS Measurement of the Cellular Response**; Allen E Haddrell; George R Agnes; *Simon Fraser University, Burnaby, Canada*
- WPX 483 **Assessing the Overlap and Complement between 2D Gel / MS and MALDI Tissue Profiling of Human Colon Cancer**; David Friedman; Salisha Hill; HansRudi Aerni; Jeff Keller; Robert Coffey; Pierre Chaurand; Richard Caprioli; *Vanderbilt University, Nashville, TN*
- WPX 484 **iTAP: An *in vivo* Protein Complex Purification Technique for Functional Proteomics in Higher Eukaryotes**; Daniel Forler; Thomas Koecher; Michaela Rode; Marc Gentzel; Elisa Izaurralde; Matthias Wilm; *EMBL-Heidelberg, Heidelberg, Germany*
- WPX 485 **Comparative Proteomics as a Component of Systems Biology**; Jane A Nagel; Julie A Corbo; Clary B Clish; Stephen Naylor; *Beyond Genomics Inc., Waltham, MA*
- WPX 486 **Evaluation of Cleavable ICAT Reagents with an Atmospheric Pressure MALDI Ion-Trap for Differential Protein Expression Experiments.**; Douglas A Whitten; W. Keith Ray; Curtis G Wilkerson; Sarah J Gilmour; Brett S Phinney; *Michigan State University, E. Lansing, MI*
- WPX 487 **Differences and Complementarities of LC-QToF and LC-MALDI TOF/TOF Datasets**; Anne M. Hansen¹; Per F. Nielsen¹; Ole N. Jensen²; Thomas N. Krogh¹; *¹Protein Science, Discovery, Novo Nordisk A/S, Bagsvaerd, Denmark; ²Department of Biochemistry and Molecular Biology, SDU, Odense, Denmark*
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- TOXICOLOGY**
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- WPY 488 **Effects of Free Unmodified Purine Bases, Guanine and Adenine, on Ionization of Three N-7 Guanine DNA Adducts Using LC/ESI/MS/MS**; Yutai Li; Nedyalka, D Dicheva; Gunnar Boysen; Pat Upton; James Swenberg; *University of North Carolina, Chapel Hill, NC*
- WPY 489 **Development of a Microbore Liquid Chromatography-Microelectrospray Ionization-Tandem Mass Spectrometry Method to Screen Pharmaceutical Compounds for Reactive Metabolite Formation *in vitro***; John R. Soglia; Sabrina Zhao; Shawn Harriman; Patrick Jeanville; Mark J. Cole; *Pfizer Inc., Groton, CT*
- WPY 490 **Detection of the Metabolites of Nitrofurans in Food by HPLC/MS/MS**; Lutz Hartig¹; Kristin von Czapiewski²; Joaquim Soares-Granja³; *¹W.E.J. GmbH, Handels- und Umweltschutzzlaboratorium, Hamburg, Germany; ²Applied Biosystems, Darmstadt, Germany; ³Applied Biosystems, Courtaboeuf, France*
- WPY 491 ***In vitro* Prepolymers in S9 Human Hepatic Fraction by LC-ES-MS-MS.**; Michele J Berode¹; Jean De Graeve²; Pierre Kremers²; Youcheng Liu³; *¹Institute of Occupational Health Sciences, Lausanne, Switzerland; ²University of Liege, Liege, Belgium; ³Yale Occupational and Medicine Program, New Haven, CT*
- WPY 492 **Detection of Sulfoconjugated Compounds by Parent and Neutral Loss Scannings: Application to the Detection of Biomarkers for the Toxicity of Uranium in Rat**; Alexandra Lafaye¹; Christophe Junot¹; Eric Ezan¹; Jean-Claude Tabet²; *¹CEA, Service de Pharmacologie et d'Immunologie, Gif-sur-Yvette cedex, France; ²LCSOB, UMR, Université Pierre et Marie Curie, 4 place Jussieu, Paris, France*
- WPY 493 **Mass Spectrometry Studies of Interactions Between Arsenicals and Proteins**; Guifeng JIANG; Meiling LU; X. Chris LE; *University of Alberta, Edmonton, Alberta*
- WPY 494 **Monitoring Fentanyl and NorFentanyl In Urine by LC/ESI-MS Utilizing Multiple Ions for Quantification and Positive Confirmation**; Robert Franey¹; Kim Lilley²; Kate Yu²; *¹Franey Medical Labs, Sandwich, MA; ²Waters Corporation, Milford, MA*
- WPY 495 **HPLC/ESI MS Combined with Immunoaffinity Chromatography for the Rapid Analysis of 2-Amino-3,8-dimethylimidazo[4,5-f]quinoxaline (MeIQx) and Two Cytochrome P450 1A2 Metabolites in Human Urine**; Ricky D. Holland; Theresa Gehring; Robert J. Turesky; *National Center for Toxicological Research, Jefferson, AR*
- WPY 496 **The Metabolism of Nicotine in the BeWo cell line using CE-MS and LC-MS**; Edward Baidoo; Malcolm Clench; Robert F Smith; *Sheffield Hallam University, Sheffield, UK*
- WPY 497 **An Automated LC-MS/MS Assay For The Quantification of 8-iso PGF2 α** ; Christine Kahle; Yan Ling Zhang; Uwe Christians; *University of Colorado Health Sciences Center, Denver, CO*
- WPY 498 **The Application of GC/MS for Metabonomics: Analysis of Urine from Rats Dosed with an Agent Associated with Organ-Specific Toxicity**; Bradley L. Ackermann¹; James A. Eckstein¹; Jean-Marie Colet²; Craig E. Thomas¹; *¹Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN; ²Eli Lilly and Company, Lilly Development Center S.A., Mont-Saint-Guibert, Belgium*
- WPY 499 **High Throughput Quantitative Analysis of Prostaglandins (PG), Leukotrienes (LT) and Their Metabolites by LC/MS/MS for Potential Disease Diagnosis**; Dong Wei; Lily Li; Arthur Rugg; Kojo Abdul-Hadi; Jim Rogers; Alexander Rosenberg; Steve Rounsley; Robert MaCarroll; Mark Trusheim; Roger Wiegand; *Cantata Pharmaceuticals, Woburn, MA*
- WPY 500 **Identification of Novel Biomarkers of Genetic State in Mice by NMR, LC/MS, and Metabonomics**; Jennifer H. Granger²; Robert S. Plumb²; Chris L. Stumpf²; Ian D. Wilson¹; Jose Castro-Perez³; Hilary Major³; *¹AstraZeneca R&D Alderley Park, Macclesfield, United Kingdom; ²Waters Corporation Life Sciences R&D, Milford, Massachusetts; ³Waters Corporation Manchester, Manchester, United Kingdom*
- WPY 501 **LC/ESI/MS Method for the Determination of 2,4,4'-Trichloro-2'-hydroxydiphenyl Ether (Triclosan) in Human Matrices**; Rolf U. Halden¹; Robert Classon²; Guibo Xie¹; *¹Johns Hopkins University, Bloomberg School*

- of Public Health, Baltimore, Maryland; ²Johns Hopkins University Bloomberg School of Public Health; Baltimore, MD
- WPY 502 **Analysis of Glycidamide-DNA Adducts Derived from Acrylamide in the Mouse;** Mona I. Churchwell¹; Goncalo Gamboa da Costa²; L. Patrice Hamilton¹; M. Matilde Marques²; Frederick A. Beland¹; Daniel R. Doerge¹; ¹National Center for Toxicological Research, Jefferson, AR; ²Instituto Superior Tecnico, Lisbon, Portugal
- WPY 503 **Use of Electrospray Ionization Mass Spectrometry and Multiple Reaction Monitoring for the Kinetic Characterization of Substrate-based Inhibitors of Fucosyltransferase V: Implications for the Reaction Mechanism;** Andrew Norris; Julian Whitelegge; Jane Strouse; Kym Faull; Tatsushi Toyokuni; *University of California, Los Angeles, CA*
- WPY 504 **Selective Digestion and Novel Cleanup Techniques for Detection of Benzo[a]pyrene-DNA Adducts by CE/MS;** Lynn A. Gennaro¹; Manicka Vadhanam²; Ramesh C. Gupta²; Paul Vouros¹; ¹Northeastern University, Boston, MA; ²University of Kentucky Medical Center, Lexington, KY
- WPY 505 **Proteomic Study of Human Hepatocytes and Their Response to Environmental Contaminants;** Denise K. MacMillan¹; Agnes M. Hindemith²; ¹Engineer Research and Development Center, Environmental Chemistry, Omaha, NE; ²Veterans Administration Medical Center, Omaha, NE
- WPY 506 **A Novel GC/MS/MS Method for the Determination of Pesticide Dialkyl Phosphate Metabolites in Human Matrices;** Roberto Bravo; Gayanga Weerasekera; Lisa M Caltabiano; Carolina Fernandez; Kimberly D Smith; Larry L Needham; Dana B Barr; *Centers for Disease Control and Prevention, Atlanta, GA*
- WPY 507 **A Novel MS Based Metabonomic Approach to the Determination of Biomarkers of Drug Toxicity;** Hilary J. Major¹; Jose Castro-Perez¹; Steve W. Preece¹; John P. Shockcor²; Andrew Nicholls²; Jeff Goshawk¹; Martin Lunt¹; Richard Gilpin¹; ¹Waters Corporation, MS Technologies Centre (Micromass UK Ltd.), Manchester, UK; ²Metabometrix Ltd., London, UK
- WPY 508 **Analysis of DNA-Phosphate Adducts in vitro Using Miniaturised LC-ESI-MS/MS and Column Switching: Alkyl Cobalamins Versus Phosphotriesters;** Johanna Haglund²; Walter Van Dongen¹; Filip Lemièrè¹; Margareta Törnqvist²; Eddy L. Esmans¹; ¹Department of Chemistry, University of Antwerp, Antwerp, Belgium; ²Department of Environmental Chemistry, Stockholm University, Stockholm, Sweden
- WPY 509 **Identification of DNA Adducts Derived from Riddelliine, a Carcinogenic Pyrrolizidine Alkaloid, and from its Principal Metabolite, Riddelliine N-Oxide;** Daniel R. Doerge; Mona I. Churchwell; Ming W. Chou; Lee D. Williams; Jian Yan; Qinsu Xia; Peter P. Fu; *National Center for Toxicological Research, Jefferson, AR*
- WPY 510 **Screening for Drug-Glutathione Adducts on a Linear Iontrap Mass Spectrometer: Is There a General Approach for the Detection of Unknown Glutathione-Containing Structures as Markers of Reactive Metabolites?** Axel Paehler¹; Andreas Goetschi¹; Christophe Husser¹; Florian Klammers¹; Wolfgang Klemisch¹; Wolfgang Voelkel²; Idelette Weick¹; Manfred Zell¹; ¹F. Hoffmann-La Roche Ltd., Pharmaceuticals, Non-Clinical Drug Safety, Basel, Switzerland; ²Department of Toxicology and Pharmacology, University of Würzburg, Würzburg, Germany
- WPY 511 **In vitro Reaction of 1, 3 bis (2-chloroethyl)-1-Nitrosourea (BCNU) with Metallothionein.;** Yetrib Hathout¹; Michael Colvin²; ¹Department of Chemistry and Biochemistry, University of Maryland, College Park, MD; ²Department of Surgery, Duke University Medical Center, Durham, NC
- WPY 512 **Development of a GC/MS Method to Determine Hemoglobin N-Valine Adducts from (1-chloroethenyl)oxirane, a Chloroprene Metabolite;** Md. Yeakub Ali; Harrell E. Hurst; *University of Louisville Department of Pharmacology and Toxicology, Louisville, KY*
- WPY 513 **Detection of N1-Inosine Adducts Derived from Butadiene by LC-ESI-MS/MS;** Gunnar Boysen; Yutai Li; Ramiah Sangaiah; James A Swenberg; *University of North Carolina at Chapel Hill, Chapel Hill, NC*
- WPY 514 **Structural Characterization and Quantitative Analysis of 1,2,3,4-Diepoxybutane-Induced DNA-DNA Cross-Links;** Soobong Park; Natalia Tretyakova; *University of Minnesota, Minneapolis, MN*
- WPY 515 **Method Development and Validation of a Very Sensitive Assay for the Determination of Drug A In Dog Plasma Using Liquid-Liquid Extraction Coupling with LC/MS/MS Analysis;** David L. Dube; John Yu; Mark Castles; *Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT*
- WPY 516 **A Novel Method to Determine Phenolic Metabolites of Contemporary Pesticides in Human Urine Using Solid Phase Extraction with GC-MS/MS and Isotopic Internal Standards;** Gayanga Weerasekera; Roberto Bravo; Lisa M. Caltabiano; Carolina Fernandez; Kimberly D. Smith; Larry L. Needham; Dana B. Barr; *Centers for Disease Control and Prevention, Atlanta, GA*
- WPY 517 **Mass Spectrometric Characterization of the Adducts Produced by the Alkylation of Protein Disulfide Isomerase by the Episulfonium Ion Derived from the Glutathione Conjugate of 1,2-Dichloroethane;** Rhonda S. Kaetzel¹; Martha Staples²; Brian Arbogast²; Elisabeth Barofsky²; Douglas F. Barofsky²; Donald J. Reed³; ¹Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR; ²Department of Chemistry, Oregon State University, Corvallis, OR; ³Department of Biochemistry and Biophysics, Oregon State University, Corvallis, OR

THURSDAY POSTERS

Thursday posters should be set up 7:30 – 8:00 am on Thursday and removed 7:30 – 8:00 pm on Thursday. Authors of odd numbered posters (i.e., 001, 003, 005) present 8:45 – 10:15 am on Thursday. Authors of even numbered posters (i.e., 002, 004, 006) present 1:30 – 3:00 pm on Thursday.

AGRICULTURE

- ThPA 001 **Determination of Restricted Antibiotics in Animal Tissues by LC-ESI/MS/MS;** Della Wai-mei Sin; Yiu-chung Wong; *Analytical & Advisory Services Division, Government Laboratory, Hong Kong SAR, China*
- ThPA 002 **Acrylamide Formation in Heated Foods;** Robert A. Sanders; David V. Zyzak; Marko Stojanovic; Daniel H. Tallmadge; B. Loye Eberhart; Deborah K. Ewald; Thomas R. Morsch; *The Procter & Gamble Company, Cincinnati, OH*
- ThPA 003 **Confirmation of Chloramphenicol and Related Drugs in Food Commodities using Ion Trap LC/MS;** Sherril B. Turnipseed; Allen P. Pfenning; Joseph M. Storey; Rebecca H. Lee; Jose E. Roybal; Mark R. Madson; Cathy L. Burns; Karen S. Kreuzer; *Food and Drug Administration, Denver, CO*
- ThPA 004 **Identification of Candidate Mosquito Attractants in the Headspace of Bovine Blood;** Ulrich R Bernier¹; Matthew M Booth²; Sandra A Allan¹; Daniel L Kline¹; Donald R Barnard¹; ¹*United States Department of Agriculture-Agricultural Research Service, Gainesville, FL;* ²*University of Florida-Department of Environmental Engineering, Gainesville, FL*
- ThPA 005 **Identification of a Sulfonic Acid Metabolite Originating from an Organophosphorous Insecticide in Potato by ESI/MS/MS;** Ronald E. Shomo, II¹; Sha'aban F. ElNaggar¹; Patrick J. Sabourin²; ¹*FMC Corporation, Princeton, New Jersey;* ²*Battelle Memorial Institute, Columbus, OH*
- ThPA 006 **Characterization of Wheat Glutenin Subunits by Proteolytic Mass Mapping with Trypsin and Chymotrypsin;** Werner Ens¹; Yuwei Qian¹; Kenneth G Standing¹; Ken Preston²; Jean Mellish²; ¹*Department of Physics and Astronomy, University of Manitoba, Winnipeg, Canada;* ²*Department of Physics and Astronomy, University of Manitoba, Winnipeg, Manitoba, Canada;* ³*Grain Research Laboratory, Canadian Grain Commission, Winnipeg, Manitoba, Canada;* ⁴*Grain Research Laboratory, Canadian Grain Commission, Winnipeg, Canada*
- ThPA 007 **Determination of Avermectin Residues in Food Matrices with Liquid Chromatography/Electrospray Ionization Mass Spectrometry;** Dayue Shang; Angelo DiCicco; Monica Dyck; Jagroop Dahiya; Nicole Gibbons; Helen Nicolidakis; Xiaoyan Jia; *Health Canada, HPFB, Organic Residues Laboratory, Burnaby, BC, Canada*
- ThPA 008 **Multi-Class Method for Drug Residues in Eggs: Silica SPE Cleanup and LC/MS/MS Analysis of Ionophore and Macrolide Antibiotic Residues;** Cristina B. Nochetto; David N. Heller; *US Food and Drug Administration, Laurel, MD*
- ThPA 009 **LC/MS/MS Assay for the Simultaneous Quantitation of Ionophore Antibiotic Residues in Animal Tissues and Manure;** Dayue Shang; Monica Dyck; Nicole Gibbons; Jagroop Dahiya; Xiaoyan Jia; *Health Canada, HPFB, Organic Residues Laboratory, Burnaby, B.C., Canada*
- ThPA 010 **Association of Beer Quality and Barley Proteins using MALDI-TOF MS and MS/MS;** Yuwei Qian¹; Werner Ens¹; Ken, G Standing¹; Marta Izydorczyk²; Sharon Bazin²; Ken Preston²; ¹*Department of Physics and Astronomy, University of Manitoba, Winnipeg, Canada;*

²*Grain Research Laboratory, Canadian Grain Commission, Winnipeg, Canada*

- ThPA 011 **High Sensitivity Quantitation of Metabolites of Nitrofuran Antibiotics in Animal Tissue Using High Performance Liquid Chromatography Tandem Mass Spectrometry;** Vince C.X. Gao¹; Matthew E. Grigg¹; Sureerat Singhawangcha²; Suvit Upalawanna²; Tum Sutthisak²; ¹*Applied Biosystems, Hong Kong, China;* ²*GenSystems, Bangkok, Thailand*
- ThPA 012 **Cytokinins and Other Growth Regulating Compounds Identified and Quantified by LC-MS in *Abies Nordmanniana* Spach;** Jens Hansen-Moller¹; Rikke Norbaek²; Bjarke Vierskov³; Hanne Rasmussen⁴; ¹*Danish Institute of Agricultural Sciences, Tjele, Denmark;* ²*Danish Institute of Agricultural Sciences, Arsløv, Denmark;* ³*The Royal Veterinary and Agricultural University, Fredriksberg, Denmark;* ⁴*Danish Forest & Landscape Research Institute, Horsholm, Denmark;* ⁵*Danish Forest & Landscape Research Institute, Horsholm, Denmark*
- ThPA 013 **Metabolomics: Temporal and Spatial Snapshots of *Medicago truncatula* Biochemistry;** Lloyd W. Sumner; Anthony L. Duran; Corey D. Broeckling; David V. Huhman; Hidesuki Suzuki; Richard A. Dixon; *The Samuel Roberts Noble Foundation, Ardmore, OK*
- ThPA 014 **BSE Control: Detection of Gelatine Peptides in Animal Feed by MALDI-TOF and LC-MS/MS;** Mireia Fernandez-Ocana¹; Hendrik Neubert²; Anna Przyborowska²; Rick Parker³; Peter Bramley¹; John Halket⁴; Raj Patel⁴; ¹*Biological Sciences, Royal Holloway, Univ. London, Egham, United Kingdom;* ²*Mass Spectrometry Facility, King's College London, London, United Kingdom;* ³*Veterinary Laboratories Agency, Addlestone, United Kingdom;* ⁴*SBSL, Centre for Chemical Sciences, Royal Holloway, Univ. London, Egham, United Kingdom*
- ThPA 015 **On the Search for Florigen;** Susanne Hoffmann-Benning¹; Douglas, A Gage¹; Hans Kende²; Jan AD Zeevaert²; ¹*Michigan State University-Mass Spectrometry Facility, East Lansing, MI;* ²*Michigan State University-DOE Plant Research Laboratory, East Lansing, MI*

ANTITERRORISM MS

- ThPB 016 **Determination of Sarin (GB) in Blood by Gas Chromatography-Chemical Ionization Mass Spectrometry Using Isotope Dilution and Large Volume Injection;** Edward M Jakubowski¹; Jeffrey M McGuire²; Jennifer L Edwards²; Ronald A Evans²; Robert J Mioduszewski¹; Sandra A Thomson¹; ¹*U.S. Army SBCCOM, ECBC, Toxicology Team, Edgewood, MD;* ²*Geo-Centers, Edgewood, MD*
- ThPB 017 **Computational and Experimental Simulations for Mass Spectrometry-Based Identification of Biological Threat Agents;** Jane Razumovskaya³; William J. Hervey³; Nathan C. VerBerkmoes³; Miriam Land²; Frank W. Larimer²; Loren Hauser²; Gary J. Van Berkel¹; Douglas E. Goeringer¹; ¹*Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN;* ²*Life Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN;* ³*Life Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN;* ⁴*Graduate School of Genome Science and Technology UT-ORNL, Oak Ridge, TN;* ⁵*Graduate School of Genome Science and Technology UT-ORNL, Oak Ridge, TN*
- ThPB 018 **Characterization and Detection of Unknown Chemical Agents Using Alternating EI/CI Scans;** Kevin J. Hart; Irene F. Robbins; Marcus B. Wise; Wayne H. Griest; *Oak Ridge National Laboratory, Oak Ridge, TN*

- ThPB 019 **Chemical Weapons Screening of Water Samples by Photoionization MS;** Matthew D. Evans; E. Ryan Beckley; Karl A. Hanold; Jack A. Syage; *Syagen Technology, Inc., Tustin, CA*
- ThPB 020 **Detection and Identification of Proteins in Breath using MALDI-TOF and Tandem MS;** Rebekah L. Gundry¹; Chris VonSeggern¹; Jennifer Smoll²; Laura Shanholtz²; Sachin Mani²; Joany Jackman²; Marti Jett³; Robert J Cotter¹; ¹*Johns Hopkins University School of Medicine, Baltimore, MD*; ²*Johns Hopkins University Applied Physics Laboratory, Laurel, MD*; ³*Walter Reed Army Institute of Research, Silver Spring, MD*
- ThPB 021 **HPLC/MS/MS Quantitative Bioanalysis Used in Homeland Security and Anti-Terrorism Efforts: Analysis of Drugs Used to Protect Against Chemical Warfare Agents;** Shane R. Needham¹; Binying Ye¹; J. Richard Smith²; Benedict R. Capacio²; ¹*Alturas Analytics, Inc., Moscow, Idaho*; ²*US Army Medical Research Ins. of Chemical Defense, Aberdeen Proving Ground, MD*
- ThPB 022 **Hybrid Ion Mobility/Cylindrical Ion Trap Mass Spectrometer for *in situ* Detection of Chemical Warfare Agents;** Brian C. Laughlin¹; Paul V. Johnson²; Luther W. Beegle²; Isik Kanik²; R. Graham Cooks¹; ¹*Purdue University, West Lafayette, IN*; ²*NASA Jet Propulsion Laboratory, Pasadena, CA*; ³*Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA*
- ThPB 023 **Selective Ion Chemistry for Chemical Warfare Agent and Explosive Detection in Air in a Miniature Cylindrical Ion Trap Mass Spectrometer;** Leah S. Riter; Eric Handberg; Hao Chen; Brian C. Laughlin; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- ThPB 024 **Biological Monitoring for Chemical Weapons in Human Samples;** John R. Barr; Anne E. Boyer; Hecules Moura; Adrian R. Woolfitt; Carrie L. Young; Kerry E. Preston; W. Jack Driskell; Sharon W. Lemire; Joe V. Wooten; David L. Ashley; *Centers for Disease Control and Prevention, Atlanta, GA*
- ThPB 025 **Performance Characterization and Initial Field Testing of a Portable Tandem Mass Spectrometer;** Garth E. Patterson; John W. Gossenbacher; J. Mitchell Wells; Brent A. Knecht; Brent Rardin; Dennis J. Barket, Jr; *Griffin Analytical Technologies, Inc., West Lafayette, IN*
- ThPB 026 **Potential of CE/MS/MS and HPLC/MS/MS in Analysis of N,N,N-trialkyl-2-chloroethylammonium Derivatives;** Petr Bednár; Petr Barták; Zdenek Stránský; Juraj Ševčík; Karel Lemr; *Palacky University, Olomouc, Czech Republic*
- ThPB 027 **Verification of Chemical Warfare Agent Exposure in Biomedical Samples using Mass Spectrometry;** J. Richard Smith; Benedict R. Capacio; William D. Korte; Mike T. DeLion; *US Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, MD*
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- CHIRAL ANALYSIS BY MS**
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- ThPC 028 **Experimental and Theoretical Studies of Aromatic D and L Amino Acid-Cu(II)-Chiragen Complexes;** Jennifer L. Seymour; Frantisek Turecek; *University of Washington, Seattle, WA*
- ThPC 029 **Low Picogram Separation and Determination of RO3300074 Major Metabolite Isomers in Plasma with a Chiral Column Chromatography Coupled with Mass Spectrometric Detection;** Hua-fen Liu; Cheng-I Mau; Wen Chen Hsu; May Young; Thomas Tarnowski; *Roche, Palo Alto, CA*
- ThPC 030 **Cross Validation of Chiral and Achiral LC/MS/MS Methods for Quantitating AMG099073-00 in Human Plasma;** Krys J. Miller¹; Yong Q. Tang²; Brian D. Beato²; Henry Lai¹; Hesham Ghobarah¹; ¹*Amgen, Thousand Oaks, CA*; ²*Covance, Covance, IN*
- ThPC 031 **An Ultra High-Throughput Chiral Analysis of 3-hydroxy-4-cyanobutyric acid Using LC/MS/MS;** Kelly Chatman; Grace DeSantis; Pei Chen; *Diversa Corporation, San Diego, CA*
- ThPC 032 **Observation of a Possible Enantioselective Formation of Trimeric Complex Ions [CuII(Phe)(Pro)2-H]⁺ using ESI;** Mei-Yi Zhang; Edward Kerns; Oliver McConnell; *Wyeth Research, Princeton, NJ*
- ThPC 033 **Chiral Analysis of Amino Acids Present in Permafrost Samples using the Kinetic Method;** Yanan Peng¹; Lianming Wu¹; Alexandre Tsapin²; Luther Beegle²; Isik Kanik²; R. Graham Cooks¹; ¹*Department of Chemistry, Purdue University, West Lafayette, Indiana*; ²*Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA*; ³*Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA*
- ThPC 034 **FI-ESI-FAIMS-MS Compared to LC-UV for the Determination of Ephedra Alkaloids in Complex Matrices;** Margaret McCooey; Luyi Ding; Graeme G. Gardner; Catharine Fraser; Joseph Lam; Zoltan Mester; *National Research Council of Canada, Ottawa, Canada*
- ThPC 035 **Product Ion Studies of DNA adduct Diastereomers formed by Benzo[ghi]fluoranthene;** Linge Li¹; Hui-Fang Chang²; Bongsup P. Cho²; M. Paul Chiarelli³; ¹*Dept. of Chemistry, Loyola University, Chicago, IL*; ²*Loyola University, Chicago, IL*; ³*University of Rhode Island, Kingston, RI*; ⁴*Dept. of Biomedical Sciences, University of Rhode Island, Kingston, RI*; ⁵*Division of Chemistry, National Center for Toxicological Research, Jefferson, AR*; ⁶*National Center for Toxicological Research, Jefferson, AR*
- ThPC 036 **A Novel Liquid Chromatographic Mass Spectrometry Method for Characterizing Chiral Compounds in Drug Discovery;** Peter J Simms; Cynthia T. Jeffries; Aixia Sun; Thomas Arrhenius; *Chugai Pharma USA LLC, San Diego, CA*
- ThPC 037 **Analysis Using LC/MS of Enantioselective Isoflavone Metabolism to Equol by Rodents and Humans;** Lee D. Williams¹; Nathan C. Twaddle¹; Mona I. Churchwell¹; Clinton D. Allred²; Jodi L. Fultz²; Young H. Ju²; William G. Helferich²; William G. Helferich²; Daniel R. Doerge¹; ¹*National Center for Toxicological Research, Jefferson, AR*; ²*University of Illinois, Urbana, IL*
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- COMBINATORIAL CHEMISTRY**
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- ThPD 038 **Screening Compound Libraries Using Frontal Affinity Chromatography Coupled to Electrospray Ionization Mass Spectrometry;** Yuko Ogata; Erkang Fan; Frantisek Turecek; *University of Washington, Seattle, WA*
- ThPD 039 **Applications of an ESI-TOF Instrument for Accurate Mass Determination in the Drug Discovery Laboratory;** Douglas E. McIntyre¹; Jon D. Williams²; Luke A. D. Miller²; Linda L. Lopez¹; ¹*Agilent Technologies, Santa Clara, CA*; ²*GlaxoSmithKline, Research Triangle Park, NC*
- ThPD 040 **Analysis of a Complex Isomeric Combinatorial Library Mixture by LC/Ion Mobility/Collision-Induced Dissociation/Mass Spectrometry;** Amy E. Hilderbrand; David E. Clemmer; *Indiana University, Bloomington, IN*
- ThPD 041 **An Interactive Physicochemical Property Profiling Software for Early Candidate Analysis in Drug Discovery;** Michael R. Jackson; Michael P. Balogh; Warren B. Potts; *Waters Corporation, Milford, MA*
- ThPD 042 **High-throughput Analysis of Combinatorial Libraries Utilizing API-MS and Dual-Channel UV Detection: Optimization of Analysis of Unpurified Libraries for Scale-up to High-Throughput Preparative HPLC;** Raylyn DeGuzman; Loanne Chung; Jeff Wheatley; Manuel Ventura; Kathleen Tivel; *Pfizer Global Research and Development, San Diego, CA*

- ThPD 043 **Development of a High-Throughput MALDI-MS Analysis for Single Encoded Beads from Combinatorial Libraries;** Andreas H. Franz¹; Crystal Kirmiz¹; Ruiwu Liu²; Aimin Song²; Jinhua Zhang¹; Kit S. Lam²; Carlito B. Lebrilla¹; ¹University of California Davis, Department of Chemistry, Davis, CA; ²University of California Davis Cancer Center, Dept. of Intern. Med., Davis, CA
- ThPD 044 **Drug Compound Molecular Weight Screening using Laser Desorption Mass Spectrometry on Deposited Thin Films Without a Matrix;** Joseph D Cuiffi¹; Daniel J Hayes¹; Stephen J Fonash²; ¹Penn State University, State College, PA; ²NanoHorizons Inc., University Park, PA
- ThPD 045 **Effects of Supercritical Fluid Chromatography Backpressure Control Techniques on On-line Signal Detection by ELSD and Atmospheric Pressure Ionization Mass Spectrometry;** Ole Gron; Leslie Nyguyen; David Dalesando; Kathleen Tivel; Ben Bolanos; Manuel Ventura; *Pfizer Global Research and Development, San Diego, CA*
- ThPD 046 **A Fully Automated Method for Accurate Mass Determination;** Maristella Colombo; Federico Riccardi Sirtori; Giuseppe Razzano; *Pharmacia Italia S.p.A., Nerviano - Milan, Italy*

COMPUTER APPLICATIONS

- ThPE 047 **Principal Component Regression for Quantitative Analysis of Vegetable Oils by Pyrolysis-MAB-TOF Mass-Spectrometry;** Theodor B. Krustev¹; Sylvie Beaudet¹; Pascal Martin¹; Michel J. Bertrand²; ¹Dephy Technologies, Montreal, Canada; ²University of Montreal, Montreal, Canada
- ThPE 048 **Purity Analysis of Library Compounds by High-throughput LC-MS-UV;** Manish Soni¹; Bertrand Monegier²; Mark Broenstrup³; Markus Kohlmann³; Eugene Dank¹; Boris Reshko¹; Samuel Fellous²; ¹Aventis, Bridgewater, New Jersey; ²Aventis, Paris, France; ³Aventis, Frankfurt, Germany
- ThPE 049 **Computer Assisted Qualitative Analysis from Unresolved Chromatographic Peaks;** Toshinobu Hondo; Jun Tamura; Shoji Makino; Tetsuru Watanabe; Hiroo Sugimura; Tomomi Kikui; Daisuke Amino; *JEOL Ltd., Tokyo, Japan*
- ThPE 050 **GEMIOS - a 64-Bit Multi-physics Gas and Electromagnetic Ion Optical Simulator;** Andreas Hieke; *Ciphergen Biosystems, Inc., Fremont, CA*
- ThPE 051 **Centralized Management of Multiple LC/MS Workstations;** Tim Hoffman¹; Byron Kieser¹; Steve Paraskevopoulos¹; Jamie Ingham³; Chris Wheeler²; Steven Wang²; ¹Applied Biosystems/MDS Sciex, Concord, Canada; ²MDS Sciex, Concord, Canada; ³Human Factors MD, Brampton, Canada
- ThPE 052 **Electrospray-MS Charge Deconvolutions without Compromise – an Enhanced Data Reconstruction Algorithm utilising Variable Peak Modelling;** Antony G. Ferrige¹; M. Robert Alecio¹; R. Stuart Ray¹; Keith A. Waddell²; Xioakui K. Zhang³; ¹Positive Probability Ltd, Isleham, England; ²Applied Biosystems, Framingham, MA; ³Genzyme, Framingham, MA
- ThPE 053 **An Innovative Computational Approach to (bio) Polymer Mass Spectrometric Data Simulation and Analysis With the polyxmass Computer Framework;** Filippo Rusconi¹; ¹Laboratoire de biophysique - CNRS UMR 8646 - INSERM U 565, Paris, France; ²LPTC CNRS UMR 5472, Talence, France
- ThPE 054 **Characterization of a QToF as a Time-varying Linear System;** Corey Yanofsky; Kossi Lekpor; Brian Carrillo; Alexander Bell; Daniel Boismenu; Robert Kearney; *McGill University, Montreal, Canada*

- ThPE 055 **ESI Mass Spectrometry: Automatic Selection and Filtering of Peaks;** Niklas Alverup¹; Daniel Dalevi²; Fredrik Levander³; Thorsteinn Rognvaldsson⁴; Jim Samuelsson¹; ¹BioBridge Computing, Lund, Sweden; ²Dept. of Theoretical Physics, Lund University, Lund, Sweden; ³Lund University, Lund, Sweden; ⁴Lund Inst. of Technology, Lund, Sweden; ⁵Dept. of Protein Technology, Lund University, Lund, Sweden; ⁶IDE, Halmstad University, Halmstad, Sweden; ⁷Halmstad University, Halmstad, Sweden
- ThPE 056 **MassFilter: Rule-based Filter of Peptide MS/MS Spectra;** Ming Xu¹; Lewis Y Geer¹; Jeri S. Roth²; Jeffrey A Kowalak²; Dawn M. Maynard²; Sanford P. Markey²; Stephen H. Bryant¹; ¹National Center for Biotechnology Information/NLM/NIH, Bethesda, MD; ²National Institute of Mental Health, Bethesda, MD
- ThPE 057 **Numerical Simulations of Electron Capture by Cations in Paul Traps;** Igor A Ivonin; Roman A Zubarev; *Laboratory for Biological & Medical Mass Spectrometry, Angstrom Lab, Uppsala, Box 534, SE-751 21, Sweden*
- ThPE 058 **Improved Peak Detection for MALDI TOF/TOF Fragment Spectra;** Marc Gentzel; Matthias Wilm; *EMBL Heidelberg, Heidelberg, Germany*
- ThPE 059 **The Determination of Adduction 'Hot Spots' via Mass Spectrometry and Molecular Modeling;** Terrence Black; Mary Jo Ondrechen; Paul Vouros; *Northeastern University, Boston, MA*
- ThPE 060 **Automated Peak Picking and Integration Algorithm for Mass Spectral Data;** Anthony J. Kearsley; William E. Wallace; Javier Bernal; Charlie M. Guttman; *National Institute of Standards and Technology, Gaithersburg, MD*
- ThPE 061 **Automated Identification of Fragments from Crosslinked Peptides;** Kurt W Wulser; Catherine L Swaim; Jean B Smith; David L Smith; *University of Nebraska, Lincoln, NE*
- ThPE 062 **A Computer Program Combining De Novo Sequencing of High Energy CID Mass Spectra of Peptides with MS BLAST Searching for Protein Identification;** Xunming Chen¹; Peter Juhasz¹; Ioannis A. Papayannopoulos¹; Kenneth C. Parker¹; Moira E. Regelson²; Darryl Spencer¹; Xiangping Zhu¹; ¹Applied Biosystems, Framingham, MA; ²Paracel, Inc., Pasadena, CA
- ThPE 063 **SearchXLinks - A Program to Identify Cross-Linked and Modified Peptides from Mass Spectra;** Stephan Wefing; Volker Schnaible; Daniel Hoffmann; *Center of Advanced European Studies and Research (caesar), Bonn, Germany*
- ThPE 064 **A New Algorithm Minimizing Chemical Noise in LC-MS: Matched Filtration with Experimental Noise Determination (MEND);** Victor P. Andreev; Tomas Rejtar; Hsuan-shen Chen; Eugene V. Moscovets; Alex R. Ivanov; Barry L. Karger; *Barnett Institute and Department of Chemistry, Northeastern University, Boston, MA*

DRUG METABOLISM: HIGH THROUGHPUT

- ThPF1 065 **Automated Generation and Analysis of Microsomal Stability Data. A Proof of Concept Study;** Ohenewaa Larbi; Tami R. Meagher; Christine M. Grinnell; Dean Hickman; Andreas Harsch; *Abbott Bioresearch Center, Worcester, MA*
- ThPF1 066 **Development of an Open-Access Semi-prep/ μ -Mass Autopurification System for Metabolite Isolation and Identification;** Larry M. Mallis; Ani B. Sarkahian; Christopher J. Petucci; Lisa Nogle; Kelly A. Keating; *Wyeth Research, Collegeville, PA*
- ThPF1 067 **Automated Identification of Phase I and II Metabolites by Accurate Mass LC/MS, LC/MSMS, and Accurate Mass Precursor Ion Discovery LC/MS/MS;** Duxi

- Zhang¹; Donglu Zhang¹; Theodore Chando¹; P. Jane Gale¹; Andrew Baker²; ¹*Bristol-Myers Squibb, Princeton, NJ*; ²*Waters, Beverly, MA*
- ThPF1 068 **Detection and Characterization of Pharmaceutical Metabolites, Degradants and Impurities by the Application of MS/MS Software Algorithms;** Jonathan L. Josephs¹; Mark Sanders²; Petia Shipkova¹; Robert A Langish¹; Jeff Whitney³; ¹*Bristol-Myers Squibb, Hopewell, NJ*; ²*Bristol-Myers Squibb, Princeton, NJ*; ³*Novatia, Plainsboro, NJ*
- ThPF1 069 **Application of Automatic MS/MS Development Software (Automaton) in Drug Discovery – a Real Time Saver;** Yung-Hsiang Chen; Eliza N. Fung; Kuo-Chi Cheng; Yau Yi Lau; *Schering-Plough Research Institute, Kenilworth, NJ*
- ThPF1 070 **Enhancing Effectiveness For LC/MS Pharmaceutical Laboratory Analysis Through Rational Process Mapping;** J. Fred Banks; Erik Soderstrom; David Tess; Maurice Bourgeois; Honggang Bi; Arkady Gusev; *Pfizer, Inc., Groton, CT*
- ThPF1 071 **Using Microsoft Excel and Visual Basic for Applications (VBA) as a Cost-Effective Solution for Processing, Validating and Reviewing LC/MS/MS Results in a High-Throughput Screening Environment;** K. Eric Milgram¹; Kelly Jenkins¹; Deborah Yates²; James Harr¹; ¹*Pfizer Global R&D - PDM, La Jolla, CA*; ²*Pfizer Global R&D - Research Informatics, La Jolla, CA*
- ThPF1 072 **Implementing New Technologies in Drug Discovery Bioanalytical Support: Aria OS Parallel LC/MS System, Automated LC/MS Method Development and High Resolution Mass Spectrometry;** Jian Wang; Georgia Cornelius; Bogdan G Slecza; Christian Caporuscio; David Wang-Iverson; Adrienne Tymiak; *Bristol-Myers Squibb, Princeton, NJ*
- ThPF1 073 **An Automated High Quality High Throughput LC/MS Process for the Analysis of Metabolic Stability Samples in Support of Drug Discovery;** Dieter Drexler¹; Kurt Edinger¹; Serhiy Hnatyshyn²; Jonathan L. Josephs³; Robert Langish³; Colleen McNaney¹; Mark Sanders²; ¹*Bristol-Myers Squibb, Wallingford, CT*; ²*Bristol-Myers Squibb, Princeton, NJ*; ³*Bristol-Myers Squibb, Hopewell, NJ*
- ThPF1 074 **High Throughput Sample Analysis Using Multiple Column LC/MS/MS and Automated Method Optimization Techniques;** Sidonia Tita; Min Yang; Leanne Beaton; Lyle Burton; Gary A. Impey; *Applied Biosystems/MDS Sciex, Concord, Canada*
- ThPF1 075 **Optimal Sensitivity and Increased Throughput Using a Dual ES/APCI Ionization Source and Turbulent Fluid Chromatography with LC/MS/MS;** Doina Caraiman¹; Tom Biesenthal¹; Nadia Pace¹; Shamim Haider¹; Takeo Sakuma¹; Lars Ynddal²; ¹*Applied Biosystems/MDS Sciex, Concord, Canada*; ²*Novo Nordisk A/S, Maaloev, Denmark*
- ThPF1 076 **The Development of Sample Reduction and Automation Methods to Increase LC-MS Throughput for the Caco-2 Permeability Assay;** Christine K Taylor¹; Heather W Mathieu¹; Tracy Ricker¹; Robert Polzer²; John Soglia¹; Mark J Cole¹; ¹*Pfizer, Inc., Groton, CT*; ²*Pfizer, Inc., Ann Arbor, MI*
- ThPF1 077 **High-Throughput In Vitro Metabolic Stability Screening Using Automated LC-MS/MS;** William R. Proctor; David Neul; Eric Milgram; Caroline Lee; Mark West; Kelly Jenkins; *Pfizer, Inc., La Jolla, CA*
- ThPF1 078 **Streamlined Approaches to Metabolic Stability Assessment and Metabolite Profiling in Drug Discovery;** Rongda Xu¹; Eva Duchoslav²; Anna Aparicio¹; Elliott B. Jones³; Daniel B. Kassel¹; ¹*Syrrx, Inc., San Diego, CA*; ²*MDS Sciex, Concord, ON, Canada*; ³*Applied Biosystems, Foster City, CA*
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- DRUG METABOLISM: ION SUPPRESSION**
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- ThPF2 079 **Characterisation of Serum Albumin and lysoPCs as Major Contributors to Plasma Sample Matrix Effects on Electrospray Ionisation Efficiency;** Martin Ahnoff; Angelika Wurzer; Bosse Lindmark; Rainer Jussila; *AstraZeneca R&D, Mölndal, Sweden*
- ThPF2 080 **Investigation of Ion-suppression from a Formulation Agent in Quantitative LC-MS/MS Bioanalysis: a Case Study on Tween 80TM;** Patrice J Larger; Massimo Breda; Chris A James; Heather J Hughes; Rosella Pisano; *Pharmacia, Nerviano, Italy*
- ThPF2 081 **LC/MS/MS of Nucleotide Compounds in Biological Matrix: Ion Response, Matrix Effect and Solution Chemistry;** Shaolian Zhou; Sara Esser; Wei Zhou; Naidong Weng; Xiangyu Jiang; *Covance Laboratories, Madison, WI*
- ThPF2 082 **Ionization Enhancement in APCI and Suppression in ESI Between Target Drugs and Stable Isotope-Labeled Internal Standards in Quantitative LC/MS and LC/MS/MS;** Hairui Liang; Rodger L. Foltz; Min Meng; Pat Bennett; *Tandem Labs, A Division of NWT Inc., Salt Lake City, UT*
- ThPF2 083 **Irregular Vehicle-related Ion Suppression in Pharmacokinetic Studies;** Andrew Volosov; Lyn Libertine; Jean-Marie Nicolas; *UCB Research, Cambridge, MA*
- ThPF2 084 **Enhanced Assay Sensitivity Resulting from Plasma Matrix Effects for Analysis of Compound A in Human Plasma by LC/MS/MS;** Maria Vindigni; Jie Zhang; Erik Walter; Gerry Choc; *Aventis Pharmaceuticals, Bridgewater, NJ*
- ThPF2 085 **Leveraging High Resolution LC/MS Data to Identify Drug Metabolite Ions in Samples of Human Excreta;** Haiying Zhang; Donglu Zhang; Kenneth Ray; Brent Kleintop; Stephen Gozo; James Mitroka; *Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ*
- ThPF2 086 **Quantitative Aspects of Adduct Formation of Paclitaxel: Effect of Ionization Conditions;** Kjell A. Mortier¹; Willy E. Lambert¹; Jan F. Van Bocxlaer²; Dieter L. Deforce³; Carlos H. Van Peteghem¹; ¹*Laboratory of Toxicology, Ghent University, Ghent, Belgium*; ²*Laboratory of Medical Biochemistry and Clinical Analysis, Ghent, Belgium*; ³*Laboratory for Pharmaceutical Biotechnology, Ghent, Belgium*
- ThPF2 087 **Metabolite Discovery and Development;** J. Jill Hayos¹; Julie C. Flynn¹; Krys J. Miller¹; ¹*Amgen Inc., Thousand Oaks, CA*; ²*Advion Biosciences, Ithica, NY*
- ThPF2 088 **The Development of a Novel “Soft” Analyte-Stabilizing Method for the Determination of CPT-11 in Plasma by LC-MS/MS for Combo PK Studies on Drug-Drug Interactions;** Chaoran Ron Huang; Susan Chen; Jing-Tao Wu; *Millennium Pharmaceuticals, Inc., Cambridge, MA*
- ThPF2 089 **Pharmacokinetics in-vivo Analysis of IV Samples using LC/MS/MS: Deciphering Problem to be Matrix-Related or Method-Related;** Frances Lai¹; Savita Ubhayakar¹; Douglas Leipold¹; S. Cyrus Khojasteh¹; Shane Needham²; Sara Kenkare-Mitra¹; ¹*Genentech Inc., South San Francisco, CA*; ²*Alturas Analytics, Inc., Moscow, ID*
- ThPF2 090 **Positive Electrospray LC/MS using a Basic pH Gradient: a Way to Combine Selectivity in HPLC and Sensitivity in MS for a Large Variety of Drugs;** Claude Delatour; Laurent Leclercq; *Lilly Development Center, Mont-Saint-Guibert, Belgium*
- ThPF2 091 **Mass Spectral Signal Suppression by Formulation Excipients: Implication in Pharmacokinetic Quantitation;** Walter Z. Yu; Liang Liu; Chris Havel; Yun Ling; Renee Coleman; Robert Draper; Doris Graupe;

Karen Thomsen; Lisa Bashnick; Jodi Fausnaugh-Pollitt; Joyce Mordenti; *Celera, South San Francisco, CA*

DRUG METABOLISM: QUANTITATION

- ThPF3 092 **Direct Analysis of ¹⁴C by Accelerator Mass Spectrometry;** Paul L. Skipper; Rosa G. Liberman; Man Ho Choi; John S. Wishnok; Steven R. Tannenbaum; *Massachusetts Institute of Technology, Cambridge, MA*
- ThPF3 093 **Advantages of Ultrafast LC-MS-MS Using Silica Column - Better Retention, Faster Analysis, and Direct Injection of SPE Eluent for Analysis of Isoniazid in Dog Plasma;** Austin C. Li; Wilson Z. Shou; Heiko Junga; Frederic W. Thalacker; Naidong Weng; *Covance Laboratories, Inc., Madison, WI*
- ThPF3 094 **Determination of Pizotifen in Human Plasma by High Throughput On-Line LC/MS;** Andrew L Pugh; Babak Ziaie; John Simpson; Orthodoxy Fragiskatos; *MDS Pharma Services, Montreal, Canada*
- ThPF3 095 **Simultaneous Determination of Dextromethorphan, Dextrorphan, and Guaifenesin in Human Plasma: Method Conditions and Long-Term Assay Performance;** Thomas H. Eichhold; David L. McCauley-Myers; Deepa A. Khambe; Lisa M. Hall; Steven H. Hoke; *The Procter & Gamble Company, Mason, OH*
- ThPF3 096 **Simultaneous Quantitation of a Small Molecule Integrin Antagonist and its Metabolite in Preclinical Pharmacokinetic Studies;** Bilin Chou; Hank La; Matthew J. Baumgardner; David Jackson; S. Cyrus Khojasteh; Sara Kenkare-Mitra; *Genentech, Inc., S. San Francisco, CA*
- ThPF3 097 **Validation of an Automated 96-Well Plate LC-MS/MS Method for the Quantitation of Compound X in Monkey, Rat, Mouse, and Rabbit Plasma;** Jerry P. Roach; Kenneth D.W. Roth; Roger N. Hayes; ¹*Schering-Plough Research Institute, Lafayette, NJ*
- ThPF3 098 **Application of a High Throughput LC/MS/MS Method for the Determination of Pseudoephedrine in Human Plasma;** Hai ping Wang; Weiyi Zheng; Patrick J. Rudewicz; *Schering-Plough Research Institute, Kenilworth, NJ*
- ThPF3 099 **Automated on-line Turbulent Flow LC/MS/MS method for the Determination of Dapsone, N-Acetyl Dapsone and Hydroxyamino Dapsone in Human Urine;** Daniel Villeneuve¹; Garnet McRae¹; Michel Simard¹; Orthodoxy Fragiskatos¹; Manju Gupta¹; David W. Osborne²; Dennis M. Wilson²; ¹*MDS Pharma Services, Montreal, Quebec*; ²*Atrix Laboratories, Fort Collins, CO*
- ThPF3 100 **Determination of Arachidonic Acid Metabolites by High Performance Liquid Chromatography / Electrospray Ionization Mass Spectrometry;** Toshie Takahashi¹; Yoshihiro Kita¹; Naonori Uozumi¹; Takao Shimizu¹; ¹*Dep. Biochem. & Mol. Biolo., Fac. Med., Graduate School of Medicine, U, Tokyo, Japan*; ²*Dep. Biochem. & Mol. Biol., Fac. Med., Grad. Sch. Med., Univ. Tokyo, Tokyo, Japan*
- ThPF3 101 **Comparison of a Sub-Minute Gradient High Flow Rate vs. a Standard Four Minute Gradient Low Flow Rate LCMSMS Quantitation;** Birendra Pitamah; Louise Basa; Elliott Jones; Alicia Du; *Appliedbiosystems, Foster City, CA*
- ThPF3 102 **Post-Column Solvent Addition to Enhance Electrospray Ionization for Normal-Phase LC/MS/MS;** Elizabeth M Verburg; Emily G Farrow; Janice R Thornton-Manning; Kenneth J Ruterbories; *Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN*
- ThPF3 103 **LC-MS Based Assay for the Detection of Bone Resorption Biomarkers;** Sean A. Holland; Kevin P. Bateman; Nathalie Chauvet; M. David Percival; Carmaj

Seto; *Merck Frosst Canada & Company, Kirkland, Quebec, Canada*

- ThPF3 104 **High Sensitive Method for Quantitative Determination of PMEA in Human Plasma by Liquid Chromatography with Tandem Mass Spectrometry;** Yifei Liu; Guifen Xu; Christin Xu; Liset Garcia; Chin-Chung Lin; Li-Tain Yeh; *Ribapharm Inc., Costa Mesa, CA*
- ThPF3 105 **Fast LC-MS/MS Bioanalysis of Buprenorphine and Norbuprenorphine in Human Urine Using Monolithic Chromatography;** Wei Sun; Karl Linderholm; Christ J. Sartwell; Nachi Ridha; Paul Brown; Alan Dzerk; Vincent Andaloro; Jean W. Lee; Patrick Lin; *MDS Pharma Services, Lincoln, NE*
- ThPF3 106 **Confirmatory Analysis to Enhance Selectivity in the Quantitation of Pharmaceutical Compounds in Plasma by Quadrupole Linear Ion Trap LC/MS/MS;** Gerard Hopfgartner¹; Chantal Grivet¹; Luc A Leuthold¹; ¹*University of Geneva, Geneva, Switzerland*; ²*University of Geneva, School of Pharmacy, Geneva, Switzerland*
- ThPF3 107 **Determination of Drug Molecules in Plasma using HPLC-APPI/MS/MS;** Kara Merkle²; Yunsheng Hsieh¹; ¹*Schering-Plough Research Institute, Kenilworth, NJ*; ²*Applied Biosystems, Foster City, CA*
- ThPF3 108 **Determination of Ketamine and Metabolites in Urine by using Liquid Chromatography-Mass Spectrometry;** Chung-Yu Chen; Maw-Rong Lee; *National Chung-Hsing University, Taichung, Taiwan R.O.C.*
- ThPF3 109 **Method Development and Validation for Quantitative Determination of Methadone Enantiomers in Human Plasma by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS);** Hairui Liang; Min Meng; Pat Bennett; Rodger L. Foltz; *Tandem Labs, A Division of NWT Inc., Salt Lake City, UT*
- ThPF3 110 **On-Line Sample Cleanup and Narrow-Bore HPLC Combined with Q-ToF MS for Ultra-Sensitive Identification of Polar Metabolites;** Timothy R. Baker¹; David J. Foltz¹; Pam Riley¹; John R. Entwistle¹; David C. Ackley¹; Amy L. Walter¹; Jose Castro-Perez²; ¹*P&G Pharmaceuticals, Mason, Ohio*; ²*Waters MS Technologies, Manchester, UK*
- ThPF3 111 **Automate & Sensitive LC-ESI/MS/MS Method for Determination of Mesalamine (5-Aminosalicylic Acid) and its Metabolite (5-N-Acetylaminosalicylic Acid) in Human Plasma;** Marius Foltea; John Simpson; orthodoxy Fragiskatos; Brigitte Comeau; *MDS Pharma Services, Montreal, Canada*

ENVIRONMENTAL ANALYSIS

- ThPG 112 **Analytical Method for the Identification of Chemical Warfare Agents in Soils Contaminated with Chemical/Biological Warfare Agents: LC-ESI-MS Analysis of Autoclaved Aqueous Extracts;** Paul A. D'Agostino; Claude L. Chenier; James R. Hancock; *DRDC Suffield, Medicine Hat, Canada*
- ThPG 113 **Determination of Natural Gas Processing Chemical Uptake in Cattails (*Typha latifolia*) Utilizing Multiple Reaction Monitoring ESI/MS with Ion Exchange Chromatography;** Kerry M. Peru¹; John V. Headley¹; William J. Doucette²; ¹*National Water Research Institute, Saskatoon, Canada*; ²*Utah State University, Logan, UT*
- ThPG 114 **A Fully Automated Protocol for Simultaneously Detection of 52 Carbamates: Comparison of LC/MS and LC/MS/MS;** Kate Yu; Jim Krol; Michael Balogh; *Waters Corporation, Milford, MA*
- ThPG 115 **A Multiresidue LC-MS/MS Screening Method for the Detection of 100 Pesticides on the TSQ Quantum Discovery;** Dipankar Ghosh¹; Mark Churchill¹; Wilhelm Gebhardt²; Eric Genin³; Janet Klein⁴; Lutz Alder⁴;

- ¹ThermoFinnigan, Hemel Hempstead, UK;
²ThermoFinnigan, Eggesbach, Germany;
³ThermoFinnigan, Paris, France; ⁴Federal Institute for Health Protection of Consumers, Berlin, Germany
- ThPG 116 **Isomeric Differentiation of Polyaromatic Hydrocarbons (PAH) : Electrospray Ionization and In-Source Collision-induced Dissociation of the Argentinated Complexes [Ag + n(PAH)]⁺ (n=1 and 2); Chun Wai Tsang; Kwan Ming Ng; Hong Kong Polytechnic University, Hong Kong, China**
- ThPG 117 **APPI and APCI for Analysis of Quinones as Signature Biomarker in Environmental Analysis; Roland Geyer¹; Margaret Gan¹; David C. White¹; Gary J. Van Berkel²; ¹Center for Biomarker Analysis, University of Tennessee, Knoxville, TN; ²Chemical and Analytical Sciences Division, Oak Ridge National Lab, Oak Ridge, TN; ³Centre for Environmental Research Leipzig-Halle, Halle(Saale), Germany**
- ThPG 118 **LC/ESI/MS-MS Analysis of Water Borne Organophosphates, Phenyl Ureas and Carbamates Pesticides; Paul Yang¹; Chunyan Hao¹; Ernie Chen¹; Mauro Aiello²; ¹Laboratory Services Branch, Ministry of the Environment, Etobicoke, Ontario, Canada; ²Applied Biosystems/MDS Sciex, Concord, Ontario, Canada**
- ThPG 119 **Determination of Biotransformation Products of Fluorotelomer 8-2 Telomer B Alcohol in Environmental Matrices by Liquid Chromatography – Tandem Mass Spectrometry (LC/MS/MS); Vladimir Capka¹; Richard F. Rossi¹; Ning Wang²; Patrick W. Folsom²; ¹DuPont Haskell Laboratory for Health and Environmental Sciences, Newark, DE; ²DuPont Central Research and Development, Newark, DE; ³DuPont Corporate Center for Environmental Research, Newark, DE**
- ThPG 120 **Study of Rhenium Sulfur Complexes in Various Reaction Systems by Negative Ion Electrospray Ionization Mass Spectrometry; Qinhua RU; Doug Berning; Norman Schroeder; Jose A Olivares; Los Alamos National Laboratory, Los Alamos, NM**
- ThPG 121 **High Performance Liquid Chromatography Tandem Mass Spectrometry Method for Quantification of 19 Biomarkers of Commonly Used Non-Persistent Pesticides; Anders O Olsson; Samuel E Baker; Johnny V Nguyen; Lovisa CS Romanoff; Simeon Udunka; Robert D Walker; Dana B Barr; National Center for Environmental Health, Centers for Disease Control, Atlanta, GA**
- ThPG 122 **Quantitation of Pesticide Residues by Gas Chromatography Time of Flight Mass Spectrometry; David Wood; Victor C. Parr; Scientific Analysis Instruments, Manchester, England**
- ThPG 123 **GCxGC/TOF-MS Analysis of Polychlorinated Biphenyl (PCB) Congeners of Great Lakes Water Samples; Stephanie Lemanik¹; Chunyan Hao¹; Olivier Niquette²; Christy Hartley¹; Paul Yang¹; Robert Wholeb³; ¹Laboratory Services Branch, Ministry of the Environment, Etobicoke, Ontario, Canada; ²LECO Corporation, St. Joseph, MI; ³VICI Gig Harbor Group, Gig Harbor, WA**
- ThPG 124 **Comparison of Series 5 (5% Phenyl Methyl Silicone) GC Column Performances from Variety Manufacturers For Separation Of Chlorinated Dibenzo-P-Dioxins and Dibenzofurans by HRMS. Are They Really the Same? Focus on I-TEF Specificity; Vyacheslav N. Fishman; Gregory D. Martin; Lester L. Lamparski; Analytical Sciences Laboratory The Dow Chemical Company, Midland, MI**
- ThPG 125 **GC-MS Study And Mapping of the Contamination of Sediments in the North Caspian Sea; Olga V Polyakova; Marina N Repina; Nikolai S Sokolov; Albert T Lebedev; Moscow State University, Moscow, Russia**
- ThPG 126 **Evaluation of a Carborane Based Capillary Column for the Analysis of Octamethylcyclotetrasiloxane (D4); Sean M. Backus; Mehran Alaei; Steve Cagampan; National Water Research Institute, Environment Canada, Burlington, Canada**
- ThPG 127 **Degradation of Chlorinated Solvents by Enzyme Mediated Electrochemical Reactions; Emek Blair; Patrick Farmer; John Greaves; University of California - Irvine, Irvine, CA**
- ThPG 128 **Application of LC-ESI-MS/MS for the Determination of Ultratrace of Hexamethylene Diisocyanate (HDI); Sebastien Gagne¹; Jacques Lesage¹; Claude Ostiguy¹; Huu Van Tra²; ¹IRSST, Montreal, Quebec, Canada; ²UQAM, Montreal, Quebec, Canada**
- ThPG 129 **Mass Spectrometric Monitoring of the Microbial Degradation of Polychlorobiphenyls (PCBs); Nathalie Agar¹; Justin Powlowski¹; Catherine Mulligan¹; Robert Masse²; Bernard F. Gibbs²; ¹MDS Pharma Seervices, Montreal, Canada; ²Concordia University, Montreal, Canada; ³MDS Pharma Services, Montreal, Canada**
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- ThPH 130 **LC-MS/MS Screening, Quantification and Confirmation of Anabolic Steroids in Equine Athletes; Fuyu Guan¹; Cornelius Uboh²; Lawrence Soma¹; Donna Teleis¹; Yi Luo¹; ¹University of Pennsylvania School of Veterinary Medicine, Kennett Square, PA; ²PA Equine Toxicology and Research Laboratory, West Chester, PA**
- ThPH 131 **Forensic Analysis of Culture Medium on Bacillus Spore Samples; Jeffrey R. Whiteaker¹; Catherine Fenselau¹; Dean D. Fetterolf²; David Wilson²; ¹University of Maryland, College Park, Maryland; ²Federal Bureau of Investigation, Quantico, VA**
- ThPH 132 **Multiplexed and Quantitative Genotyping of Mitochondrial Single Nucleotide Polymorphisms using Liquid Chromatography-Electrospray Ionization Mass Spectrometry; Christian Huber¹; Herbert Oberacher¹; Walther Parson²; ¹Instrumental Analysis and Bioanalysis, Saarland University, Saarbrücken, Germany; ²Institute of Legal Medicine, University of Innsbruck, Innsbruck, Austria**
- ThPH 133 **Sensitive LC-MS/MS Method for Analysis of Beclomethasone Dipropionate and its Metabolites in Equine Plasma and Urine; Yi Luo¹; Fuyu Guan¹; Cornelius Uboh²; Lawrence Soma¹; Donna Teleis¹; ¹University of Pennsylvania School of Veterinary Medicine, Kennett Square, PA; ²PA Equine Toxicology and Research Laboratory, West Chester, PA**
- ThPH 134 **Simultaneous Qualitative and Quantitative LC/MS/MS Analysis of Opiates in Biological Matrices; Dale Somers¹; Louissette Basa²; Elliott Jones²; ¹Bio-Tox Laboratories, Riverside, CA; ²Applied Biosystems, Foster City, CA**
- ThPH 135 **Transfer of Existing Forensic LC/MS and LC/MS-MS Mass Spectral Libraries to Linear Ion Trap Instrumentation; Andre Schreiber¹; Merja Gergov²; Claudia A. Müller³; Wolfgang Weinmann³; ¹Applied Biosystems, Darmstadt, Germany; ²University of Helsinki, Helsinki, Finland; ³University of Freiburg, Freiburg, Germany; ⁴Institute for Legal Medicine, Albert-Ludwigs-University, Freiburg, Germany**
- ThPH 136 **SNP Genotyping via Quadrupole Mass Spectrometry; Keith L. Levert¹; Brian A. Eckenrode²; Mark Wilson²; Bruce Budowle²; ¹Oak Ridge Institute for Science and Education, Oak Ridge, TN; ²Federal Bureau of Investigation, Quantico, VA**
- ThPH 137 **Mass Spectrometric Characterization of Glues; Burnaby Munson¹; Michael Lassman²; Jablonski Michele¹;**

- ¹University of Delaware, Newark, DE; ²Naval Research Laboratory, Washington, DC
- ThPH 138 **MS Forensics of Fuel-Air Explosives Collected by Radio Controlled (RC) Helicopter;** Ronny C. Robbins¹; William M. Lagna¹; Geoffrey J. Roelant¹; ¹U.S. Army, ECBC, Aberdeen Proving Ground, Gunpowder, MD; ²U.S. Army ECBC Aberdeen Proving Grounds, Gunpowder, MD
- ThPH 139 **Method Development and Evaluation of Portable Ion Mobility Spectrometers;** Christian J. Whitchurch²; Valerie J. Cavett¹; Kelly H. Mount¹; Mark L. Miller¹; Brian A. Eckenrode¹; ¹Federal Bureau of Investigation, Quantico, VA; ²Oak Ridge Institute for Science and Education, Oak Ridge, TN
- ThPH 140 **Application of the Electron Monochromator to the Analysis of Explosives, Organic acids, and Organophosphonates;** Robert B. Cody¹; James A. Laramée²; Samuel P. Hernandez³; ¹JEOL USA, Inc., Peabody, MA; ²EAI Corporation/Edgewood Chemical & Biological Center, Edgewood, MD; ³Univ. of Puerto Rico, Mayaguez, Mayaguez, PR
- ThPH 141 **Determining Bear Tranquilizers in Human Hair Using a Q-TOF;** William E. Vickery; Kevin D. Ballard; Francis X. Diamond; Rosemarie D. Citrino; Robert A. Middleberg; National Medical Services, Willow Grove, PA
- ThPH 142 **Quantification and Confirmation of Reserpine in Equine Plasma by LC/MS/MS;** Cornelius E. Uboh¹; Yi Luo²; Lawrence R. Soma²; Jeffrey A. Rudy¹; Fuyuan Guan²; James M. Enright¹; Ed Birks¹; Donna Teleis²; Deborah Tsang²; ¹PA Equine Tox & Research, West Chester, PA; ²University of Pennsylvania Sch Vet Medicine, Kennett Square, PA
- ThPH 143 **Structure Elucidation of a Novel Capsaicin Derivative via MSⁿ;** Valerie Cavett¹; James Krutak¹; Maryam Hojjat²; Brian A. Eckenrode¹; ¹FBI Academy, Quantico, VA; ²Georgia State University, Atlanta, GA
- ThPH 144 **Development of an Online Gradient Extraction Technique for Determining Relative Age of Ballpoint Pen Inks;** Alisha C Mitchell¹; Margaret Couch¹; Antonio Cantu²; Richard A. Yost¹; ¹University of Florida, Gainesville, Florida; ²United States Secret Service, Washington, DC
- ThPH 145 **Quaternary Ammonium Neuromuscular Blocking Agents In Forensics Using a Q-TOF; the Importance of Degradation Products and Metabolites;** Kevin D. Ballard; William E. Vickery; Loan T. Nguyen; Francis X. Diamond; Fredric Rieders; National Medical Services, Willow Grove, PA
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- ThPI 146 **Protein Epitope Mapping by a Combination of Isotopic Labeling and NanoESI-LC/MS;** David L Wong; Katherine Collier; Don Naki; Grant Ganshaw; Dave Estell; Hugh C McDonald; Genencor International, Inc., Palo Alto, CA
- ThPI 147 **Novel Docosatrienes and 17S-Resolvins Generated from Docosaheptaenoic acid in Brain and Blood Cells: Lipidomics of Autacoids in Anti-Inflammation Using LC-UV-MS-MS;** Song Hong; Karsten Gronert; Pallavi R. Devchand; Rose-Laure Moussignac; Charles N. Serhan; CET&RI, Brigham & Women's Hospital, Harvard Med. Sch., Boston, MA
- ThPI 148 **A Novel Approach to Characterization of Trastuzumab -DM1 Conjugates using LC-MS for Confirmation of Statistically Calculated Distributions;** Emily E Mann; Fred Jacobson; Chien Lee; Miryam Kadkhodayan; Genentech, Inc., South San Francisco, CA
- ThPI 149 **Study of the Binding of MHC Class II Molecules and Antigenic Peptide Complex by H/D Exchange and HPLC MS/MS;** Sandra Kerfoot; Ilan Vidavsky; Don Remple; Emil Unanue; Michael Gross; Washington University in Saint Louis, Saint Louis, MO
- ThPI 150 **The Use of MALDI-Tof Mass Spectrometry to Monitor Patient-Specific Vaccine Proteins for Phase I Clinical Trial Release and Stability Protocols;** Kathleen M. Hanley; Tracey L. Mahon; Tiffany Bliss; Fakhrieh Vojdani; Stephan Garger; Earl L. White; Large Scale Biology, Corporation, Vacaville, California
- ThPI 151 **Study of the Binding of MHC Class I Molecules and Antigenic Peptide Complex by H/D Exchange and HPLC MS/MS;** Zhaohui Du¹; Don Rempel¹; Daved Fremont²; Mike Miley²; Michael Gross¹; ¹Department of Chemistry, Washington University, St. Louis, MO; ²Department of Pathology, Washington University, St. Louis, MO
- ThPI 152 **SIMP-Derived Peptides are Potential Targets for Human Cancer Immunotherapy;** Luce Boulanger¹; Kevin McBride¹; Fannie Larochelle¹; Claude Perreault¹; Robert Masse²; Bernard Gibbs²; ¹Compatigene, Montreal, Canada; ²MDS Pharma Services, Montreal, Canada
- ThPI 153 **Characterization of Posttranslational modifications of the Endoplasmic Reticulum Chaperone, gp96 with Mass Spectrometry;** Nigel P Ewing; Melissa L DeFilippo; Kerrie A Morin; Zhifang S Jiang; Gregg Chenail; David Liu; Chuanliang Liu; James Zabrecky; Antigenics, Inc, Woburn, MA
- ThPI 154 **Identification of Tumor Epitopes Presented by a Non-Tumorigenic Keratinocyte Cell Line using MALDI/ESI mass spectrometry;** Gerold Schwarz¹; Winfried Kammer¹; Martin Priemer¹; Daniela Dressel²; Alfred Nordheim¹; Hubert Kalbacher²; ¹Institute of Cell Biology/University of Tuebingen, Tuebingen, Germany; ²Institute of Biochemistry/University of Tuebingen, Tuebingen, Germany
- ThPI 155 **Sulfated Metabolites in M. tuberculosis: Investigating the Role of Sulfation in Virulence;** Michael D. Leavell¹; Joseph D. Mougous²; Ryan H. Senaratne³; Spencer J. Williams¹; Christopher J. Petzold¹; Lee Riley³; Carolyn R. Bertozzi¹; Julie A. Leary¹; ¹Univ. of California, Dept. of Chemistry, Berkeley, CA; ²Univ. of California, Dept. of Molecular and Cell Biology, Berkeley, CA; ³Univ. of California, School of Public Health, Berkeley, CA
- ThPI 156 **Using NanoHPLC and Mass Spectrometry to Identify Francisella Tularensis Peptides Isolated From Infected Host Cells;** Wen Ding¹; Wayne Conlan¹; Anders Sjosted²; John Kelly¹; ¹Institute for Biological Sciences, Ottawa, Canada; ²University of Umea, Umea, Sweden
- ThPI 157 **Development of a Nano Flow LC/MS Method for Identification of MHC Class I restricted Viral Peptides;** Charlotte C. Yu Ip; Sherilyn S. Campie; Paul M. Keller; Alan Shaw; Merck Research Laboratories, West Point, PA
- ThPI 158 **HLA-DM Edits for Better MHC-Binding Peptides – A Two-dimensional LC-MS Analysis;** James J Walters¹; Shirley Petzold²; Ilan Vidavsky¹; Emil R Unanue²; Michael L Gross¹; ¹Center for Biomedical and Biorganic MS, Washington University, St. Louis, MO; ²Department of Pathology and Immunology, Wash. Univ. School of Medicine, St. Louis, MO
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- ThPJ1 159 **Selective Ionization of Molecular Hydrogen and Deuterium Hydride from Gaseous Mixture;** Sylvain R. Letarte¹; Marcel Baril¹; Réal Paquin²; ¹Université Laval, Québec, Canada; ²Ministère de l'Agriculture, des Pêcheries et de l'Alimentation Québec, Québec, Canada
- ThPJ1 160 **Atmospheric Sampling Glow Discharge Ionization / Ion Trap Mass Spectrometry for Direct Monitoring of**

- VOCs in Air - Simulation and Experimentation;** William E. Funk; Peter T. Palmer; *San Francisco State University, San Francisco, CA*
- ThPJ1 161 **Direct and Rapid Analysis of Softwood Bark Oil Fractions by Py-MAB/ToF;** Laurentiu V. Ciochina¹; Sylvie Beaudet¹; Hooshang Pakdel²; Christian Roy²; ¹*Dephy Technologies, Montréal, Canada*; ²*Laval University, St. Foy, Québec, Canada*
- ThPJ1 162 **Resonance Photoelectron Capture Ionization: A Novel Ionization Source for the Soft Ionization of Organic Compounds;** Giuseppe Petrucci; Brian LaFranchi; *University of Vermont, Burlington, VT*
- ThPJ1 163 **SIMS Study using Large Gold Cluster Primary Ions for the Detection of Small Biomolecules;** Agnes Tempez¹; Serge Della-Negra²; Joel Depauw²; Dominique Jacquet²; Yvon Le Beyec²; Alexei Novikov²; Michele Pautrat²; Michael Ugarov¹; J. Albert Schultz¹; Katrin Fuhrer²; Marc Gonin²; Amina Woods³; ¹*Ionwerks, Houston, TX*; ²*Institut de Physique Nucléaire, Orsay, France*
- ThPJ1 164 **A Vacuum Bench for the Characterization of Thermo-Ionization Sources;** Christelle Guillermier¹; Francois Hillion²; James Hill³; Claude Lechene¹; ¹*Harvard Medical School, Cambridge, MA*; ²*CAMECA, Courbevoie, FRANCE*; ³*J. A Hill Instruments Services, Arlington, VA*
- ThPJ1 165 **Electron Capture Dissociation Coupled with a Linear Radio-Frequency-Quadrupole Ion Trap – Time-of-Flight Mass Spectrometer;** Takashi Baba; David Black; Gary L. Glish; *University of North Carolina, Chapel Hill, NC*
- ThPJ1 166 **Improved Metastable Atom Bombardment Ion Source;** Samir Al Moussalami¹; Pascal Martin¹; Olivier Peraldi¹; Michel J. Bertrand²; ¹*DEPHY Technologies, Montreal, Canada*; ²*Regional Center for Mass Spectrometry, University of Montreal, Montreal, Canada*
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- INSTRUMENTATION: MASS ANALYZERS (TOF)**
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- ThPJ2 167 **Second Order Focusing in a Coaxial Multiple Reflection ESI TOF Mass Spectrometer;** Melvin A Park; Kory Morrow; Ulrich Giessmann; Frank Laukien; *Bruker Daltonics, Billerica, MA*
- ThPJ2 168 **Improvements in Mass Measurement Accuracy and Reporting over Increased Dynamic Range using Orthogonal TOF (Time of Flight) Mass Spectrometers;** Martin R. Green¹; Iain Monks¹; Keith Richardson¹; Jason Wildgoose¹; Kevin Howes¹; John Bill¹; John Skilling²; ¹*Maximum Entropy Data Consultants Ltd, Bury St Edmonds, United Kingdom*; ²*Waters Corporation, Manchester, United Kingdom*
- ThPJ2 169 **Mass Spectrometric Analysis of DNA Mixtures: Instrumental Effects are Responsible for Decreased Sensitivity with Increasing Mass;** Xiaoyu Chen; Mike S. Westphall; Lloyd M. Smith; *University of Wisconsin, Madison, WI*
- ThPJ2 170 **Orthogonal Trap-TOF Mass Spectrometer (1) - Synchronous Coupling of Trap and TOF;** Akihiko Okumura¹; Atsumu Hirabayashi¹; Takashi Baba¹; Yuichiro Hashimoto¹; Izumi Waki¹; Kiyomi Yoshinari²; ¹*Central Research Laboratory, Hitachi Ltd., Kokubunji, Tokyo, Japan*; ²*Hitachi Laboratory, Hitachi Ltd., Hitachi, Ibaraki, Japan*
- ThPJ2 171 **Tandem Time-of-Flight (TOF/TOF) Mass Spectrometer with a Curved Field Reflector;** Robert J Cotter; Ben D Gardner; Robert D English; Serguei Iltchenko; *Johns Hopkins School of Medicine, Baltimore, MD*
- ThPJ2 172 **A Time-of-Flight Mass Spectrometer System for Mass Measurement of Short-Lived Nuclei and for Diagnostics of Gas-Filled Stopping Cells;** Wolfgang R. Plass¹; Alexander F. Dodonov³; Serguei A. Elissev¹; Hans Geissel¹; Gottfried Muenzenberg¹; Yuri Novikov⁴; Christoph Scheidenberger¹; Zheng Wang¹; ¹*II. Physikalisches Institut, Justus-Liebig-Universitaet Giessen, Giessen, Germany*; ³*Gesellschaft für Schwerionenforschung, Darmstadt, Germany*
- ThPJ2 173 **Tandem TOF/TOF Mass Spectrometry of Macromolecules at Very High (20 keV) Collision Energies;** Serguei Iltchenko; Ben D Gardner; Robert D. English; Robert J Cotter; *Johns Hopkins School of Medicine, Baltimore, MD*
- ThPJ2 174 **Orthogonal Trap-TOF(2) - asynchronous Coupling of Trap and TOF;** Yuichiro Hashimoto¹; Izumi Waki¹; Kiyomi Yoshinari²; Tsukasa Shishika³; Yasushi Terui³; ¹*Hitachi, Ltd., Central Research Laboratory, Tokyo, Japan*; ²*Hitachi, Ltd., Central Research Laboratory, Ibaraki, Japan*; ³*Hitachi High-Technologies, Ibaraki, Japan*
- ThPJ2 175 **Evaluation of the Accurate Mass Capabilities of a GC-TOF Mass Spectrometer in Drug Discovery;** Chris Petucci; Larry Mallis; Oliver McConnell; *Wyeth Research, Collegeville, PA*
- ThPJ2 176 **Towards Better Mass Accuracy and Resolution in MALDI TOF MS;** Armin Holle¹; Martin Schuerenberg¹; Detlev Suckau¹; Johan Gobom²; ¹*Bruker Daltonics, Bremen, Germany*; ²*MPI for Molecular Genetics, Berlin, Germany*
- ThPJ2 177 **Influence of Grids on Resolution in Linear oa-ToF MS - Theory and Practice;** Adam W. McMahon; Dimitris Papanastasiou; Christopher A. Rego; *Manchester Metropolitan University, Manchester, UK*
- ThPJ2 178 **Multi-point Internal Mass Calibration for Enhanced Mass Accuracy in LC-ESI-TOF Analysis;** P. Lee Ferguson; Keqi Tang; Eric F. Strittmatter; Matthew E. Monroe; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- ThPJ2 179 **A Practical Cryodetector Mass Spectrometer with Single Particle Sensitivity for Routine Analysis of High Mass Polymers and Biopolymers;** Rod Chalk; Roberto Seydoux; Lothar Schultheis; Urs Matter; *Comet Analytics, Bern, Switzerland*
- ThPJ2 180 **A High Performance E4TOF Mass Spectrometer;** S. E. Buttrill, Jr.; David Knight; Peter Trinh; *Ciphergen Biosystems Inc., Fremont, CA*
- ThPJ2 181 **Use of Time-of-Flight for Compound Identification and to Assess Interference in Quadrupole Analysis by Gas Chromatography/Mass Spectrometry (GC/MS);** Gordon J. Nelson¹; Alan L. Rockwood¹; Thierry Mann²; Douglas Stevens²; Steve Griffin³; Mark M. Kushnir¹; ¹*ARUP Institute for Clinical and Experimental Pathology, Salt Lake City, UT*; ²*Waters Corp. MS Technical Center, Beverly, MA*; ³*Micromass, Inc., Denver, CO*
- ThPJ2 182 **MALDI Photodissociation TOF-TOF Mass Spectrometry;** Matthew S. Thompson; Weidong Cui; James P. Reilly; *Department of Chemistry, Indiana University, Bloomington, IN*
- ThPJ2 183 **Novel Time of Flight MS for Gas Chromatography using a Shaped Field Buncher;** Victor C. Parr; Mark Mills; Stephen P. Thompson; *Scientific Analysis Instruments, Manchester, England*
- ThPJ2 184 **Surface Induced Dissociation of Biomolecules in a Commercial MALDI-TOF Mass Spectrometer;** Chaminda M. Gamage; Facundo M. Fernandez; Krishnamoorthy Kuppanan; Vicki H. Wysocki; *University of Arizona, Tucson, AZ*
- ThPJ2 185 **Time of Flight Mass Spectrometry as an Invaluable Tool for Specific Identification of Reaction and Degradation Products within Medicinal Chemistry;**

Peter L Abrahamsson¹; Lena M von Sydow¹; Michael McCullagh²; ¹AstraZeneca, Gothenburg, Sweden; ²Waters Corporation, Manchester, UK

- ThPKJ2 186 **Performance of a Miniature MALDI-TOF Mass Spectrometer Using Non-homogeneous Accelerating Fields and Dynamic Focusing;** Ben D. Gardner; Robert J. Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*

ION MOBILITY

- ThPK1 187 **A High-Field Asymmetric Waveform Ion Mobility Spectrometer (FAIMS) Coupled with a Q-ToF Mass Spectrometer for Enhanced Proteome Analysis;** Jason Wildgoose¹; Alan Millar¹; James Langridge¹; David A Barnett²; Randall W Purves²; ¹Waters Corporation, Manchester, UK; ²Ionalytics Corporation, Ottawa, Canada
- ThPK1 188 **A Study of Biomolecular Interactions Using Ion-Mobility MALDI;** Michael Ugarov¹; Thomas Egan¹; Michael McCully¹; John Albert Schultz¹; Amina S. Woods²; ¹Ionwerks, Inc., Houston, Texas; ²NIDA IRP, Baltimore, MD
- ThPK1 189 **Charge State Separation By Linked Scanning a Mass Filter with Mobility Separator;** John B Hoyes; Steven D Pringle; Jason L Wildgoose; Kevin Giles; *Micromass, Manchester, UK*
- ThPK1 190 **Ion Mobility Measurements of MALDI Ions in a Segmented RF Quadrupole Ion Guide Interfaced to an Orthogonal TOF Mass Spectrometer;** Viatcheslav I. Kozlovski³; Alexandre V. Loboda²; James McNabb¹; Victor Spicer¹; Werner Ens¹; Kenneth G. Standing¹; ¹University of Manitoba, Winnipeg, MB, Canada; ²MDS Sciex, Concord, ON, Canada; ³Institute for Energy Problems of Chemical Physics RAS (Branch), Chernogolovka, Russian Federation
- ThPK1 191 **Ion Mobility and Diffusion Coefficient Measurements in the Segmented RFQ Interfaced to the High Resolution Ortho-TOF MS;** Iliia V. Soulimenkoy; Viatcheslav I. Kozlovski; Alexandre R. Pikhtelev; Ella V. Chardakova; Vladimir S. Brusov; Alexandre F. Dodonov; *Institute for Energy Problems of Chemical Physics RAS (Branch), Chernogolovka, Russia*
- ThPK1 192 **Gas-Phase Structures of Singly, Doubly and Triply Protonated Bradykinin Ions as Determined by *ab initio* Molecular Orbital Calculations and Collisional Cross-Section Measurements using Ion Mobility;** Yuzhu Guo¹; Galina Orlova¹; Christopher F. Rodriguez¹; Jiayi Wang¹; Reza Javahery²; Yun Ling¹; Bruce A. Thomson²; Alan C. Hopkinson¹; K. W. Michael Siu¹; ¹Dep. of Chemistry and CRMS, York University, Toronto, Canada; ²MDS SCIEX, Toronto, Canada
- ThPK1 193 **A Novel, Compact IMS/TOF Instrument for Complex Biological Mixture Analysis;** Stormy L. Koeniger¹; Stephen J. Valentine²; Rena A. Sowell¹; David E. Clemmer¹; ¹Indiana University, Department of Chemistry, Bloomington, IN; ²Beyond Genomics, Inc., Waltham, MA
- ThPK1 194 **Ion Mobility-Photodissociation (213 nm)-Time-of-Flight Mass Spectrometry for Simultaneous Peptide Mass Mapping and Peptide Sequencing;** John A. McLean¹; Michael Ugarov²; Hakim Bensaoula²; Thomas Egan²; J. Albert Schultz²; Kent J. Gillig¹; David H. Russell¹; ¹Laboratory for Biological Mass Spectrometry, Texas A&M University, College Station, TX; ²Ionwerks Inc., Houston, TX

ION MOLECULE REACTIONS

- ThPK2 195 **Quantification of Isomeric Phosphorylated Monosaccharides by using Ion/Molecule Reactions and FT-ICR Mass Spectrometry;** Hong Gao; Christopher, J.

Petzold; Michael, D. Leavell; Julie, A. Leary; *University of California, Berkeley, CA*

- ThPK2 196 **A New Twist on the SIFT- Observing Sequential Reactions Over Wide Neutral Pressure Ranges;** Vincent G Anicich¹; Paul Wilson²; Murray J McEwan²; Colin G Freeman²; Vaughan Stephan Langford²; ¹Jet Propulsion Laboratory, Pasadena, CA; ²University of Canterbury, Christchurch, NZ
- ThPK2 197 **Hydrocarbon Attachment to Zeolite Fragments Using Laser Ablation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry (FT-ICR/MS);** Deborah E. Hunka; Steven M. Thornberg; Ion C. Abraham; Russell L. Jarek; Tina M. Nenoff; Genoveva Q. Buelna; *Sandia National Laboratory, Albuquerque, NM*
- ThPK2 198 **On the Energetics of O Atom Transfer. The Reactivity of CrO₂⁺ with CO and Other Species;** Scott W Robinson; Douglas P Ridge; *University of Delaware, Newark, DE*
- ThPK2 199 **Comparison of Conformational Variations Induced by Metal Complexation and b Type Fragmentation for Peptides with Acidic- and Basic-Side Chains: Gas-Phase H/D Exchange Kinetic Studies;** Alireza Fattahi²; Touradj Solouki¹; ¹Department of Chemistry, University of Maine, Orono, ME; ²Department of Chemistry, University of Minnesota, Minneapolis, MN
- ThPK2 200 **Gas-Phase Fragmentation of Peptides via Ion-molecule Reactions with Cyclopentadienylcobalt Ion (CpCo⁺);** Kenroy E. Crawford; Hilka I. Kenttämää; *Purdue University, West Lafayette, Indiana*
- ThPK2 201 **The Pentafluoro-Tropylium Ion as Proton Donor in the Internal Ionization Quadrupole Ion Trap;** John P. Caesar; Jane McKenzie; Sigmund M. Waraszkiewicz; *AstraZeneca LP, Westborough, Massachusetts*
- ThPK2 202 **H/D Exchange of Deprotonated Flavonoids by Electrospray Ionization Quadrupole Ion Trap Mass Spectrometry;** Junmei Zhang; Barry D Davis; Jennifer S Brodbelt; *University of Texas at Austin, Austin, TX*
- ThPK2 203 **Oxidation/Reduction of Some Corticosteroids in APCI Source;** Nanying Bian; *Millipore Corporation, Bedford, MA*
- ThPK2 204 **Binding Energies of Model Nitrogen Bases to Metalloporphyrins from Ion-Molecule Reactions and Collision-Induced Dissociation in a Quadrupole Ion Trap;** Lisa A. Hayes; Angelina M. Chappell; Marvin Banal; Victor Ryzhov; *Northern Illinois University, DeKalb, IL*
- ThPK2 205 **Unexpected Acetonitrile Gas Phase Reaction Products Observed by Use of Atmospheric Pressure Chemical Ionization;** Charles W. Ross III¹; Arthur B. Coddington¹; Joan S. Murphy¹; Harri G. Ramjit¹; ¹Merck & Co. Inc, West Point, Pennsylvania; ²Merck & Co. Inc., MRL- Dept. of Medicinal Chemistry, West Point, PA
- ThPK2 206 **Preparation and Reactions of the [NH₃, H₂O]⁺⁺ Ion;** Henri E. Audier; Guillaume van der Rest; Philippe Mourgues; *CNRS / DCMR / Ecole Polytechnique, Palaiseau, France*
- ThPK2 207 **Formation and reactivity studies of the Olefin-Dicobaltpentacarbonyl Acetylene Complex by Collision-Activated Reaction Experiments;** Denis Lesage¹; Yves Gimbert²; Anne Milet²; Françoise Fournier¹; Jean-Claude Tabet¹; ¹UMR 7613 CNRS, Université Paris VI, Paris, France; ²LEDSS, Chimie recherche, UJF, Grenoble, France
- ThPK2 208 **Ion/Surface Reactions of Thiophene Molecular Ions at Self-Assembled Monolayer Surfaces;** Sung-Chan Jo; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- ThPK2 209 **Mechanism of Collision-induced Dissociation of Positive Ions Derived from Tetrahydropyranyl ethers;** Josef

- Ruzicka; Athula Attygalle; *Stevens Institute of Technology, Hoboken, NJ*
- ThPK2 210 **Reaction Dynamics and Thermochemistry of Dianions: Charge Reduction by Electron Detachment and Stabilization of Charge by Solvation;** Arthur T. Blades; Michael Peschke; Udo H. Verkerk; Paul Kebarle; *Department of Chemistry, Edmonton, Canada*
- ThPK2 211 **H/D Exchange, MS/MS and Quantum Chemical Studies on Protonated G_nR Peptides;** Linda Breci¹; Arpad Somogyi¹; Selena Fung¹; Victor Hruby¹; Bela Paizs²; Sandor Suhai²; ¹*Department of Chemistry, University of Arizona, Tucson, AZ;* ²*Department of Molecular Biophysics, German Cancer Research Center, Heidelberg, Germany*
- ThPK2 212 **A Novel Approach for Peptide Fragmentation via Ion-Molecule Reactions;** Jayalakshmi Somuramasami; Hilkka I Kenttamaa; *Purdue University, West Lafayette, IN*
- ThPK2 213 **Elimination of Hydrogen Related to the Corona Discharge in Negative Ion APCI. Case Study: Falsely Assigning Contamination as the Problem During Troubleshooting in a LC-MS-MS Assay for Ibuprofen;** William S. Edgemond; Michael Sullivan; Anders Ljungqvist; Klaus-Peter Adam; Chris Bugge; *Cedra Corporation, Austin, TX*
- ThPK2 214 **H/D Exchange of Pentapeptides with D₂O: Comparison of Fourier Transform Ion Cyclotron Resonance and Quadrupole Ion Trap Instruments;** Linda Breci¹; Kristin A Herrmann¹; Mark Malcomson¹; Vicki Wysocki¹; Perdita Barran²; Mike Bowers²; Thomas Wytenbach²; ¹*University of Arizona, Tucson, AZ;* ²*University of California, Santa Barbara, CA*
- ThPK2 215 **Back-Exchange of Deuterium for Hydrogen upon Collisional Focusing with Argon;** Markus Zollinger; Claudia Jordan; *Novartis Pharma AG, Preclinical Safety, Basel, Switzerland*
- ThPK2 216 **Proton Affinity Determination of Structural Related Liquid Crystal Model Compounds;** Daniel Kuehne; Karl-Peter Wanczek; *University of Bremen, Institute of Inorganic & Physical Chemistry, Bremen, Germany*
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- ThPK3 217 **The Bond Dissociation Energy and Lewis Acid Behaviour of XeF⁺;** Ian H. Krouse; Paul G. Wenthold; *Purdue University, West Lafayette, IN*
- ThPK3 218 **On the Novel Double Hydrogen Transfer Processes from the Molecular Ions of N-(6-Phenylhexanoyl)-1-azacycloalkan-2-ones and their Thione Analogues in Source vs. Metastable Dissociation Using BEBE Geometry Four Sector Tandem Mass Spectrometer;** Hiroshi Yamaoka¹; Kumiko Katsuma¹; Kimio Isa²; Yasuhiko Maekawa³; ¹*Osaka Women's University, Osaka, Japan;* ²*Fukui University, Fukui, Japan;* ³*SAKAI OVEX Co. Ltd., Fukui, Japan*
- ThPK3 219 **Simulating Chemical Reactions on Titan and Analyzing the Products by FT-ICR and Ion Trap Mass Spectrometry;** Arpad Somogyi¹; Niladri Sarker¹; Jonathan Lunine²; Mark Smith¹; ¹*Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ;* ²*Department of Chemistry, University of Arizona, Tucson, AZ*
- ThPK3 220 **Neutralisation Reionisation Mass Spectrometry (NRMS) of the Transient Neutral Tetranitrogen (N₄);** Emma E Rennie; Paul M Mayer; *Chemistry Department, University of Ottawa, Ottawa, Ontario, Canada*
- ThPK3 221 **Potential Energy Surface Energetics from Metastable Ion Mass Spectral Peak Heights;** Paul M. Mayer; Julie McCormack; *Chemistry Department, University of Ottawa, Ottawa, Canada*
- ThPK3 222 **Thermochemistries of Selenium Fluoride Anions;** John W. Torchia; Katrina E. Nizzi; Hilkka I. Kenttamaa; *Purdue University, West Lafayette, IN*
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- ThPL 224 **Dependence of Charge States of Nondenatured Proteins on the Nature of the Buffer Cations Provides Information on the Complete Mechanism by which the Protein Ions Originate;** Udo H. Verkerk; Michael Peschke; Paul Kebarle; *Department of Chemistry, University of Alberta, Edmonton, Canada*
- ThPL 225 **Liquid Chromatography/Electrochemistry/APCI-Mass Spectrometry and Liquid Chromatography/APPI-Mass Spectrometry of Polycyclic Aromatic Hydrocarbons;** Suze M. van Leeuwen; Heiko Hayen; Uwe Karst; *University of Twente, dept. of Chemical Analysis, Enschede, NL, Enschede, The Netherlands*
- ThPL 226 **A Novel Gas Chromatography/Resonant Electron Capture/TOF Mass Spectrometer;** Valery G. Voinov; Yury V. Vasil'ev; Hong Ji; Douglas F. Barofsky; Max L. Deinzer; *Oregon State University, Corvallis, OR*
- ThPL 227 **Effect of the Solvent Flow Rate on the Ionization Efficiency in Atmospheric Pressure Photoionization Mass Spectrometry;** Tiina J Kauppila¹; Risto Kostiaainen²; Andries P Bruins¹; ¹*University of Groningen, Groningen, Netherlands;* ²*University of Helsinki, Helsinki, Finland*
- ThPL 228 **Electron Capture Effects in HPLC/Atmospheric Pressure Chemical Ionization-Mass Spectrometry - Investigations on Nitroaromatic Compounds;** Heiko Hayen; Nicole Jachmann; Martin Vogel; Uwe Karst; *University of Twente, Enschede, Netherlands*
- ThPL 229 **Mass Spectrometric Response and the Electrospray Ionization Process;** Keqi Tang; Patrick L. Ferguson; Jason S. Page; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, Washington*
- ThPL 230 **Efficiency of Nanospray Ionization;** Bruce A. Thomson¹; Ayman El-Faramawy¹; K. W. Michael Siu²; ¹*Department of Chemistry, York University;* and *MDS Scienc Inc, Toronto, Canada;* ²*Department of Chemistry, York University, Toronto, Canada*
- ThPL 231 **Mass Spectrometric and Molecular Modeling Investigation of Alkali Metal Ion Cationization from the Liquid Phase;** James A. Kelley¹; Lawrence R. Phillips²; Christopher C. Lai¹; Tracy L. Wolfe³; Guangyu Sun¹; Marc C. Nicklaus¹; ¹*Laboratory of Medicinal Chemistry, NCI-Frederick, NIH, Frederick, MD;* ²*Biological Testing Branch, DTP, NCI-Frederick, NIH, Frederick, MD;* ³*SAIC-Frederick, Frederick, MD*
- ThPL 232 **Jahn-Teller Effect and Fragmentation of Negative Ions of CCl₄ and CHCl₃ as Functions of Electron Energy and Molecular Temperature;** Yury V Vasil'ev; Valery G Voinov; Douglas F Barofsky; Max L Deinzer; *Oregon State University, Corvallis, OR*
- ThPL 233 **Electrochemical Cell Design and Function for On-Line EC/ES-MS;** Michael C. Granger¹; Gary J. Van Berkel²; Paul Gamache¹; John Waraska¹; ¹*ESA Inc., Chelmsford, MA;* ²*Oak Ridge National Laboratory, Oak Ridge, TN*
- ThPL 234 **Electrospray Ionization of Protein and Small Molecule Mixtures;** Peng Pan; Scott A. McLuckey; *Department of Chemistry, Purdue University, West Lafayette, IN*
- ThPL 235 **Charge Reduction in Electrospray: Charged Nanojets as Intermediates;** Ioan Marginean; Vasilij Znamenskiy; Akos Vertes; *George Washington University, Washington, DC*

- ThPL 236 **Influence of Emitter Electrode Material on the Nature and Abundance of Ions in Electrospray Mass Spectra;** Keiji G. Asano; Gary J. Van Berkel; *Oak Ridge National Laboratory, Oak Ridge, TN*
- ThPL 237 **Study of Fullerenes and Endohedral Metallofullerenes by Negative-Mode ESI Mass Spectrometry: Special Features of Mass Spectra Originated from Corona-Assisted ESI;** Viatcheslav I. Kozlovski¹; Ilia V. Soulimenkov¹; Alexandre R. Pikhtev¹; Ivan E. Kareev³; Viatcheslav P. Bubnov²; Eduard B. Yagubskii²; Vladimir S. Brusov¹; Alexandre F. Dodonov¹; ¹*Institute for Energy Problems of Chemical physics RAS (Branch), Chernogolovka, Russian Federation*; ²*Institute of Problems of Chemical Physics RAS, Chernogolovka, Russian Federation*; ³*Moscow State University, Moscow, Russian Federation*
- ThPL 238 **Study of the Impact of Mobile Phase Composition on ion intensity observed in LC-ESI/MS/MS;** Babak Ziaie; Milton Furtado; Josee Michon; George Faria; John Chapdelaine; Francis Beaudry; *MDS Pharma Services, St-Laurent, Canada*
- ThPL 239 **Mapping of Potential Gradients Within the Electrospray Emitter;** Yan Li; Boguslaw P. Posniak; Richard B. Cole; *University of New Orleans, New Orleans, LA*
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- ThPM 241 **Exploration of Recovery and Suppression Characteristics of Nine Solid Phase Extraction Plates using Acidic, Neutral, Basic and Zwitterionic Compounds for Drug Metabolism Bioanalysis;** Amy Longo; Jessica Gremminger; Adam Brockman; *Pfizer, Inc, Groton, CT*
- ThPM 242 **Determination of Cyclosporin A in Skin Tissue After in vivo Topical Application by HPLC/MS/MS;** Jingran Chen; Tracy Chang; Erik Kreider; Hongran Fan; *Cellgate Inc., Sunnyvale, CA*
- ThPM 243 **96-Well Liquid Phase Micro Extraction (LPME) – A New Sample Preparation Technique for Potentially High-throughput Quantitative Bioanalysis;** Chris Mason¹; Lorrie Day¹; Eric Yang¹; Krishna Kallury²; Rob Stubbs²; ¹*GlaxoSmithKline Pharm, King of Prussia, PA*; ²*Varian, Inc, Harbor City, CA*
- ThPM 244 **Rapid Protein Precipitation and Liquid-Liquid Extraction in 96-Well Plate Format for Quantitation of Kinase Inhibitors in Biological Samples;** Seema Pai; Todd Groessl; Michael A. Shirley; *Celgene Corporation, San Diego, CA*
- ThPM 245 **Identification of the Source for Variable Internal Standard Responses During Analysis of 6 α -hydroxypaclitaxel in Human Hepatic Microsomal Samples by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS);** Lisa M. Magis; Naidong Weng; Zhenyu Shou; Karen Aschenbrenner; Ian Ridd; *Covance Laboratories, Madison, WI*
- ThPM 246 **XLC-MS: Sample Extraction and LC Separation Merged into a Single Automated Front-End System;** Emile. H.M. Koster; Bert. A Ooms; Peter Ringeling; *Spark Holland, Emmen, The Netherlands*
- ThPM 247 **Rapid Eicosanoid Analysis from Urine via LC-MS/MS using Negative Mode ESI and Immuno-affinity Extraction;** Gary E. Adamson; James A Yergey; *Merck & Co., Inc., West Point, PA*
- ThPM 248 **Development and Validation of a High-throughput Assay for the Rapamycin Derivative ABT-578 Using LC/LC-MS/MS in Blood and Tissue Samples;** Yan Ling Zhang; Marta Lishnevsky; Michelle L. Voss; Uwe Christians; *University of Colorado Health Sciences Center, Denver, CO*
- ThPM 249 **Simultaneous Determination of Emtricitabine, Zidovudine, and Zidovudine Glucuronide in Human Plasma and Urine by LC/MS/MS;** Michelle Brosnan-Cook; Robert W. Hart; Robert L. St. Claire III; Jian Zong; Bernhard Lampert; *Gilead Sciences, Inc., Durham, NC*
- ThPM 250 **The Evaluation of a 96-Well SPE Card Extraction Technique for Pharmaceutical Bioanalysis;** Jeffrey X. Duggan¹; Virginia S. Gutierrez¹; Phillip Worboys¹; Peter J. Ellefson²; ¹*Pharmacia Corporation, Skokie, Illinois*; ²*Pharmacia Corporation, Kalamazoo, Michigan*
- ThPM 251 **Analysis of 8-hydroxy-2'-deoxyguanosine by LC/MS/MS;** Jacob S. K. Liao²; Qiao Zhan¹; James A. Swenberg¹; J. Ronald Hass²; ¹*Triangle Laboratories, Inc., Durham, NC*; ²*Dept. of Environ. Sci. & Eng., UNC, Chapel Hill, NC*
- ThPM 252 **The Validation of an Analytical Procedure for the Determination of Tacrolimus (FK506) in Human Skin using Liquid/Liquid Extraction and Liquid Chromatography with Tandem Mass Spectrometric Detection;** Julian Potter¹; Karen E Cawkill¹; Ala Alak²; Taiji Sawamoto³; Kenji Tabata³; ¹*Covance Laboratories Ltd., Harrogate, United Kingdom*; ²*Fujisawa Research Institute of America, Inc., Evanston, IL*; ³*Fujisawa Pharmaceutical Company, Ltd., Osaka, Japan*
- ThPM 253 **Optimization of Paclitaxel Extraction and Analysis in Solid Tissues;** Robert K. Lantz; Patricia L. Sulik; Linda S. Jefferies; *Rocky Mountain Instrumental Laboratories, Ft. Collins, CO*
- ThPM 254 **A Rapid LC-MS Method for the High Throughput Quality Control of Long Oligonucleotides;** Kenneth J. Fountain; Martin Gilar; Claude R. Mallet; John C. Gebler; *Waters Corporation, Milford, MA*
- ThPM 255 **Multi-Dimensional LC-MS Using Continuous Gradient Ion Exchange Chromatography Without Off-Line Fraction Collection;** Jonathan A. Karty; William E. Running; Kirk Boraas; James P. Reilly; *Indiana University Department of Chemistry, Bloomington, IN*
- ThPM 256 **Applications of LC/MS and Photo Diode Array (PDA) Detection to Establish Impurity/Degradation Peak Correlations Within a Drug Product Matrix;** Jianfeng Hong; Syed Hasan; Layla Broadus; Jamie Veltri; Jan Fang; Brian Whelihan; *Pharmacia Corporation, Skokie, IL*
- ThPM 257 **Enzymatic Digestion of Tissues for Quantitative LC/MS/MS;** Chongwoo Yu; Lara D. Penn; John Hollembaek; Wenlin Li; Lucinda H. Cohen; *Pfizer Global Research & Development, Ann Arbor, MI*
- ThPM 258 **Improved Characterization Tool: Novel Compound (RapiGest.TM. SF) Significantly Improves Trypsin Digestion of a mAb;** Ted Stover; John V. Amari; Istvan Mazsaroff; *EMD Pharmaceuticals, Lexington, MA*
- ThPM 259 **Improved Urinary Prostanoid Analysis using On-line C-18 Trapping, Followed by HPLC/MS/MS;** Hideji Fujiwara; Jerry Muhammad; John J. Likos; B. Mason Hughes; William D. McGhee; Kevin L. Duffin; *Pharmacia Company, Chesterfield, MO*
- ThPM 260 **A 96-Well Single-Pot Protein Precipitation, LC/MS/MS Method for the Determination of BMS-298585;** Jane Liu; Janice Pursley; Yongjun Xue; Steve Unger; *Bristol Myers Squibb, New Brunswick, NJ*
- ThPM 261 **Fast Analysis of Hippuric Acid and Methylhippuric Acid in Urine By HPLC-Tandem MS and SPE;** Mi-

- Young Lee; In-Jeong Park; *Korea Occupational Safety & Health Agency, Seoul, South Korea*
- ThPM 262 **A Multidimensional On-line Digestion-NanoLC-MS/MS Approach for rapid Protein Identification**; Liliana B. Areces¹; Bruno Casetta²; Bachi Angela³; ¹*European Institute of Oncology, Milan, Italy*; ²*Applied Biosystems, Monza, Italy*; ³*Dibit- San Raffaele Scientific Institute, Milan, Italy*
- ThPM 263 **On-line Column Switching Analysis of Bisphosphonate Metabolites in Cell Extracts with Automated Purification and Zone-Cutting Technique**; Timo T Mauriala; Hannu Monkkonen; Jukka Monkkonen; Seppo Auriola; *University of Kuopio, Faculty of Pharmacy, Kuopio, Finland*
- ThPM 264 **An Efficient Approach for Solid Phase Extraction for Reducing Ion Suppression in Liquid Chromatography /Mass Spectrometry (LC/MS)**; Keith J. Duff; Carmen T. Santasania; David S. Bell; Yuhui Yang; An Trinh; *Supelco, Bellefonte, PA*
- ThPM 265 **Examination of Rapid Online Cleanup of Small Molecules in Plasma Using an Automated SPE System coupled to a Triple Quadrupole LCMSMS**; Martin Sibum¹; Elliott Jones²; Miryam Kadkhodayan³; ¹*Spark Holland, Emmen, The Netherlands*; ²*Applied Biosystems, Foster City, CA*; ³*Genentech, Inc., So. San Francisco, CA*
- ThPM 266 **A Liquid-Liquid Extraction Method Followed by LC/MS/MS Analysis for the Determination of Indiplon and its Metabolite in Human Milk**; Blanca E. Ruvalcaba; Ta-Kung Chen; Haig Bozgian; Jenny Wen; *Neurocrine Biosciences, San Diego, CA*
- ThPM 267 **Applications of Automated HTLC/MS/MS**; Michael Zhou; Adlai Niggebrugge; Lisa Ford; Anthony Chilton; *Cardinal Health, Research Triangle Park, NC*
- ThPM 268 **Comparative Performance Evaluation Using Antidepressant Drugs to Characterize terize Silanol Variations in SPE Sorbents Used for Bioanalytical Sample Preparation**; Gary Lensmeyer¹; Asha Oroskar²; ¹*University of Wisconsin Hospital and Clinics, Madison, Wisconsin*; ²*Orochem Technologies, Westmont, IL*
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- ThPN 270 **Structural Approach of Lipids A by using Soft Desorption/Ionization Methods**; Geoffrey Madalinski¹; Franck Wind¹; Françoise Fournier²; Jean-Claude Tabet²; ¹*Centre d'Etudes du Bouchet, Vert-le-Petit, France*; ²*Université Pierre et Marie Curie - Paris VI, Paris, France*
- ThPN 271 **Direct and Rapid Identification of Animal Fat from Various Materials by Py-MAB-ToF**; Sylvie Beaudet¹; Dimo Zidarov¹; Pascal Martin¹; Michel J. Bertrand²; ¹*Dephy Technologies, Montreal, Canada*; ²*University of Montreal, Montreal, Canada*
- ThPN 272 **Detailed Structural Characterization of Lipid A from E.coli O157: H7: K- by Combined Thin-Layer Chromatography and Mass Spectrometry**; Chang-Soo Lee; Yun-Gon Kim; Hwang-Soo Joo; Kwang-Won Lee; Sung-Soo Park; Byung-Gee Kim; *Seoul National University, Seoul, Republic of Korea*
- ThPN 273 **Normal Phase LC/ESI-MS for Sugar Sequencing of Gangliosides**; Takeshi Kasama¹; Kenji Kawasaki¹; ¹*Inst. Anal. Res. Center, Tokyo Med. Dent. Univ., Tokyo, Japan*
- ThPN 274 **Structural Characterization of Degradation Products of Phospholipid by LC/MS/MS and High Resolution LC/MS**; Guodong Chen; Birendra N. Pramanik; Ibrahim Daaro; Emily Luk; Haiying Liu; George Lourenco; Elizabeth Lin; *Schering-Plough Research Institute, Kenilworth, NJ*
- ThPN 275 **Identification of Clinical Significant Fungi/Yeast using Lipid-derived Biomarkers**; Ludmila Khailova¹; Petra Miketova¹; Ida M. (Ki) Moore¹; Karl H. Schram¹; Jarmila Vytrasova³; ¹*College of Pharmacy, University of Arizona, Tucson, AZ*; ²*College of Nursing, University of Arizona, Tucson, AZ*
- ThPN 276 **Application of Combinatorial Chemistry Libraries in the Identification of Trace Compounds In Plant Oils Using FTICR Mass Spectrometry**; Ahmad Mokhtari-Fard; Athol G. Turner; Gary D. Willett; *The University of New South Wales, Sydney, Australia*
- ThPN 277 **HPLC and GC/MS Analysis of Food-borne Contaminant *Arcobacter* sp.**; David Jelinek¹; Petra Miketova²; Karl H. Schram¹; Ida M. (Ki) Moore²; Jarmila Vytrasova³; ¹*College of Pharmacy, University of Arizona, Tucson, AZ*; ²*College of Nursing, University of Arizona, Tucson, AZ*; ³*University of Pardubice, Pardubice, Czech Republic*
- ThPN 278 **Identification of Membrane Phospholipids in *Listeria* sp.**; Jeannette Karczmarzski¹; Petra Miketova²; Karl H. Schram³; M. Bonner Denton¹; Ida M. (Ki) Moore²; Jarmila Vytrasova⁴; ¹*Department of Chemistry, University of Arizona, Tucson, AZ*; ²*College of Nursing, University of Arizona, Tucson, AZ*; ³*College of Pharmacy, University of Arizona, Tucson, AZ*; ⁴*Department of Microbiology, University of Pardubice, Pardubice, Czech Republic*
- ThPN 279 **Structural Characterization of Mixed Geometry (Cis/Trans and Trans/Cis) Conjugated Fatty Acid Methyl Esters with Acetonitrile Chemical Ionization Tandem Mass Spectrometry**; Anthony L. Michaud¹; Martin P. Yurawecz²; Pierluigi Delmonte²; Benjamin A. Corl¹; Dale E. Bauman¹; J. Thomas Brenna¹; ¹*Cornell University, Ithaca, NY*; ²*FDA, College Park, MD*
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- ThPO 281 **Fragmentation and Charge Transfer in Gas-Phase Solvated Complexes of Triply-Charged Metal Ions**; Sonal Patel¹; Galina Orlova¹; Alan C. Hopkinson¹; K.W. Michael Siu¹; ¹*York University, Dept. of Chemistry, Centre for Research in Mass Spec., Toronto, Canada*; ²*York University, Toronto, Canada*
- ThPO 282 **Characterization of Keggin's Type Polyoxometalates with Multiple Metal-Nitrogen Bonds by Ion-Trap Mass Spectrometry**; Céline Dablemont¹; Anna Proust¹; Pierre Gouzerh¹; Carlos Afonso²; Françoise Fournier²; Jean Claude Tabet²; ¹*Chimie Inorganique et Matériaux Moléculaires, Paris, France*; ²*Laboratoire de Chimie Structurale Organique et Biologique, Paris, France*
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- ThPP 284 **A Chip Porous Silicon Array for Receptor Binding Assay with Desorption/Ionization On Porous Silicon Mass Spectrometry (DIOS-MS)**; Qian Li; Danielle F. Anderson; David H. Powell; Benjamin W. Smith; James D. Winefordner; *University of Florida, Gainesville, FL*
- ThPP 285 **The Construction and Validation of a Parallel LC-MS-MS System to Increase Throughput in Quantitative Bioanalysis**; David Browne; Simon Wood; Julian Potter;

- David Bakes; John Maltas; *Covance Laboratories Ltd., Harrogate, United Kingdom*
- ThPP 286 **Peptide Ion Dissociation Kinetics Under Different Storage Conditions in a Quadrupole Ion Trap Mass Spectrometer;** Jonathan Wilson; Richard W Vachet; *University of Massachusetts, Amherst, MA*
- ThPP 287 **High Throughput 4-Channel Multiplexed Analysis using a Triple Quadrupole with Automated MS/MS Optimization Software;** Mark Tischler¹; Rachel A. Garlish¹; Marilyn Dar¹; Guy T. Carter¹; Kate Yu²; ¹*Wyeth Research, Pearl River, NY*; ²*Waters Corporation, Milford, MA*
- ThPP 288 **Automatic HPLC Screening and Method Development System;** Willy Janssens; Rudy Sneyers; Achille Pluym; Ivan Somers; *Johnson and Johnson Pharmaceutical Research and Development, Beerse, Belgium*

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- ThPQ 289 **Comparative Proteomics of Breast Cancer Cells Based on Chromatofocusing, Nonporous-Reversed Phase-Liquid Chromatography and Mass Spectrometry;** kan zhu¹; Paweena Kreunin¹; Nathan Buchanan¹; David Lubman¹; Fred Miller²; ¹*Department of Chemistry, University of Michigan, Ann Arbor, MI*; ²*Karmanos Cancer Institute, Wayne State University, Detroit, MI*
- ThPQ 290 **Multidimensional Chromatography Systems for the Direct Analysis of Small Polar Compounds in Plasma;** Francois A. Espourteille; Anthony DeSimone; Hubert M. Quinn; Joseph J. Takarewski; *Cohesive Technologies, Inc., Franklin, MA*
- ThPQ 291 **Fe³⁺-IMAC for the On-line Sample Clean Up and Preconcentration of Nucleoside Mono-, di- and Triphosphates Prior to Their Analysis by Ion Pair HPLC-ES(-)MS;** Robin Tuytten¹; Filip Lemière¹; Walter Van Dongen¹; Herman Slegers²; Russel P. Newton³; Eddy L. Esmans¹; ¹*University of Antwerp (RUCA), Department of Chemistry, Antwerp, Belgium*; ²*University of Antwerp (UIA), Department of Biochemistry, Antwerp, Belgium*; ³*University of Wales, School of Biological Sciences, Swansea, UK*
- ThPQ 292 **Automated Micro-column Protein Capture and Proteolysis for Identification of Proteins from E. coli Cell Extracts by Mass Spectrometry;** David R. Craft; Dr. Liang Li; *University of Alberta, Edmonton, Canada*
- ThPQ 293 **Optimized Orthogonal 2-dimensional LC-MS System for the Identification of Naturally Processed Peptides;** Hugo D. Meiring¹; Jeffrey Ringrose²; Jan ten Hove¹; Albert J.R. Heck³; Ad P.J.M. de Jong¹; ¹*National Institute of Public Health and the Environment, Bilthoven, The Netherlands*; ²*Academic Medical Centre, Amsterdam, The Netherlands*; ³*Utrecht University, Utrecht, The Netherlands*
- ThPQ 294 **The Implication of Column Peak Capacity and Selectivity on the Multi-Dimensional LC-MS Analysis of Complex Peptide Mixtures;** Amy E Daly; Martin Gilar; Uwe D Neue; Tad Dourdeville; John C Gebler; *Waters Corporation, Milford, MA*
- ThPQ 295 **On-line Strong Cation Exchange μ -HPLC-ESI-MS/MS for Protein Identification and for Process Optimization;** Thierry Le Bihan; Henry S. Duetel; Daniel Figeys; *MDS-Proteomics, Toronto, Ontario, Canada*
- ThPQ 296 **Two Dimensional Strong Cation Exchange Liquid Chromatography: "Intelligent" Fractionation by using a Combination of Evaporative Light Scattering Detector and Mass Spectrometry Through a Novel Dynamic Mass Attenuator(DMA) Post Column Splitter;** Konstantinos Petritis¹; Richard M. Devereaux²; Thomas N. Villaseñor²; Michel Dreux³; David Camp¹; Mary Lipton¹;

Heather Mottaz¹; Mark A. Wingerd¹; Richard D. Smith¹; ¹*Pacific Northwest National Laboratory, Richland, WA*; ²*Richard Scientific Inc., Novato, CA*; ³*SEDERE, Orleans, France*

NEUROPEPTIDES

- ThPR 297 **In vivo Monitoring of Neuropeptide Metabolism by Microdialysis and MALDI-TOFMS;** Tamara Blagojevic¹; Alevtina Zharikova²; John R Eyler¹; Laszlo Prokai²; ¹*University of Florida, Department of Chemistry, Gainesville, FL*; ²*University of Florida, Department of Medicinal Chemistry, Gainesville, FL*
- ThPR 298 **Peptidomic Analysis of the Fruit Fly Brain;** Geert Baggerman; Liliane Schoofs; Arnold De Loof; *K.U.Leuven, Leuven, Belgium*
- ThPR 299 **Altered Striatal in vivo Metabolism of the Opioid Neuropeptide Dynorphin A (1-17) in the Unilateral 6-OHDA Rat Model of Parkinson's Disease;** Rebecka Klintonberg¹; Per Svenningsson²; Lars Gunne¹; Per E. Andren¹; ¹*Uppsala University, Uppsala, Sweden*; ²*Karolinska Institute, Stockholm, Sweden*
- ThPR 300 **Synthesis, Structural and Biochemical Characterisation of Branched Polypeptides Containing A B-Amyloid-Plaques-Specific Epitope Recognised by Therapeutically Active Antibodies;** Marilyna Manea¹; Gabor Mezö²; Ferenc Hudecz²; Michael Przybylski¹; ¹*University of Konstanz, Department of Chemistry, Konstanz, Germany*; ²*Hungarian Academy of Sciences, Research Group of Peptide Chemistry, Budapest, Hungary*
- ThPR 301 **De novo Sequencing of Novel Neuropeptides from *Ascaris suum* Tissue using MALDI-TOF/TOF;** Joanne Y Yew¹; Sergei Dikler²; Antony O Stretton¹; ¹*University of Wisconsin, Madison, WI*; ²*Bruker Daltonics Inc., Billerica, MA*
- ThPR 302 **Microdialysis and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry Investigation of Neuropeptide Biotransformation: Dynorphin A(1-17);** Brian Reed; Yong Zhang; Mary Jeanne Kreek; Brian T Chait; *The Rockefeller University, New York, NY*
- ThPR 303 **Mass Spectrometric Elucidation and Immunoanalytical Characterisation of a Plaque Specific Epitope of β -Amyloid(1-42) Polypeptide;** Roxana Cecal¹; JoAnne McLaurin²; Xiaodan Tian¹; Chris Janus²; David Westaway²; Marilena Manea¹; Paul Fraser²; Peter St.George Hyslop²; Michael Przybylski¹; ¹*Department of Chemistry, Analytical Chemistry, Konstanz, Germany*; ²*Centre for Research in Neurodegenerative Diseases, Toronto, Canada*
- ThPR 304 **Mass Spectrometry of Acylated Peptides;** Jenny A Vazquez¹; Eric A Berg¹; Mark J Panepinto¹; Richard E Fine²; Catherine E Costello¹; ¹*Mass Spectrometry Resource, Boston University School of Medicine, Boston, MA*; ²*Department of Biochemistry, Boston University School of Medicine, Boston, MA*
- ThPR 305 **Characterizing Peptide Toxins from *Conus striatus* Using Electrospray Ionization Mass Spectrometry and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry;** Jennifer A. Jakubowski¹; Wayne P. Kelley¹; Joseph Schulz²; William F. Gilly²; Jonathan V. Sweedler¹; ¹*University of Illinois, Urbana-Champaign, Illinois*; ²*Stanford University, Pacific Grove, CA*
- ThPR 306 **A Peptidomics Approach to Neuro modulation in Crustacean Nervous Systems: A Comparative Study using High Resolution Mass Spectrometry;** Lingjun Li; Joshua Schmidt; Kimberly Kutz; Qiang Fu; *University of Wisconsin, Madison, WI*
- ThPR 307 **ESI/MS/MS Method Development for the Identification and Quantitation of Gluten Exorphins;** Christopher L.

Pennington¹; Giuseppe Fanculli²; Ema Fenude²; Troy D. Wood¹; ¹The University at Buffalo, The State University of New York, Buffalo, NY; ²La Univerisdad de Sassari, Sardinia, Italy

- ThPR 308 **Direct Peptide Profiling and Analysis of Differential Gene Expression in Single Neurons by MALDI-TOF MS**; Elena V. Romanova¹; John Koester²; Ferdinand S. Vilim³; Jonathan V. Sweedler¹; ¹Dept. of Chemistry & Beckman Institute, University of Illinois, Urbana, IL; ²Center for Neurobiology & Behavior, New York State Psychiatric Inst., New York, NY; ³Dept. of Physiology & Biophysics, Mount Sinai School of Medicine, New York, NY

PEPTIDES: FRAGMENTATION SEQUENCING

- ThPS1 309 **Surface Induced Dissociation for Practical Peptide Sequencing**; Lori L. Smith; Facundo M. Fernandez; Vicki H. Wysocki; Xi Yang; University of Arizona, Department of Chemistry, Tucson, AZ
- ThPS1 310 **Structure Elucidation of a Six Member Cyclic Peptide from Fungal Culture HK2590 by FTMSn and 2D NMR**; Deborah M. Roll; Xedong Feng; Guy T. Carter; Marshall M. Siegel; Wyeth Research, Pearl River, NY
- ThPS1 311 **Peptide Rearrangement During Quadrupole Ion Trap Fragmentation: Added Complexity to MS/MS Spectra**; Jesús Yagüe¹; Alberto Paradelá¹; Manuel Ramos¹; Samuel Ogueta¹; Anabel Marina¹; Fernando Barahona¹; José A. López de Castro¹; Jesus Vázquez¹; ¹Centro de Biología Molecular "Severo Ochoa", CSIC-UAM, Madrid, Spain; ²Centro de Biología Molecular, Madrid, Spain
- ThPS1 312 **Improved Ion Trap MS/MS Fragmentation of Peptides Using Wideband Excitation**; Jose E. Meza¹; Patrick D. Perkins¹; Friedrich Mandel²; ¹Agilent Technologies, Santa Clara, CA; ²Agilent Technologies, Waldbromm, Germany
- ThPS1 313 **Sequencing of a Peptide Containing a Methionine Sulfoxide Utilizing Mass Gating and Post-source Decay on a Time-of-flight Mass Spectrometer**; Suzanne R. Kalb; Robert J. Cotter; Dept. of Pharmacology, The Johns Hopkins University School of Medicine, Baltimore, MD
- ThPS1 314 **Comparison of Fragmentation and MS/MS Techniques for MALDI**; Randy J. Arnold; Matthew S. Thompson; Weidong Cui; James P. Reilly; Department of Chemistry, Indiana University, Bloomington, IN
- ThPS1 315 **Comparison of the Structural Information Content of High- and Low-energy CID Spectra of the 4.9 kDa Peptide Minor Hevein Obtained by MALDI Seamless PSD and MS/MS as well as ESI MSⁿ**; Martina Marchetti¹; Dietmar Waidelich²; Erich R. Schmid³; Andreas Rizzi³; Chris Sutton⁴; Guenter Allmaier¹; ¹Inst. of Chemical Technol. and Analysis, Vienna Univ. of Technology, Vienna, Austria; ²Applied Biosystems, Darmstadt, Germany; ³Institute for Analytical Chemistry, University of Vienna, Vienna, Austria; ⁴Shimadzu Biotech-Kratos Analytical, Manchester, United Kingdom
- ThPS1 316 **Energy-Resolved Infrared Multiphoton Dissociation for Low Energy Dissociation of Polypeptides – A Tool**; Alexander J Yates; Shabaz Mohammed; Simon J Gaskell; Michael Baber Centre for Mass Spectrometry, UMIST, Manchester, UK
- ThPS1 317 **Dissociation Study of Chemotactic Peptide N-Formyl-Met-Leu-Phe**; Da Ren; Paul Rainville; Himanshu Gadgil; Reb Russell II; Waters Corporation, Milford, MA
- ThPS1 318 **Fast Capillary Exit Voltage Switching During Trappulse Mode of Operation in Micro-LC/MS Separations – As a Tool for Protein Identification and Post - Translational Modification Site Mapping**; Marketa Berkova; Craig, M. Whitehouse; Oleg Borisov; Analytica of Branford, Inc., Branford, CT
- ThPS1 319 **Determination of Protein Acetylation Sites by MALDI Post-Source Decay on Curved-field Reflectron TOF Mass Spectrometer**; Dongxia Wang; Paul R. Thompson; Philip A. Cole; Robert J. Cotter; The Johns Hopkins University School of Medicine, Baltimore, MD
- ThPS1 320 **Simultaneous Acquisition of Peptide Mass Map and Sequence Information for Peptides, Peptide Mixtures, and Protein Digests Employing MALDI-IM-SID-TOF-MS with a Micro-Crystal ND:YAG (355nm) kHz Laser**; Earle G. Stone; Kent J. Gillig; Shane E. Tichy; David H. Russell; Texas A&M University, College Station, TX
- ThPS1 321 **Profiling of Cyclic Hexadepsipeptides Roseotoxins Synthesized in vitro and in vivo: A Combined Tandem Mass Spectrometry and Quantum Chemical Study**; Alexandr Jegorov¹; Bela Paizs²; Martin Zabka³; Marek Kuzma⁴; Anastasios E. Giannakopoulos⁵; Peter J. Derrick⁵; Vladimir Havlicek⁴; ¹IVAX-Pharmaceuticals, Ceske Budejovice, Czech Republic; ²Deutsches Krebsforschungszentrum, Heidelberg, Germany; ³University of Southern Bohemia, Ceske Budejovice, Czech Republic; ⁴Institute of Microbiology, Prague 4, Czech Republic; ⁵University of Warwick, Coventry, United Kingdom
- ThPS1 322 **Fragmentation Reactions of Protonated Tripeptides Containing Proline**; R. Natasha Grewal¹; Alex G. Harrison²; K.W. Michael Siu¹; Alan C. Hopkinson¹; ¹York University, Toronto, Canada; ²University of Toronto, Toronto, Canada
- ThPS1 323 **Factors Affecting Gas-phase Deuterium Scrambling in Peptide Ions**; Jeroen AA Demmers; Dirk TS Rijkers; Johan Haverkamp; J Antoinette Killian; Albert JR Heck; Utrecht University, Utrecht, The Netherlands
- ThPS1 324 **A Method for Auto Calibrating MS-MS Spectra for Peptide Analytes**; alexis j polley; steve thompson; vic parr; Scientific analysis instruments, manchester, UK
- ThPS1 325 **Characterising the Di-Sulphide Bridging Motif in β -Defensins; Can we Link Structure to Activity?**; Nick C Polfer¹; Julia R Dorin²; Dominic J Campopiano¹; Perdita E Barran¹; ¹The School of Chemistry, The University of Edinburgh, Edinburgh, UK; ²The School of Chemistry, The University of Edinburgh, Edinburgh, UK; ³MRC Human Genetics Unit, Western General Hospital, Edinburgh, UK
- ThPS1 326 **Sequence Analysis of Peptide Epitopes Presented by HLA Class I Molecules: a Comparison Between Different MS/MS Techniques**; Andrea Schmidt¹; Eric Schulz¹; Andreas Dörrschuck²; Wolfgang Herr²; Michael Karas¹; ¹Institute of Pharmaceutical Chemistry, J.W. Goethe University, Frankfurt, Germany; ²III. Medizinische Klinik, Johannes Gutenberg University, Mainz, Germany
- ThPS1 327 **Application of a Molecular Orbital Model for Interpreting Fragmentation Profile of Peptides in MS/MS**; Kiyomi Yoshinari¹; Atsushi Ohtake¹; Akihiro Sano¹; Kinya Kobayashi¹; Shinji Nagai²; Yoshinori Satomi³; Toshifumi Takao³; ¹Hitachi Research Laboratory, Hitachi, Ltd, Ibaraki, Japan; ²Design&Manufacturing Group, Hitachi High-Technologies Corporation, Hitachinaka, Ibaraki, Japan; ³Institute for Protein Research, Osaka University, Suita, Osaka, Japan
- ThPS1 328 **Charge-State Selective Fragmentation Analysis for Protonated Peptides in IRMPD and CID**; Kazuhiko Fukui¹; Yasuhide Naito²; Katsutoshi Takahashi¹; ¹Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan; ²Computational Biology Research Center, AIST, Tokyo, Japan
- ThPS1 329 **Structure Determination of MHC Class I Peptides of Renal Carcinoma Cells on an AP-MALDI/ESI Ion Trap and a MALDI-PSD-TOF Instrument**; Vinh An Thieu¹;

- Dieter Kirsch¹; Thomas Flad¹; C.A. Mueller¹; Bernhard Spengler¹; ¹*Institute of Inorganic and Analytical Chemistry /University of Giessen, Giessen, Germany*
- ThPS1 330 **Influence of Sequence on the Formation of (b_n) Type Product Ions;** Manohari Silva; Annie Wu; Michael Van Stipdonk; *Wichita State University, Wichita, KS*
- ThPS1 331 **Fragmentation Pathways of Protonated Peptides;** Béla Paizs; Sándor Suhai; *Deutsches Krebsforschungszentrum, Heidelberg, Germany*

PEPTIDES: GENERAL

- ThPS2 332 **Mass Spectrometric Analysis of Dye-sensitized Photo-Oxidation of Peptides;** N. Karoline Scheffler; Elke Horstkotte; Jens Niewoehner; Stefan W. Henning; *Xerion Pharmaceuticals AG, Martinsried, Germany*
- ThPS2 333 **A Study of Biomolecular Interaction Emphasizing the Roles of Cation- π Interaction and of Phosphorylated Biomolecules;** Amina S. Woods; *NIDA IRP, NIH, Baltimore, MD*
- ThPS2 334 **Amino Acid Reactivity of RNA Chemical Modifiers Used to Probe the Structure of Protein RNA-Complexes;** Olusimidele T Akinsiku; Eizadora Yu; Daniele Fabris; *University of Maryland, Baltimore County, Baltimore, MD*
- ThPS2 335 **Speciation and Characterization of Dissolved Metal-Binding Peptides using Electrospray MS and MS/MS;** Sarah L. Luettgen¹; Stephen J. Ambrose²; Douglas J.H. Olson²; Andrew R.S. Ross²; ¹*University of Victoria, Victoria, Canada*; ²*National Research Council Canada, Saskatoon, Canada*
- ThPS2 336 **Recognition of Cysteine-Containing Peptides through Prompt Fragmentation of the 4-Dimethylaminophenylazophenyl-4'-maleimide Derivative During Analysis by MALDI-MS;** Chad R. Borges; J. Throck Watson; *Michigan State University, East Lansing, MI*
- ThPS2 337 **Using Deuterated Mobile Phase to Determine the Presence and Location of t-Boc Protected Amines in Synthetic Peptides;** Paul G. Cummings¹; Sonya Kennedy-Gabb¹; Gudrun Trescher¹; Mark A. Olsen¹; Cristina N. Villalobos²; Christian Wolf²; ¹*Georgetown University, Washington, DC*; ²*GlaxoSmithKline, King of Prussia, PA*
- ThPS2 338 **Analysis of Modified Forms of Bioactive Peptides by Electrospray Mass Spectrometry;** Ermias Melles; Tomas Bergman; Gunvor Alvelius; Andreas Jonsson; Hans Jörnvall; *Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden*
- ThPS2 339 **Identification of Peptides from Eggcase Silk Proteins of *Latrodectus hesperus* (Black Widow Spider);** Xiaoyi Hu¹; Craig Vierra²; Arnold M. Falick³; Jing Yuan¹; O. David Sparkman¹; Patrick R. Jones¹; ¹*Chemistry Department, University of the Pacific, Stockton, CA*; ²*Biology Department, University of the Pacific, Stockton, CA*; ³*Howard Hughes Medical Institute, University of California, Berkeley, CA*
- ThPS2 340 **The Role of Mass Spectrometry in Developing a Standard-Module Strategy for Disulfide-linked Polypeptide Nanostructures;** Olga A. Mirgorodskaya¹; Kim F. Haselmann¹; Frank Kjeldsen¹; Peter Roepstorff²; Roman A. Zubarev³; ¹*Department of Chemistry, University of Southern Denmark, Odense, Denmark*; ²*Department of Molecular Biology, University of Southern Denmark, Odense, Denmark*; ³*Division of Ion Physics, Uppsala University, Uppsala, Sweden*
- ThPS2 341 **An Integrated Multidimensional LC-MS Analysis for Botulinum Neurotoxin Activity;** Dudley Williams¹; Kerry Nugent²; Marc Verhagen¹; Julie Roth¹; ¹*Allergan*

Biopharmaceuticals, Irvine, CA; ²*Michrom Bioresources Inc., Auburn, CA*

- ThPS2 342 **The Electrospray Mass Spectrometry and Tandem Mass Spectrometry of Methylated Peptides;** Clement Poon; Harvey Kaplan; Paul M. Mayer; *University of Ottawa, Ottawa, Canada*
- ThPS2 343 **Detection of Oligopeptides in the Lumbar Spinal Chord of Sciatic Nerve Cuff-implanted Rats;** Pascal Vachon¹; Mike Aguiar¹; Brooks Fallis²; Robert Masse¹; Bernard F Gibbs¹; ¹*MDS Pharma Services, Montreal, Canada*; ²*McGill University, Montreal, Canada*
- ThPS2 344 **Analysis of Peptide Mixtures by Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry: the Contributions of Amino Acids to Signal Intensities of Peptides;** Sabine Baumgart²; Yvonne Lindner¹; Ronald Kühne¹; Holger Wenschuh³; Eberhard Krause¹; ¹*Forschungsinstitut für Molekulare Pharmakologie, Berlin, Germany*; ²*Institut für Biochemie, Charite, Berlin, Germany*; ³*Jerini AG, Berlin, Germany*

PHOSPHOPROTEINS

- ThPT 345 **Characterization of Protein Kinase A (PKA) Phosphorylation, A Multi-Technique Approach to Phosphate Mapping;** Robert W. Johnson¹; Jianwei Shen¹; Richard Smith²; Vincent Stoll²; Rohinton Edalji²; Clarissa Jakob²; Karl Walter²; Angelo Gunasekera³; Michael J. Chalmers⁴; Kristina Hakansson⁴; Mark R. Emmett⁴; Alan G. Marshall⁴; ¹*Abbott Laboratories Structural Chemistry, Abbott Park, IL*; ²*Abbott Laboratories Structural Biology, Abbott Park, IL*; ³*Abbott Laboratories Cancer Exploratory Biology, Abbott Park, IL*; ⁴*National High Magnetic Field Laboratory, Tallahassee, FL*
- ThPT 346 **PKC Induced Phosphorylation of Bovine Rhodopsin in Rod-Outer Segment;** Zohra Olumee-Shabon; Kirk Hines; Burton J. Litman; Hee-Yong Kim; *NIAAA/NIH, Rockville, MD*
- ThPT 347 **An Effective Strategy for Identification of *in vivo* Protein Kinase Substrates Using KESTREL Coupled with Multidimensional Phosphopeptide Mapping;** Dean E. McNulty; Roland S. Annan; *GlaxoSmithKline Pharmaceuticals, King of Prussia, PA*
- ThPT 348 **Naturally Phosphorylated Proteins in the Photosynthetic Membranes of *Arabidopsis thaliana* Identified by Electrospray Ionization Mass Spectrometry;** Maria Hansson; Alexander V. Vener; *Linköping University, Linköping, Sweden*
- ThPT 349 **Locating Substrate and Inhibitor Binding Sites on the Cgmp Dependent Protein Kinase using Photoaffinity Labeling And Mass Spectrometry;** Martijn W.H. Pinkse¹; Arjen Scholten²; Dirk T.S. Rijkers¹; Claudia S. Maier³; Wolfgang R.G. Dostmann²; Albert J.R. Heck¹; ¹*Utrecht University, Utrecht, The Netherlands*; ²*University of Vermont, Burlington, United States of America*; ³*University of Vermont, Burlington, VT*
- ThPT 350 **Identification of Bacterial Phosphoproteins by Immobilized Metal Affinity Chromatography and NanoLC-MS/MS;** Sebastien Voisin; David Watson; Martin Young; Wen Ding; Luc Tessier; John Kelly; *Institute for Biological Sciences, National Research Council, Ottawa, Canada*
- ThPT 351 **Comparative Phosphorylation Site Mapping using N-terminal Isotope encoded Tagging (NIT);** Francesca Zappacosta; Roland S. Annan; *GlaxoSmithKline, King of Prussia, PA*
- ThPT 352 **Exploring the *Arabidopsis thaliana* Plasma Membrane Phosphoproteome;** Adrian D. Hegeman; Clark J. Nelson; Amy C. Harms; Michael R. Sussman; *Biotechnology Center/ University of Wisconsin, Madison, WI*

- ThPT 353 **Detection of Phosphorylated Peptides from Data-Dependent MS3 Neutral-Loss Scans using a Linear Ion Trap Mass Spectrometer**; Amy M. Zumwalt; Gargi Choudhary; Diane Cho; Eric Hemenway; Jim Shofstahl; Iain Mylchreest; *Thermo Finnigan, San Jose, CA*
- ThPT 354 **Identification and Characterization of Phosphorylated Proteins in the Human Pituitary**; Francesco Giorgianni; Sarka Beranova-Giorgianni; Dominic M. Desiderio; *University of Tennessee Health Science Center, Memphis, TN*
- ThPT 355 **Simultaneous Phosphopeptide Mapping by Phosphospecific Ion Monitoring and LC/MS/MS Sequencing**; Greg Waite¹; Jon Williams¹; Craig Wagner¹; ¹*GlaxoSmithKline, Research Triangle Park, NC*; ²*GlaxoSmithKline, Research Triangle Park, NC*
- ThPT 356 **Molecular Weight Determination, Partial De Novo Sequencing and Identification of Endogenous Phosphorylation Sites of Bovine Neurofilament Protein Subunits**; Sarah Trimpin¹; Martha Degen¹; April E. Mixon¹; Moo-Young Kim¹; Peter S. Spencer²; Max L. Deinzer¹; ¹*CROET, Oregon Health & Science University, Portland, OR*; ²*Department of Chemistry, Oregon State University, Corvallis, OR*
- ThPT 357 **Identification of Novel Phosphorylation Sites on Tristetraprolin (TTP) imparted by MAP Kinase-Activated Protein Kinase 2 (MK2) and the Implications for the TNF- α Induced Inflammatory Response**; Melanie J Schroeder; Carol A Chrestensen; Mark T Worthington; Jeffrey Shabanowitz; Thomas W Sturgill; Donald F Hunt; *University of Virginia, Charlottesville, VA*
- ThPT 358 **Phosphoproteome Analysis of U937 Differentiated Cell Extracts**; Alexandra M Fürtös-Matej; Manon Ouimet; Sylvie Laboissiere; Eustache Paramithiotis; Pierre Thibault; *Caprion Pharmaceuticals, Montreal, Canada*
- ThPT 359 **In vivo Identification of the Rad53p Phosphorylation Sites using Nano-HPLC Micro-ESI Mass Spectrometry**; E. Yang¹; F. Sweeney²; A. Chi¹; D. Durocher²; J. Shabanowitz¹; D.F. Hunt³; ¹*Department of Chemistry, University of Virginia, Charlottesville, VA*; ²*Samuel Lunenfeld Research Institute, Toronto, Canada*; ³*Department of Chemistry and Pathology, University of Virginia, Charlottesville, VA*
- ThPT 360 **Identification of Sml1 *in vitro* Phosphorylation Sites by ESI-FTICR-MS**; Tomoaki Uchiki¹; Chris Dealwis²; Robert L Hettich³; ¹*Genome Science and Technology Graduate School, University of Tennessee, Knoxville, TN*; ²*Biochemistry, Cellular and Molecular Biology Department, University of Tennessee, Knoxville, TN*; ³*Chemical Science Division, Oak Ridge National Laboratory, Oak Ridge, TN*
- ThPT 361 **2D-LC for Selective Extraction of Phosphopeptides using Titanian Precolumn**; Kenichi Suzuki¹; Ikuma Kuroda²; Masahiro Furuno²; Hiroshi Nakamura³; ¹*GL Sciences Inc., Shinjuku, Japan*; ²*GL Sciences Inc., Iruma, Japan*; ³*Faculty of Pharmaceutical Sciences, Science University of Tokyo, Shinjuku, Japan*
- ThPT 362 **Electrospray Ionization Mass Spectrometry (ESI MS) of Isotopically and Chemically Labeled Proteins Produced in Insect Cells**; Cinzia Cristiani¹; Sandrine Thieffine¹; Silvia Messali¹; Beatrice Saccardo¹; Arndt Schnuchel²; Luisa Rusconi¹; ¹*Pharmacia Italia SpA, Biology Dept, Nerviano, Italy*; ²*Pharmacia Italia SpA, Chemistry Dept, Nerviano, Italy*
- ThPT 363 **Identification and Functional Characterization of Phosphorylation Sites in the Upstream Binding Factor**; Mark D. Platt¹; C. Huie Lin²; Scott B. Ficarro³; Mark H. Hoofnagle²; Lucio Comai⁴; Jeffrey Shabanowitz¹; Gary K. Owens²; Donald F. Hunt¹; ¹*UVA Department of Chemistry, Charlottesville, Virginia*; ²*UVA Department of Molecular Physiology & Biological Physics, Charlottesville, Virginia*; ³*Genomics Institute of the Novartis Research Foundation, San Diego, California*; ⁴*USC Department of Molecular Microbiology and Immunology, Los Angeles, California*
- ThPT 364 **Selective Detection and Sequencing of Phosphotyrosine Peptides by Nanobore LC-ESMS Using a Quadrupole-TOF MS**; Michael J. Huddleston; Roland S. Annan; *GlaxoSmithKline, King of Prussia, PA*
- ThPT 365 **Phosphoproteomics of Human Thrombin-Stimulated Platelets**; Katrin Marcus; Jan Moebius; Helmut E. Meyer; *Medical Proteom-Center, Ruhr University of Bochum, Bochum, Germany*
- ThPT 366 **A Mechanistic Study of APC Phosphorylation during the G2 to Mitotic Transition using Mass Spectrometry**; Judith Jebanathirajah; Sean Beausoleil; Ann Georgi; Ruihua Fang; Steven Gygi; Marc Kirschner; *Harvard Medical School, Boston, MA*
- ThPT 367 **Using "Ion Mapping" Technology to Identify Phosphorylation Sites**; Andrew West; Sarah, J Murray; Alastair, D Reith; Klaus Schneider; Dimitris Anastasiou; *GlaxoSmithKline Pharmaceuticals, Harlow, U.K.*
- ThPT 368 **Analysis of the Arabidopsis Thaliana Phosphoproteome by Mass Spectrometry**; Camille N Strachan¹; Stanley Stevens²; Laszlo Prokai²; James Winefordner¹; Nancy Denslow³; Alice Harmon⁴; ¹*Department of Chemistry, University of Florida, Gainesville, FL*; ²*Department of Medicinal Chemistry, University of Florida, Gainesville, FL*; ³*Department of Biochem. and Molecular Biology, University of Florida, Gainesville, FL*; ⁴*Department of Botany, University of Florida, Gainesville, FL*
- ThPT 369 **Phosphorylation Site Identification of Bovine Alpha Crystallin A Chain Using "Top Down" and "Bottom Up" Sequencing**; Jason M. Hogan; Sharon J. Pitteri; Ethan R. Badman; Scott A. McLuckey; *Purdue University, West Lafayette, IN*
- ThPT 370 **Identification of Phosphorylation Sites in Troponins using MALDI TOF Mass Spectrometry**; Xiaofeng Yang¹; Tomoyoshi Kobayashi²; Huaping Wu¹; R. John Solaro²; Richard B. van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL*; ²*Dept. of Medicinal Chemistry, Univ. of Illinois at Chicago, Chicago, IL*; ³*University of Illinois College of Medicine, Chicago, IL*; ⁴*Dept. of Physiology and Biophysics, Univ. of Illinois at Chicago, Chicago, IL*
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- PROTEINS: FOLDING**
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- ThPU 371 **Hydrogen/Deuterium Exchange and MALDI-MS Analysis of Solvent Accessibility Related to the Formation of Amyloid Fibrils in HET-s Prion Protein**; Alexis Nazabal¹; Suzana Dos Reis²; Marc Bonneau³; Sven.J Saupé²; Jean-Marie Schmitter¹; ¹*European Institute of Chemistry and Biology, Pessac, France*; ²*Institut de Biochimie et de Génétique Cellulaire, UMR 5095 CNRS, Bordeaux, France*; ³*Laboratoire de Génomique Fonctionnelle, UBII, Bordeaux, France*
- ThPU 372 **Investigations into beta2-Microglobulin Folding Conformations and Associated Fibril Formation using Electrospray Ionisation Charge State Distribution Analysis and MS/MS Analysis of Proteolytic Digestion Products**; Alison E Ashcroft; Antoni J H Borysyc; Sarah L Myers; Sheena E Radford; *University of Leeds, Leeds, UK*
- ThPU 373 **Probing the Structure of Actin Subunits of F-Actins in Solution by Hydroxyl Radicals and Mass Spectrometry**; Jing-Qu Guan; Steve C Almo; Mark R Chance; *Albert Einstein College of Medicine, Bronx, NY*
- ThPU 374 **Optimization of Conditions for Monitoring Hydrogen/Deuterium Exchange in Proteins by MALDI-**

- TOF-MS; Xue Li**; Rhonda Husain; J. Throck Watson; *Michigan State University, East Lansing, MI*
- ThPU 375 **Photochemical Protein Surface Mapping as an Indicator of Computational Structure Model Accuracy; Joshua S. Sharp¹**; Juntao Guo¹; Vibha Gupta⁴; Tomoaki Uchiki¹; Kyle Ellrott¹; Jeffrey M. Becker¹; Dong Xu³; Ying Xu³; Chris Dealwis¹; Robert L. Hettich²; *¹School of Genome Science and Technology, University of Tennessee, Knoxville, TN; ²Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN; ³Computational Biology Group, Oak Ridge National Laboratory, Oak Ridge, TN; ⁴BCMB Department, University of Tennessee, Knoxville, TN*
- ThPU 376 **Use of Different Proteases Working in Acidic Conditions to Improve Sequence Coverage and Resolution in H/D Exchange of Large Proteins; Laetitia Cravello**; David Lascoux; Otto Dideberg; Eric Forest; *Institut de Biologie Structurale, Grenoble, France*
- ThPU 377 **Kinetic Refolding of Alpha-Tryptophan Synthase Studied by Hydrogen Exchange/Mass Spectrometry; Patrick L. Wintrode¹**; Ramakrishna Vadrevu²; C. Robert Matthews²; David L. Smith¹; *¹Department of Chemistry, University of Nebraska, Lincoln, NE; ²Dept. of Chemistry & Molecular Pharmacology, U. Mass. Medical School, Worcester, MA*
- ThPU 378 **Probing Heat Shock Proteins Conformational Change upon Mild Heat Treatment using H/D Exchange and Mass Spectrometry; Melissa L DeFilippo**; Nigel P Ewing; Kerrie Morin; Zhifang S Jiang; Gregg Chenail; Stephen Monks; Ramesh Kashi; Chuanliang Liu; James Zabrecky; *Antigenics, Inc, Woburn, MA*
- ThPU 379 **Covalent Alkyl Hydrogen/Deuterium Exchange-Tandem Mass Spectrometry for Protein Structural Analysis; Jennifer F. Nemeth-Cawley¹**; Benlian Wang²; Stephen J. Coales¹; Vernon E. Anderson²; Patrick R. Griffin¹; *¹ExSAR, Monmouth Junction, NJ; ²Case Western Reserve University, Cleveland, OH*
- ThPU 380 **Structural Changes During Arrestin2 Activation Probed with Hydrogen Exchange and Mass Spectrometry; Jennifer M. Carter¹**; Eric R. Prossnitz²; Vselovod V. Gurevich³; John R. Engen¹; *¹Department of Chemistry, University of New Mexico, Albuquerque, NM; ²Department of Cell Biology and Physiology, University of New Mexico, Albuquerque, NM; ³Department of Pharmacology, Vanderbilt University Medical Center, Nashville, TN*
- ThPU 381 **Characterization of Amyloid Fibrils formed by the PI3-SH3 Domain; Gemma L Caddy**; Natalia Carulla; Jesus Zurdo; Christopher M Dobson; Carol V Robinson; *University of Cambridge, Cambridge, UK*
- ThPU 382 **Probing Protein Folding by Mass Spectrometric Hydrogen/Deuterium Exchange Measurements; Navindra J. Ramjit**; Elizabeth M. Meiering; Terry B. McMahon; *University of Waterloo, Waterloo, Canada*
- ThPU 383 **The Effects of Signal Sequence on the Unfolding of DHFR by Hydrogen Exchange Mass Spectrometry (HX MS); Suma Kaveti**; Yan Wu; John R. Engen; *Department of Chemistry, University of New Mexico, Albuquerque, NM*
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- PROTEOMICS: BIOCHEMISTRY**
- ThPV1 384 **Metallo-peptides, a Cautionary Tale!; David J Evason**; Steve P Thompson; Alexis J Polley; Victor C Parr; *Scientific Analysis Instruments Ltd., Manchester, United Kingdom*
- ThPV1 385 **Determination of Potential Protein Binding Targets of Histatin 5 in *Saccharomyces cerevisiae*; Sibylle M. Heidelberger**; Gilles A. Lajoie; *University of Western Ontario, London, Canada*
- ThPV1 386 **Molecular Characterization of Protein Sumoylation using Nano-HPLC/MS/MS; Yue Chen; Sung Won Kwon**; Anthony Anselmo; Michael White; Yingming Zhao; *UT Southwestern Medical Center at Dallas, Dallas, TX*
- ThPV1 387 **Molecular Structure of Tissue Transglutaminase-Gliadin Peptide Complexes Elucidated by MALDI-TOF-MS, NanoESI-MS/MS and LC-MS; Burkhard Fleckenstein¹**; Shuo-Wang Qiao²; Ludvig M Sollid²; Peter Højrup¹; Peter Roepstorff²; *¹Dep. of Biochemistry and Mol. Biol., University of Southern Denmark, Odense, Denmark; ²Institute of Immunology, The National University Hospital, Oslo, Norway*
- ThPV1 388 **Proteomic Investigation of Biominalization in Mussels; Jing Huang**; Hailong Zhang; Vernon Reinhold; *University of New Hampshire, Durham, NH*
- ThPV1 389 **Enzyme Kinetics: The Use of Mass Spectroscopy as a New Tool in Determining the Nature of Transient Species in the Catalytic Mechanism of Enzymes; Cristina M Furdui**; Karen S Anderson; *Yale University, School of Medicine, New Haven CT*
- ThPV1 390 **Evaluation of an Automated Multi-dimensional LC-MS System for Peptide Separations using *S. cerevisiae* as a Model System; Dawn M. Maynard**; Junichi Masuda; Jeffrey A. Kowalak; Sanford P. Markey; *National Institute of Mental Health (NIMH/NIH), Bethesda, MD*
- ThPV1 391 **Probing the Protein Partners in Huntington's Disease; Dyna I. Shirasaki¹**; Joseph A. Loo¹; Allan J. Tobin²; *¹University of California-Los Angeles, Dept of Chemistry & Biochemistry, Los Angeles, CA; ²University of California-Los Angeles, Brain Research Institute, Los Angeles, CA*
- ThPV1 392 **Global Analysis of *Shewanella oneidensis* Strain MR-1 Proteome using Accurate Mass Tags; Mary S. Lipton**; Dwayne A. Elias; Ljiljana Pasa-Tolic; Gordon A. Anderson; Kim K. Hixson; Ron Moore; Margie F. Romine; Yuri A. Gorby; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- ThPV1 393 **Characterization of the AhR Complex in Malignant Tumor Cells by Mass Spectrometry; Biplab K. Das**; Donghui Liu; Devid H. Sherr; Catherine E. Castello; *Boston University, Boston, MA*
- ThPV1 394 **Identification of 3-Isopropylmalate as a Novel Substrate for the Yeast *trans*-Aconitate Methyltransferase (TMT1) Gene Product: Implications for a Common Repair Pathway in Methylene Addition Biochemistry; Jonathan E. Katz**; Darren S. Dumlao; Jacob I. Wasserman; Michael E. Jung; Kym F. Faull; Steven G. Clarke; *University of California, Los Angeles, Los Angeles, CA*
- ThPV1 395 **Proteomics Analysis of Human Cerebrospinal Fluid: An Evaluation of the Between-gel Reproducibility of Two-dimensional Gel Electrophoresis; Doris E. Terry**; Dominic M. Desiderio; *University of Tennessee, Memphis, TN*
- ThPV1 396 **Protein Expression in Marine *Synechococcus*; Konstantinos Thalassinou**; Jim Scrivens; Martha Clokie; Nick Mann; Sue Slade; Wendy Foxall; *University of Warwick, Coventry, UK*
- ThPV1 397 **De Novo Protein Sequencing of Heat Resistant Proteins Found in Sacred Lotus; Kerry M. Wooding¹**; Heidi Zhang¹; Paul C. Goodley³; Joseph A. Loo¹; Jane Shen-Miller²; *¹University of California-Los Angeles, Dept. of Chem. and Biochem., Los Angeles, CA; ²University of California-Los Angeles, Dept. of Organismic Biol., Los Angeles, CA; ³Agilent Technologies, Palo Alto, CA*
- ThPV1 398 **Protein Complexes in Organelles of Arabidopsis Thaliana and Other, Non-sequenced, Higher Plants; Jean-Benoit Peltier; Yang Cai**; Giulia Friso; Andrea

Rudella; Lisa Giacomelli; Jimmy Ytterberg; Klaas J van Wijk; *Department of Plant Biology, Cornell University, Ithaca, New York*

- ThPV1 399 **Novel Methylation Sites in Histone H2B;** Xinzhao Jiang; Kangling Zhang; Yinsheng Wang; *University of California, Department of Chemistry, Riverside, CA*
- ThPV1 400 **Charting the Proteome of *Tetrahymena Thermophila* via 2-dimensional electrophoresis, MALDI TOF MS and MS/MS, as well as ESI TOF MS/MS;** Jeffrey C Smith; Kalkidan Belay; Scott Beeser; Alex Keuroghlian; Ronald E Pearlman; K. W. Michael Siu; *Centre for Research in Mass Spectrometry, York University, Toronto, Canada*
- ThPV1 401 **A Novel SEC-MS Method for the Study of Proteins and Their Interactions;** Himanshu S. Gadgil; Da Ren; Paul Rainville; Jeff R. Mazzeo; Reb J. Russell II; *Waters Corporation, Milford, MA*
- ThPV1 402 **Comprehensive Analysis of the THP-1 Lipid Raft Proteome with SDS-aided in-solution Digestion and Off-line HPLC MALDI MS/MS Sequencing;** Nan Li¹; Nan Zhang¹; Allan Mak²; Andrew R. Shaw²; Liang Li¹; ¹*Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada;* ²*Department of Oncology, Cross Cancer Institute, University of Alberta, Edmonton, Alberta, Canada*

PROTEOMICS: CANCER BIOMARKERS

- ThPV2 403 **Identification of Differentially Expressed Proteins in Hepatocellular Carcinoma Developed in Patients with Chronic Viral Hepatitis C;** Jean-Marie Schmitter¹; Marc Bonneau²; Jean-Frédéric Blanc³; Antoine De Daruvar²; Katell Bathany¹; Géraldine Gourgues²; C Lalanne³; P Bioulac-Sage³; Charles Balabaud³; Christophe Plomion⁴; Jean Rosenbaum³; ¹*European Institute for Chemistry and Biology, Pessac, France;* ²*IBGC CNRS UMR 5095 Université Bordeaux 2, Bordeaux, France;* ³*GREF INSERM EMI 9917 Université Bordeaux 2, Bordeaux, France;* ⁴*INRA, Pierroton, France*
- ThPV2 404 **Cancer Angiomics: Mapping Accessible Vascular Proteins for Molecular Imaging & Targeted Therapy of Solid Tumors;** Phil Oh; Jacqueline Testa; Jan Schnitzer; *Sidney Kimmel Cancer Center, San Diego, CA*
- ThPV2 405 **Hepatocellular Carcinoma: Identification of Differentially Expressed Proteins Using Proteomic Approach;** Chen Li¹; Shi-Jian Ding¹; Hu Zhou¹; Ye-Xiong Tan²; Qi-Chang Xia¹; Hong-Yang Wang²; Rong Zeng¹; ¹*Shanghai Institutes for Biological Sciences, Shanghai, China;* ²*Eastern Hepatobiliary Surgery Institute, Shanghai, China*
- ThPV2 406 **Expression Analysis of Secreted Proteins and the Presence or Absence of Metastatic Behavior in Human MDA-MB-435 Cell Lines by a Mass Mapping Technique;** Paweena Kreunin¹; Steve Goodison²; David M Lubman¹; ¹*University of Michigan-Ann Arbor, Ann Arbor, MI;* ²*University of California-San Diego, La Jolla, CA*
- ThPV2 407 **Differential Expression of Histone Post-translational Modifications in Tumors Determined by High-pressure Liquid Chromatography and Mass Spectrometry;** Michael A. Freitas¹; Liwen Zhang¹; Nanette Kleinholtz¹; Kari B. Green-Church¹; Mark R. Parthun¹; Samson Jacobs¹; Yvonne P Dragan²; ¹*The Ohio State University, Columbus, OH;* ²*Food and Drug Administration, Jefferson, AR*
- ThPV2 408 **Proteome Analysis Based on Large-Scale Analysis of MHC Peptides;** Eilon Barnea¹; Ilan Beer²; Lior Dassau¹; Hava Segal¹; Rivka Sharon¹; Tamar Ziv¹; Arie Admon¹; ¹*Technion - Israel Institute of Technology, Haifa, Israel;* ²*IBM Research Laboratory, Haifa, Israel*
- ThPV2 409 **Comparative Two-dimensional Gel Electrophoresis and 2-Dimensional Nanoliquid Chromatography Coupled On-Line with Mass Spectrometry for Comparative Studies of Nuclear Protein Extracts from a Max Induced Ecr 293 Cell Line: Protein Identification and Evaluation of Expression Level;** Geneviève Dufresne-Martin¹; Jean-François Naud²; Pierre Lavigne¹; Benoît Chabot²; Klaus Klarskov¹; ¹*Dep. Pharmacology, Fac. of Medicine, University of Sherbrooke, Sherbrooke, Quebec, Canada;* ²*Dep. Microbiol. and Infections, Fac. of Med., Univ. of Sherbrooke, Sherbrooke, Quebec, Canada*
- ThPV2 410 **Plasma Protein Profiling with Offline Parallel Separations and MALDI MS;** John M. Koomen¹; Lichen Nancy Shih²; Isaiah J. Fidler²; Lianchun Xiao³; Kevin R. Coombes³; Donghui Li⁴; James L. Abbruzzese⁴; Ryuji Kobayashi¹; ¹*Molecular Pathology University of Texas MD Anderson Cancer Center, Houston, TX;* ²*University of Texas MD Anderson Cancer Center, Houston, TX;* ³*Cancer Biology University of Texas MD Anderson Cancer Center, Houston, TX;* ⁴*Biostatistics University of Texas MD Anderson Cancer Center, Houston, TX*
- ThPV2 411 **Identification of Differentially Expressed Proteins in Gastric Adenocarcinoma, from Samples Obtained by Laser Capture Microdissection;** Uros Rajcevic¹; Maja Matis¹; Jeffrey R. Lee¹; Radovan Komel²; Jasna Peter-Katalinic³; ¹*IMMAG, Medical College of Georgia, Augusta, GA;* ²*Institute of Biochemistry, Faculty of Medicine, Ljubljana, Slovenia;* ³*Institute of Medical Physics and Biophysics, University of Muenster, Muenster, Germany*
- ThPV2 412 **Using Ion Mobility/Time-of-Flight Mass Spectrometry for Comparative Proteomics;** Gary Lavine; Steve Valentine; Tom Londo; Stephen Naylor; *Beyond Genomics, Waltham, MA*
- ThPV2 413 **Proteomic Approach to Elucidate the Role of the Growth Factor Progranulin in Cancer Development;** Leonid Kriazhev¹; Marcos DiFalco¹; Andrew Bateman²; ¹*Genome Quebec, Montreal, Canada;* ²*McGill University, Montreal, Canada*
- ThPV2 414 **Development of a High Throughput Screening Strategy for Identifying Disease Markers using 1D SDS-PAGE and MALDI TOF/TOF Mass Spectrometry;** Katherine E Williams; Robert J Chalkley; Kirk C Hansen; Lan Huang; A. L. Burlingame; Maria G. Pallavicini; *University of California San Francisco, San Francisco, CA*
- ThPV2 415 **Proteomic Analysis of Human Body Fluids by LC-MS/MS;** Mads Gronborg; Troels Z.G. Kristiansen; Henrik Molina; Dario Kalume; Akhilesh Pandey; *Johns Hopkins University, Baltimore, MD*
- ThPV2 416 **A Proteomics Profile of ATRA in the Treatment of Acute Promyelocytic Leukemia;** Michael N Harris¹; Bulent Ozpolat²; Fadi Abdi³; Kwasi Mawuenyega¹; Xian Chen¹; ¹*Los Alamos National Laboratory, Los Alamos, NM;* ²*The University of Texas-Houston M.D. Anderson Cancer Center, Houston, TX;* ³*Applied Biosystems, Foster City, CA*
- ThPV2 417 **Identification of New Differentially Expressed Stomach Cancer Markers from Silverstained 2D Gels;** Stephanie Lamer¹; Marie-Laure Fogeron¹; Tatiana Ilyina¹; Matthias Pross²; Matthias Ebert²; Christoph Röcken²; ¹*Europroteome AG, Hennigsdorf/Berlin, Germany;* ²*University Magdeburg, Medical Faculty, Magdeburg, Germany*
- ThPV2 418 **Comprehensive vs. Targeted Proteomics Approaches for the Identification of Differentially Expressed Plasma Membrane Proteins from Lung and Colon Cancer Tissues;** Pierre Thibault; Alain Carrier; Daniel Chelsky; Michel Dominguez; Navdeep Jaitly; Paul

- Kearney; Sylvie Kieffer-Jaquinod; Les Kondejewski; Joel Lanoix; Joachim Ostermann; Sylvie Plante; John Tsang; *Caprion Pharmaceuticals, Montreal, Quebec, Canada*
- ThPV2 419 **A Novel Functional Proteomics Approach for the Identification and Validation of New Drug Targets;** Claudia Torella; *Xerion Pharmaceuticals AG, Martinsried, Germany*
- ThPV2 420 **Combining Laser Capture Microdissection with MALDI MS for Disease Profiling;** Baogang J Xu¹; Robert J Coffey¹; Robert H Whitehead¹; Richard M Caprioli¹; ¹*Vanderbilt University, Nashville, TN*; ²*University of Texas, Houston, TX*

PROTEOMICS: FUNDAMENTAL – OTHER/NEW

- ThPV3 421 **Identification of Active-Site Cysteines in Vitamin K-Dependent-Glutamyl Carboxylase by Chemical Modification, Select Proteolysis, and MS/MS Analysis;** Jian_Ke Tie¹; Kevin L. Carrick²; Vasantha P. Mutucumarana¹; Pen-Jen Lin¹; Colleen Scott²; Craig S. Wilcox²; Marshall Pope³; Darrel W. Stafford¹; ¹*Univ. of North Carolina, Dept. of Biology, Chapel Hill, NC*; ²*Univ. of Pittsburgh, Dept. of Chemistry, Pittsburgh, PA*; ³*Univ. of North Carolina, Dept. of Biochemistry and Biophysics, Chapel Hill, NC*
- ThPV3 422 **Subproteomics: Identification of Single Cell Proteins from *Arabidopsis Thaliana* Trichomes using 1-D Nano LC-MS/MS;** Stefanie Wienkoop; Mirko Glinski; Wolfram weckwerth; *Max-Planck-Institute of Molecular Plant Physiology, Potsdam, Germany*
- ThPV3 423 **Identification of Expressed Surface Proteins of *Geobacter sulfurreducens* Grown in the Presence of Fumarate and Fe(III) Citrate;** Kim K Hixson¹; Derek R Lovley²; Susan E Childers²; Kenneth J Auberry¹; Harold R Udseth¹; Mary S Lipton¹; Richard D Smith¹; ¹*Pacific Northwest National Laboratory, Richland, WA*; ²*University of Massachusetts, Amherst, MA*
- ThPV3 424 **NanoLC-ESI MS Analysis of Brain Protein and Peptide Degradation: a Post-Mortem Time-course Study;** Karl Skold¹; Marcus Svensson¹; Mathias Norrman¹; Per Svenningsson²; Per Andren¹; ¹*Uppsala University, Uppsala, Sweden*; ²*Karolinska Institute, Stockholm, Sweden*
- ThPV3 425 **Factors that Contribute to the Complexity of Protein Digests;** Katalin F. Medzihradzsky; *Department of Pharmaceutical Chemistry, UCSF, San Francisco, CA*
- ThPV3 426 **Post-translational Modification Determination using ESI-FTMS with Electron Capture Dissociation;** Jason L. Pittman; Vera Ivleva; Catherine E. Costello; Peter B. O'Connor; *BUSM Mass Spectrometry Resource, Boston, MA*
- ThPV3 427 **"Top-down" Strategies for Complex Protein Mixtures via Online LC and Nanoflow LC-IMS/CID or High Field/TOF;** Rena A. Sowell¹; Stormy L. Koeniger¹; Sunnie Myung¹; Stephen J. Valentine²; David E. Clemmer¹; ¹*Indiana University, Bloomington, IN*; ²*Beyond Genomics, Waltham, MA*
- ThPV3 428 **Using the Yeast Proteome to Characterize Linear Ion Trap Performance;** Rameh Hafezi¹; Ashok Dongre¹; Andrew Guzzetta²; Rohan Thakur²; ¹*Bristol-Myers Squibb Company, Pennington, NJ*; ²*ThermoElectron Corporation, San Jose, CA*
- ThPV3 429 **Enhanced Sequence Coverage of Proteins Interacting with Plasma Membrane of Keratinocytes by Using MALDI with Different Matrices in Concert;** Florence Gonnet¹; Gilles Lemaitre³; Xavier Gidrol²; Gilles Waksman³; Jeanine Tortajada¹; ¹*Lab Analyse & Environnement, UMR 8587, University Evry Val d'Essonne, Evry, France*; ²*Service de Génomique*

Fonctionnelle, CEA, Génomique, Evry, France; ³*Lab Génomique et Radiobiologie des kératinocytes, Université d'Evry, Evry, France*

- ThPV3 430 **The Impact of Ion Trap Tandem Mass Spectra Variability on the Identification of Peptides;** John D Venable; John R Yates III; *The Scripps Research Institute, La Jolla, CA*

PROTEOMICS: FUNDAMENTALS

- ThPV4 431 **Identification and Characterization of PDE10A from Rat Brain Striatum and Substantia Nigra by Mass Spectrometry;** Ping Du; Frank Menniti; Robert Williams; Michele Kelly; Thomas McLellan; Zhi(Julie) Xie; *Pfizer Global Research and Development, Groton Laboratories, Groton, CT*
- ThPV4 432 **Differential Expression Analysis of Proteins in Complex Human Samples by Stable Isotope Labeling: How and Why?;** Peter Juhasz¹; Armin Graber¹; Steve Hattan¹; Jason Marchese¹; Ken Parker¹; Brian Williamson¹; Steve Martin¹; Johan Malmstrom²; Gunilla Westergren-Thorsson²; Gyorgy Marko-Varga²; ¹*Applied Biosystems, Framingham, MA*; ²*University of Lund, Lund, Sweden*
- ThPV4 433 **Application of a Targeted Proteomics Approach for the Identification of KSR-associated Proteins;** Ming Zhou¹; Thomas P. Conrads¹; Deborah Morrison²; Monica Murakami²; Timothy D. Veenstra²; ¹*SAIC-Frederick, Inc., Frederick, MD*; ²*NCI-Frederick, Frederick, MD*
- ThPV4 434 **Identification of Proteins in Human Cerebrospinal Fluid (CSF) Using Two-Dimensional LC-MS/MS;** Brett R. Wenner; Mark A. Lovell; Bert C. Lynn; *Department of Chemistry, University of Kentucky, Lexington, KY*
- ThPV4 435 **Proteomics of Non-Steroidal Anti-Inflammatory Drugs and Alzheimer's Disease;** Helena Costa; Georgia Dolios; Catherine Ding; Lanying Liu; Rong Wang; *Mount Sinai School of Medicine, New York, NY*
- ThPV4 436 **Capture and Identification of the Binding Partners of Mixed Lineage Kinase 3 Using Immunoprecipitation and LC/MS/MS;** Hua Zhang³; Wei Wu²; Kathleen A. Gallo¹; J. Throck Watson¹; ¹*Department of Biochemistry, Michigan State University, East Lansing, MI*; ²*Department of Chemistry, Michigan State University, East Lansing, MI*; ³*Department of Cell and Molecular Biology, Michigan State University, East Lansing, MI*
- ThPV4 437 **A Comparison of Separation Techniques at the Protein and Peptide Level as the First Dimension in 2D Proteomic Analysis Using ESI-LC-MS/MS;** Cindy Lou Chepanoske; Bonnie E. Richardson; Nafei Xu; Justin R. Savage; John M. Peltier; *Myriad Proteomics, Salt Lake City, UT*

PROTEOMICS: LOWER ORGANISMS

- ThPV5 438 **Analysis of the Proteomic Responses on Cadmium Exposure in *Schizosaccharomyces pombe*;** Weon Bae; Kwasi Mawuenyega; Xian Chen; *Los Alamos National Laboratory, Los Alamos, NM*
- ThPV5 439 **Proteomic Comparison of the Foodborne Pathogen *Listeria Monocytogenes* Grown in Liquid Culture and in Biofilm;** Sophie J. D'Aoust; Mary Alice Hefford; John W. Austin; Martin L. Kalmokoff; Terry D. Cyr; *Health Canada, Ottawa, Canada*
- ThPV5 440 **Using MALDI-TOF Mass Spectrometry to Explore the Virion Structure of Poxviruses;** Alicja Zachertowska; Dyanne Brewer; David H. Evans; *University of Guelph, Guelph, Canada*
- ThPV5 441 **Proteome Analysis of the Anoxygenic Photobacterium *Rhodospseudomonas palustris*;** Nathan C. VerBerkmoes³; Michael B. Strader¹; Patricia Lankford²; Dale Pelletier²; Loren Hauser²; Miriam Land²; Gregory B. Hurst¹; Stephen J. Kennel²; Caroline S. Harwood⁴; Robert L. Hettich¹;

- Frank W. Larimer²; ¹*Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN*; ²*Life Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN*; ³*Graduate School of Genome Science and Technology UT/ORNL, Oak Ridge, TN*; ⁴*Department of Microbiology, University of Iowa, Iowa City, IA*
- ThPV5 442 **Proteomic Study on Evolution of Escherichia Coli at Low Temperature**; Suping Zheng¹; Al Bennett²; David M. Lubman¹; ¹*University of Michigan, Chemistry Department, Ann Arbor, MI*; ²*University of California, Irvine, Department of Ecology and Evolution, Irvine, CA*
- ThPV5 443 **Proteomic Analysis of in vivo Isolated Francisella tularensis**; Susan M. Twine; Patricia Lanthier; C. Wayne Conlan; John F. Kelly; *Institute for Biological Sciences, National Research Council, Ottawa, Canada*
- ThPV5 444 **Proteome Analysis of Physcomitrella Patens by Nano-LC/MS/MS**; Virginie Wurtz¹; Eric Sarnighausen²; Dimitri Heintz²; Noelle Potier¹; Ralf Reski²; Alain Vandorsselear¹; ¹*Laboratoire de spectrométrie de masse Bio-Organique, CNRS-UMR, Strasbourg, France*; ²*University of Freiburg, Plant Biotechnology, Freiburg, Germany*
- ThPV5 445 **Proteome Mapping of Burkholderia cepacia Genomover III in Studies Related to Cystic Fibrosis**; Kyu H. Park; John J. Lipuma; David M. Lubman; *University of Michigan, Ann Arbor, MI*
- ThPV5 446 **Discrimination of Campylobacter species by MALDI-TOF MS and Determination of HUP Proteins by Offline HPLC and MS or MS-MS**; Leslie A. Harden; William Haddon; William Miller; Robert Mandrell; *USDA Western Regional Research Center, Albany, CA*
- ThPV5 447 **Approaches to Cross Species Protein Identification from the Polycyclic Aromatic Hydrocarbon-degrading Bacterium Mycobacterium vanbaalenii PYR-1**; Richard C. Jones; Seong-Jae Kim; Oh-Gew Kweon; Ricky D. Edmondson; Carl E. Cerniglia; *National Center for Toxicological Research/FDA, Jefferson, AR*
- ThPV5 448 **Identification of Function of Unk4 for Antibacterial Drug Discovery via Expression Proteomics**; Yan-Hui Liu; Leigh Ann Giebelhaus; Todd Black; Nicholas J. Murgolo; Wei Ding; Birendra N. Pramanik; *Schering-Plough Research Institute, Kenilworth, NJ*
- ThPV5 449 **Application of 2D-LC/MS/MS to Study Proteolysis of E. coli Whole Cell Lysate**; Rui Chen; Haiyan Zhang; Lidan Tao; Liang Li; *University of Alberta, Edmonton, Canada*
- ThPV5 450 **Proteomic Analysis of the Zebrafish (Danio rerio) Caudal Fin Wound-Healing Model**; Benoit Cadieux¹; David Baranowski¹; Marcos R. DiFalco²; Leonid Kriazhev²; Susan James²; Hugh P.J. Bennett¹; ¹*McGill University, Montreal, Canada*; ²*Genome Quebec Innovation Centre, Montreal, Quebec*
- ThPV5 451 **Proteomic Analysis of Therapeutically Important Bacteriophage 812 by Combination of Electrophoresis and Mass Spectrometry**; Jan Preisler¹; Zbynek Zdráhal¹; Karel Klepárník²; František Foret²; Patrik Vrábel¹; Malá Zdena²; Jirí Doškar¹; Roman Pantucek¹; Jakub Grym²; Michal Spešný²; Hana Konečná¹; Pavel Krásenský¹; Krásenský Pavel¹; Krásenský Pavel¹; ¹*Masaryk University, Brno, Czech Republic*; ²*Institute of Analytical Chemistry, CAS, Brno, Czech Republic*
- ThPV5 452 **Global Proteome Profiling of Bacillus anthracis Using Three-Dimensional LC-MS/MS Proteomic Platform**; Jing Wei¹; Wen Yu¹; Jun Sun¹; Arianna Jones¹; Brian Green¹; Arthur Friedlander²; Bruce Kimmel¹; Jay Short¹; ¹*Diversa Corporation, San Diego, CA*; ²*USAMRIID, Frederick, MD*
- ThPV5 453 **Proteome analysis of Pirellula – Initial results**; Klaus-Dieter Kloeppel; Dorothea Theiss; Ralf Rabus; Doerte Gade; Hans Lehrach; Johan Gobom; *Max Planck Institute for Molecular Genetics, Berlin, Germany*
- ThPV5 454 **Characterization of Single Nematodes by UV-MALDI-MS**; Julia Gross; Charles A. Gloeckner; Christopher G. Taylor; *Donald Danforth Plant Science Center, St. Louis, MO*
- ThPV5 455 **Expression of Virulence Factors of S. aureus Exposed to Subinhibitory Concentrations of Linezolid**; Norbert Pakulat¹; Silke Flee¹; Olaf Utermöhlen¹; Stefan Müller²; Oleg Krut¹; Martin Krönke¹; Katussevani Bernardo¹; ¹*Inst. for Medical Microbiol., Imm. and Hygiene University of Cologne, Cologne, Germany*; ²*Center of Molecular Medicine of Cologne (ZMMK), Cologne, Germany*
- ThPV5 456 **Differential Protein Profiling of Individual Drosophila melanogaster Heads Using a Bottom-Up Nanoflow LC-Ion Trap MS Approach**; John A. Taraszka¹; Myeong H. Moon²; Randy J. Arnold³; David F. Miller⁴; Thomas C. Kaufman⁴; David E. Clemmer¹; ¹*Department of Chemistry, Indiana University, Bloomington, IN*; ²*Department of Chemistry, Pusan National University, Pusan, Korea*; ³*Proteomics Research and Development Facility, Indiana University, Bloomington, IN*; ⁴*Department of Biology, Indiana University, Bloomington, IN*
- ThPV5 457 **Proteome Profiling of Shewanella oneidensis MR-1 fur, etrA, and fur/etrA Mutants**; Heather M. Connely³; Nathan C. VerBerkmoes³; Xiufeng Wan²; Dawn Stanek²; Dorothea K. Thompson²; Loren Hauser³; Frank W. Larimer³; Jizhong Zhou²; Robert L. Hettich¹; ¹*Organic and Biological Mass Spectrometry Group, Chemical Sciences Div, Oak Ridge National Lab, Tennessee*; ²*Chemical Sciences Division, Oak Ridge National Lab, Tennessee*; ³*Environmental Sciences Division, Oak Ridge National Lab, Tennessee*
- ThPV5 458 **Proteomic Mapping of the Trypanosoma Cruzi Epimastigote by Multidimensional Chromatography and LC-MS/MS**; James A Atwood¹; Todd Minning²; Brent Weatherly²; Jason Baker²; Cameron Cavola¹; Rick Tarleton²; Ron Orlando¹; ¹*Complex Carbohydrate Research Center, University of Georgia, Athens, GA*; ²*Department of Cellular Biology, University of Georgia, Athens, GA*
- ThPV5 459 **A Proteomics Initiative for the Burkholderia cepacia complex (PROBCEP)**; Malcolm A Ward¹; Helen L Byers¹; James Campbell¹; Carrina Keys²; Andrew Goodwin²; Haroun Shah²; ¹*Proteome Sciences plc, London, United Kingdom*; ²*Central Public Health Laboratory, London, United Kingdom*
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- PROTEOMICS: MEDICAL APPLICATIONS**
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- ThPV6 460 **A 2DE Map of the Cerebrospinal Fluid Proteome**; Erin J Finehout; Zsofia Franck; Kelvin H Lee; *Cornell University, Ithaca, NY*
- ThPV6 461 **Identifying Biomarkers of Rheumatoid Arthritis Using Differential Proteomics and Metabolomics**; Weixun Wang¹; Hua Lin¹; Haihong Zhou¹; Lander R. Hill¹; Thomas A. Shaler¹; Sushmita Roy¹; Praveen Kumar¹; Markus Anderle¹; Christopher H. Becker¹; *SurroMed, Inc., Mountain View, CA*
- ThPV6 462 **Characterization of Pollen Enzymes and their Relationship to Allergens**; Rohit Saldanha; Mark Raftery; Carolyn Geczy; Rakesh Kumar; *School of Medical Sciences, UNSW, Sydney, Australia*
- ThPV6 463 **Detection of Biomarkers of Premature Maternal-Fetal Membrane Rupture via Proteome Analysis**; Jonathan L Bundy¹; Patricia A Basta¹; Bryan A Yonish²; Amy M Murtha²; Carol C Whisnant¹; James L Stephenson Jr¹; ¹*Research Triangle Institute, Research Triangle Park, NC*; ²*Duke University School of Medicine, Durham, NC*

- ThPV6 464 **The Amyloid Precursor Protein in Alzheimer's Disease: A Proteomic Study;** Barbara A. Cottrell¹; Christian R. Lombardo³; Tristian W. Williams²; Birgit Schilling¹; Richard H. Row¹; Veronica Galvan¹; Edward H. Koo⁴; Bradford W. Gibson¹; Dale E. Bredesen¹; ¹Buck Institute, Novato, CA; ²Burnham Institute, La Jolla, CA; ³Celgene, La Jolla, CA; ⁴University of California, San Diego, La Jolla, CA
- ThPV6 465 **Examination of Protein Expression Profiles Using Various Mass Spectrometric Techniques in Brain Endothelial Cells and Astrocytes During Ischemic Stroke;** Arsalan S. Haqqani¹; Danica D. Stanimirovic¹; John F. Kelly¹; ¹Institute for Biological Sciences, Ottawa, Canada; ²Institute for Biological Sciences, National Research Council, Ottawa, Canada
- ThPV6 466 **Discovery, Purification, and Identification of Biomarkers from Complex Samples by Combining Biochip Analysis with Micro-purification Strategies;** Rosa I Viner¹; Siyu Fu¹; Ning Tang¹; Peter Tornatore¹; Travis Carson²; Ken Hunter²; Scot R Weinberger¹; ¹Ciphergen Biosystems, Inc., Fremont, CA; ²University of Nevada, Reno, NV
- ThPV6 467 **FT-ICR MS in Search of Structurally Altered Glycoproteins as Biomarkers for Alzheimer's Disease;** Carina B Sihlbom¹; Kristina Hakansson²; Mark R Emmett²; Alan G Marshall²; Pia Davidsson³; Carol L Nilsson¹; ¹Inst. of Medical Biochemistry, Goteborg University, Goteborg, Sweden; ²National High Magnetic Field Laboratory, Tallahassee, FL; ³Inst. of Clin. Neuroscience, Goteborg University, Molndal, Sweden
- ThPV6 468 **Gender Difference in Aging Monkeys Elucidated via Cardiac Mitochondrial Proteomics;** Lin Yan; Hui Ge; Seun Akeju; Albert Sun; Dorothy E Vatner; *Cardiovascular Research Institute, UMDNJ-New Jersey Medical School, Newark, NJ*
- ThPV6 469 **Proteomics Approach for Identification and Quantification of Collagen Type II Peptide Biomarkers in Human Synovial Fluid and Urine;** Olga Nemirovskiy; Dawn Dufield; Poonam Aggarwal; Mark Abrams; Teresa Sunyer; Dean Welsch; Kevin Duffin; *Pharmacia Corporation, St. Louis, MO*
- ThPV6 470 **Mechanisms of Superoxide Dismutase Toxicity in Amyotrophic Lateral Sclerosis;** Jeff Agar¹; Heather Durham¹; Robert Masse²; Bernard F Gibbs²; ¹MNI, McGill University, Montreal, Canada; ²MDS Pharma Services, Montreal, Canada
- ThPV6 471 **The Characterization of Differentially Expressed Proteins in Human Pituitary Adenomas Compared to Controls;** Dominic M. Desiderio²; Xianquan Zhan¹; ¹Stout Neuroscience Mass Spectrometry Lab, UT Health Science Center, Memphis, TN; ²Dept. of Neurology and Molecular Sciences, UT Health Science Center, Memphis, TN
- ThPV6 472 **Characterisation of the Different Protein Expression Associated with Hypothermia in HUVEC;** Silke Wandschneider¹; Annette Breedijk²; Martina Schnoelzer¹; Benito A. Yard²; ¹Deutsches Krebsforschungszentrum Heidelberg, Heidelberg, Germany; ²V. Medizinische Universitätsklinik, Klinikum Mannheim, Mannheim, Germany
- ThPV6 473 **Discovering Novel Protein Biomarkers of Traumatic Brain Injury in Hippocampus and CSF by 1D-DIGE/CLC/MS²;** William E. Haskins¹; Kevin K.K. Wang¹; Ming Chen Liu¹; Scott H. McClung²; Alexia G. Lundberg²; Barbara E. O'steen¹; Marjorie M. Chow²; Jose A. Pineda¹; Nancy D. Denslow²; Ronald L. Hayes¹; ¹McKnight Brain Institute, University of Florida, Gainesville, FL; ²ICBR, University of Florida, Gainesville, FL
- ThPV6 474 **Identification of Phosphotyrosyl-Proteins in Human Lumbar Cerebrospinal Fluid with Proteomics Method;** Xianglin Yuan¹; Dominic M. Desiderio²; ¹Stout Lab, University of Tennessee Health Science Center, Memphis, TN; ²Stout Lab, Departments of Neurology and Molecular Sciences, UT Health, Memphis, TN
- ThPV6 475 **Two Dimensional Differential Image Gel Electrophoresis (2D DIGE) Mass Spectrometry Analysis of Protein Expression Changes in an Animal Model of Parkinson's Disease;** Per E. Andren¹; Karl Skold¹; Marcus Svensson¹; Judith Pickering²; ¹Uppsala University, Uppsala, Sweden; ²Amersham Biosciences, Buckinghamshire, UK
- ThPV6 476 **New Insight of VEGF-induced Signaling Pathway in HUVEC by Proteomics and Bioinformatics;** Young Mee Kim; Hee-Jung Kim; Eun Joo Song; Kong-Joo Lee; *Center for Cell Signaling Research, Ewha Womans University, Seoul, Republic of Korea*
- ThPV6 477 **Characterization of the Digestion of Amyloid Beta-Peptide by Neprilysin Using MALDI-TOF MS;** L.J. Sparvero¹; Chang-Sook Hong¹; Joseph C. Glorioso¹; Mark E. Bier²; ¹University of Pittsburgh, Pittsburgh, PA; ²Carnegie Mellon University, Pittsburgh, PA
- ThPV6 478 **Three-tier Strategy for Quantitative Proteomics with 3D LC-MS/MS: Comparison of *Streptomyces diversa* Variants for Optimal Production of Metabolites;** Wen Yu; Jing Wei; Jun Sun; Arianna Jones; Mick Moordeewier; Roy Williams; Srividya Akella; Jamie Ryding; Mervyn Bibb; *Diversa, San Diego, CA*
-
- TOXICOLOGY**
- ThPW 479 **Structural Analysis of Ergot Alkaloids With MSⁿ;** Mark Stahl; Edgar Naegele; Ralf Moritz; *Agilent Technologies, Waldbronn, Germany*
- ThPW 480 **Characterization of Symmetrical and Unsymmetrical Mercury(II)-Thiol Compounds of Biological Interest by Electro Spray Ionization and Tandem Mass Spectrometry;** Federico M Rubino¹; Cinzia Verduci²; Rosario Giampiccolo²; Salvatore Pulvirenti²; Gabri Brambilla²; Antonio Colombi²; ¹Lab. Molecular Toxicology, Dept. Medicine 'HSPaolo' Univ. Studi Milano, Milano, Italy; ²Lab. Molecular Toxicology, Dept. Occupat Med Univ Studi Milano, Milano, Italy
- ThPW 481 **Dissociation Reactions of Paralytic Shellfish Poisoning (PSP) Biotoxins Studied by MS/MS and FT-ICR-MS;** Dietrich A. Volmer¹; Stephan Brombacher¹; Michael J. Chalmers²; Alan G. Marshall²; ¹Institute for Marine Biosciences, Halifax, Nova Scotia, Canada; ²Florida State University, Tallahassee, FL; ³National High Magnetic Field Laboratory, Tallahassee, FL
- ThPW 482 **Mass Spectrometric Detection and Characterization of Azaspiracid Biotoxins in Complex Biological Matrices;** Pearl Blay; Stephan Brombacher; Stacey Owen; Dietrich A. Volmer; *Institute for Marine Biosciences, Halifax, Nova Scotia, Canada*
- ThPW 483 **Urinary Screening for Ritalin Abuse: A comparison of Liquid Chromatography-tandem Mass Spectrometry, Gas Chromatography-mass Spectrometry and Immuno-Assay Methods;** Jeff C Eichhorst¹; Michele Etter¹; Denis C Lehotay^{1,2}; ¹Saskatchewan Health, Provincial Laboratory, Regina, Canada; ²University of Saskatchewan, Saskatoon, Canada
- ThPW 484 **The Analysis of Coffee for the Presence of Acrylamide by LC/MS/MS;** Denis Andrzejewski; John A. G. Roach; Martha L. Gay; Steven M. Musser; *CFSAN, U. S. Food and Drug Administration, College Park, MD*
- ThPW 485 **High Throughput LC/MS Analysis of Ephedra Alkaloids in Humans and Experimental Animals;**

Nathan C. Twaddle; Mona I. Churchwell; Daniel R. Doerge; *National Center for Toxicological Research, Jefferson, AR*

ThPW 486 **Simultaneous Determination of Antioxidants, Preservatives as Additives in Cosmetics by Solid-Phase Microextraction Compatible with Gas**

Chromatography-Mass Spectrometry; Tsz-Feng Tsai; Maw-Rong Lee; *National Chung-Hsing University, Taichung, R.O.C.*

ThPW 487 **Sensitive Methods for Trace Level Analysis of Dichloroacetic Acid in Rat Blood and Tissues by LC/MS**; Amy M Dixon; David C Delinsky; Srinivasa Muralidhara; James V Bruckner; Jeffrey W Fisher; Michael G Bartlett; *The University of Georgia, Athens, GA*

ThPW 488 **Isolation of a New Okadaic Acid Toxin from *Prorocentrum Lima* Algae by Preparative LC/MS and its Mass Spectral Characterization using Ion Trap Mass Spectrometry**; Norbert Helle¹; Sebastian Lippemeier²; Juergen Wendt³; ¹*Nds.Landesamt für Verbraucherschutz und Lebensmittelsicherheit, Oldenburg, Germany*; ²*BlueBioTech, Ellerbek, Germany*; ³*Agilent Technologies Deutschland GmbH, Waldbromm, Germany*

ThPW 489 **HPLC-MS/MS: A Powerful Tool for the Detection of Aromatic Amines as Biomarkers of Diesel Engine Emission Constituents**; Ellen Straube; Nataly Bittner; Wolfgang Dekant; Wolfgang Voelkel; *Department of Pharmacology and Toxicology, University of Wuerzburg, Wuerzburg, Germany*

ThPW 490 **Identification of Aminobiphenyl Isomers in Permanent Hair Dyes**; Robert J. Turesky; James P. Freeman; Ricky D. Holland; Daniel M. Nestorick; Dwight W. Miller; Fred F. Kadlubar; *National Center for Toxicological Research, Jefferson, AR*

ThPW 491 **Development and Validation of a Simple High-Performance Liquid Chromatography-Electrospray Mass Spectrometric Assay for the Opioids Alfentanil, Fentanyl, Loperamide, Remifentanil and Sufentanil**; Andreas Frank¹; Yan Ling Zhang¹; Matthias Unger²; Thomas Henthorn¹; Uwe Christians¹; ¹*University of Colorado Health Sciences Center, Denver, Colorado*; ²*Bayerische Julius-Maximilians Universität, Würzburg, Germany*

Author	Program Code	Author	Program Code	Author	Program Code	Author	Program Code
A de Wuilloud, J. C.	TPQ 296	Ahn, Natalie	WPW 425	Alverup, Niklas	ThPE 055	Andrew, Aquilina	TPR 309
Abbatliello, Susan E.	WPR1 292	Ahn, Seonghee	MPK 225	Alves, Sandra	ThODam 10:15	Andrews, Christine L.	WPE 079
Abbruzzese, James	ThPV2 410	Ahn, Seonghee	MPX 485	Alves, Sandra	WPK 211	Andrews, Philip C.	WPD 068
Abd El Rahman, O.	TPK 206	Ahn, Seonghee	TPK 194	Alves, Sandra	WPK 219	Andrews, Philip C.	TPM 234
Abdi, Fadi	ThPV2 416	Ahn, Soon Kil	TPE 094	Amanchy, Ramars	TPA 009	Andrews, Philip C.	WPD 066
Abdul-Hadi, Kojo	WPY 499	Ahnoff, Martin	ThPF2 079	Amari, John V.	ThPM 258	Andrzejewski, Denis	ThPW 484
Ablonczy, Zsolt	TPV 398	Ahrens, Christian	WPW 416	Ambrose, Stephen J.	MPS 364	Ang, Catharina	TPQ 302
Abouchacra, H.	MPX 473	Aiello, Mauro	ThPG 118	Ambrose, Stephen J.	MPS 364	Ang, Leonard PK.	WPV 409
Abraham, Ion C.	ThPK2 197	Aiello, Mauro	TPI 158	Ambrose, Stephen J.	MPS 364	Angela, Bachi	ThPM 262
Abraham, Trent	MPO 271	Aitchison, John D.	TPZ 520	Ambrose, Stephen J.	MPS 364	Angeletti, Ruth H.	MPU 389
Abrahamsson, Peter L.	ThPJ2 185	Aitchison, John D.	WPW 446	Ambrose, Stephen J.	ThPS2 335	Angeletti, Ruth H.	TPT 346
Abrams, Jerry	WPI 174	Akeju, Seun	ThPV6 468	Amegayibor, Sednam	WPJ 189	Anicich, Vincent G.	ThPK2 196
Abrams, Mark	ThPV6 469	Akella, Srividya	ThPV6 478	Amegayibor, Sednam	WPJ 190	Annan, Roland S.	ThOCpm 3:00
Acheampong, Andrew	MPE2 093	Åkerud, Thomas	WPC 061	Amegayibor, Sednam	WPJ 195	Annan, Roland S.	ThPT 347
Acheampong, Andrew	MPE3 111	Akhtar, Asifa	MPU 417	Amin, Jakal M.	WPE 094	Annan, Roland S.	ThPT 351
Ackermann, B. L.	MODam 10:55	Akinaga, Nobuyuki	MPW 442	Amin, Jakal	TPE 088	Annan, Roland S.	ThPT 364
Ackermann, Bradley L.	WPY 498	Akinsiku, Olusimidele	ThPS2 334	Amin, Kamel M.	MPE3 128	Annan, Roland S.	WPP 276
Ackermann, Bradley	MPE1 067	Akram, Othman	MPE3 104	Amino, Daisuke	ThPE 049	Annis, Allen	WODam 11:15
Ackley, David C.	ThPF3 110	Akram, Othman	TPD 053	Amirav, Aviv	TPJ 176	Anselmo, Anthony	ThPV1 386
Ackley, David C.	TPO 268	Al Moussalami, Samir	ThPJ1 166	Amit, Or	TPY 486	Anspach, Jason A.	MPX 483
Ackloo, Suzanne	TPX 445	Alaee, Mehran	MPF 136	Amster, Jonathan	MOFam 11:15	Anthes, Fiona	TPI 158
Ackloo, Suzanne	TPZ 530	Alaee, Mehran	ThPG 126	Amster, Jonathan	TPY 478	Anthony, Maria	MPE1 072
Acworth, Ian N.	MPO 269	Alaee, Mehran	TPG 122	Amster, Jonathan	TPZ 505	Anthony, Maria	ThOCam 11:35
Adachi, Takeshi	WPW 423	Alaee, Mehran	TPG 124	Amundson, Jennifer	MPE3 109	Antti, Henrik	ThOCam 10:55
Adam, Klaus-Peter	ThPK2 213	Alak, Ala	ThPM 252	Amundson, Jennifer	TFP 113	Anyoji, Hisae	WPV 398
Adams, Frederick W.	WPF 124	Alary, Jean-François	MPF 151	Amunugama, Ravi	WOBpm 4:40	Aparicio, Anna	ThPF1 078
Adams, William	TPD 071	Alary, Jean-Francois	TPI 158	An, Hyun Joo	TPB 026	Aparicio, Anna	TPD 057
Adamson, Gary E.	ThPM 247	Albersheim, Peter	WPS 350	An, Yan	MPD 043	Apicella, Michael A.	WPS 330
Addona, Terri	WPX 461	Alberts, Jeffrey	MPO 283	An, Yan	TPC 045	Appel, Bernd	MPX 457
Adeuya, Anthony	WPJ 195	Alder, Lutz	ThPG 115	Anastasiou, Dimitris	ThPT 367	Appel, Bernd	MPX 457
Adkins, Joshua N.	TPW 422	Alecio, M. Robert	ThPE 052	Anbalagan, Victor	MPL 237	Aquilina, Andrew	ThOEam 11:55
Admon, Arie	ThPV2 408	Alekseev, Oleg	TPZ 527	Andalago, Vinny	WPE 109	Arachi, Shaparak	TPC 042
Admon, Arie	WPW 428	Alex, Anish	TPA 002	Andaloro, Vincent	ThPF3 105	Arakawa, Ryuichi	MPG 161
Aebersold, Ruedi	MOCam 10:15	Alexander, Michael L.	TPI 157	Andaloro, Vincent	TFP 097	Arbogast, Brian	WPY 517
Aebersold, Ruedi	MPB 023	Alexander, Michael L.	WPI 162	Andaloro, Vinny	WPB 025	Arcand, Patrice	TFP 115
Aebersold, Ruedi	MPX 471	Algayer, Kimberly	ThPM 240	Anderle, Markus	MPT 380	Archambault, V.	ThOCpm 4:00
Aebersold, Ruedi	MPX 471	Ali, Md. Yeakub	WPY 512	Anderle, Markus	ThPV6 461	Arckens, Lutgarde	WPR2 320
Aebersold, Ruedi	TPA 004	Allan, Jim	MPU 418	Anderle, Markus	TPZ 523	Areces, Liliana B.	ThPM 262
Aebersold, Ruedi	TPY 469	Allan, Jonathan A.	MPI 193	Anders, Jonas	WPX 463	Aribi, Houssain El	WPO 262
Aebersold, Ruedi	TPY 471	Allan, Sandra A.	ThPA 004	Andersen, Jens S.	MOCam 11:35	Arkin, C Richard	WPF 124
Aebersold, Ruedi	TPY 482	Allardyce, Randall A.	MPD 047	Andersen, Jens S.	ThOCpm 4:40	Armentrout, Peter	WOEam 10:55
Aebersold, Ruedi	TPY 488	Allegood, Jeremy C.	MPM 245	Andersen, Jens S.	TPY 474	Armstrong, Dan	MPA 001
Aebersold, Ruedi	TPZ 516	Allen, Mark H.	MPD 049	Andersen, Julie K.	WPU 388	Armstrong, Dan	WPA 022
Aebersold, Ruedi	WPD 070	Allen, Mark H.	TPR 318	Andersen, Julie K.	WPU 388	Arnold, Randy J.	ThPS1 314
Aebersold, Ruedi	WPU 378	Allen, Mark	MPE1 083	Anderson, D.C.	WPW 440	Arnold, Randy J.	ThPV5 456
Aebersold, Ruedi	WPV 412	Allen, Nadia P.	MPW 444	Anderson, Danielle F.	MPN 267	Arnold, S.T.	MOEam 10:55
Aebersold, Ruedi	WPW 446	Allen, Nadia P.	TPZ 519	Anderson, Danielle F.	ThPP 284	Arnott, David P.	WPP 273
Aebersold, Ruedi	WPX 465	Allen, Simon	WPS 330	Anderson, David J.	TPF 100	Arnott, David	TPX 449
Aerni, Hans-Rudi	WPX 483	Allis, C. David	MPU 412	Anderson, David J.	TPG 125	Arnott, David	WPP 268
Aerni, Hans-Rudolf	MPN 262	Allis, C. David	TPT 364	Anderson, Gordon	MPK 225	Arora, Jasbir S.	TPT 357
Aerni, Hans-Rudolf	TPN 242	Allison, John	MPQ 329	Anderson, Gordon	ThOBam 11:55	Arora, Vinod	MPO 283
Afonso, Carlos	MPM 239	Allison, John	TOApm 4:40	Anderson, Gordon	ThPV1 392	Arrhenius, Thomas	ThPC 036
Afonso, Carlos	ThPO 282	Allmaier, Guenter	MPN 252	Anderson, Gordon	TPY 484	Arrowood, Michael J.	WPA 012
Afonso, Carlos	TPK 203	Allmaier, Guenter	MPU 416	Anderson, Gordon	WPW 447	Arscott, Steve	MPG 168
Afonso, Carlos	WPK 211	Allmaier, Guenter	ThPS1 315	Anderson, James	MPI 189	Arsenault, Alain	MPE1 069
Agar, Jeff	ThPV6 470	Allmaier, Guenter	TPM 241	Anderson, Karen S.	MPQ 314	Arsic, Momo	MPU 414
Agar, Nathalie	ThPG 129	Allred, Clinton D.	ThPC 037	Anderson, Karen S.	ThPV1 389	Arteaga, Carlos L.	WPW 424
Aggarwal, Poonam	ThPV6 469	Almo, Steven C.	ThPU 373	Anderson, Karen S.	WPQ 284	Asano, Keiji G.	ThPL 236
Aggerholm, Tenna	MPT 383	Almo, Steven C.	MPU 413	Anderson, Vernon E.	MPV 437	Asano, Keiji	WPH 149
Agnes, George R.	WPX 482	Alonso, Angel	MPS 361	Anderson, Vernon E.	ThPU 379	Aschenbrenner, Karen	ThPM 245
Agnes, George R.	MPN 264	Alper, Joseph	TPL 218	Andersson, Per	ThOBpm 4:00	Ashcroft, Alison E.	ThPU 372
Agnes, George R.	WPN 237	Alpert, Andrew J.	WPU 383	Andersson, Per	TPN 256	Ashley, David L.	ThPB 024
Agnew, Brian J.	TPZ 512	Alpert, Andrew	WPW 427	Ando, Eiji	MPW 442	Ashley, David	WPF 123
Aguiar, Mike	ThPS2 343	Alpha, Christopher G.	MPG 167	Ando, Eiji	WPX 468	Ashman, Keith	WPW 430
Aguiar, Mike	WPR1 291	Alpha, Christopher	TPP 288	Ando, Sumie	WPH 158	Ashman, Keith	WPX 455
Aguiar, Mike	WPV 408	Altelaar, A.F.M.	WOApm 4:40	Andrecht, Sven	WPX 463	Ashton, Simon	WPD 065
Aguilera, Rodrigo	TPW 416	Altelaar, A.F. Maarten	MPY 498	Andreev, Victor P.	ThPE 064	Asirvatham, Victor S.	MPX 466
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Ahene, Ago B.	TPF 110	Alton, Kevin B.	TPO 266	Andreev, Viktor	MPK 214	Assey, Gervas E.	MPN 265
Ahmad, Ateeq	WPE 112	Alvarez, Jormarie	WPI 180	Andreev, Viktor	WPW 438	Astorga-Wells, Juan	TPN 249
Ahmad, Imran	WPE 112	Alvarez, Narsico	TPO 266	Andren, Per E.	ThPR 299	Astrom, Jonas	TPZ 494
Ahn, Kyo-Han	TPK 193	Alvelius, Gunvor	ThPS2 338	Andren, Per E.	ThPV6 475	Atsriku, Christian D.	MPU 390
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Program Codes

Orals: M, T, W, Th = Day
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P = PosterA, B, C, D, E, F = Session
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Atwell, Shane	WPP 263	Baldwin, Michael A.	MPU 390	Barran, Perdita E	ThPS1 325	Beausoleil, Sean	WPX 477
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Auberry, Kenneth J	ThPV3 423	Balgley, Brian M.	WPX 470	Barran, Perdita	ThPK2 214	Beck, Sebastian	MPX 457
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Aubriet, Frédéric	MPY 511	Ballard, Kevin D.	ThPH 141	Barrios-Rodiles, M	WPX 455	Becker, C	ThOCam 11:15
Aubriet, Frédéric	WPM 230	Ballard, Kevin D.	ThPH 145	Barry, Alena	TPD 071	Becker, C	ThPV6 461
Aubry, Annie J	TPB 024	Balogh, Michael P.	MPF 140	Barry, Michael	WPR1 305	Becker, C	WPS 332
Aubry, Jean-Marie	WPL 221	Balogh, Michael P.	ThPD 041	Bart, Benedict M.	TPY 488	Becker, C	TPZ 523
Auchter, Burkhard	TPM 231	Balogh, Michael	ThPG 114	Barták, Petr	ThPB 026	Becker, Jeffrey M.	ThPU 375
Audier, Henri E	ThPK2 206	Baltz-Knorr, Michelle	WPK 213	Bartels, Michael J.	TPO 272	Becker, Susanne	WPX 457
Audier, Henri E	WPJ 201	Banal, Marvin	ThPK2 204	Bartels, Michael J.	WPU 384	Becker, Susanne	WPX 476
Auer, Gert	WPX 457	Bandura, Dmitry R.	ThOFpm 3:40	Bartlett, Alan	MPE3 100	Beckley, E. Ryan	ThPB 019
Aufderheide, Arthur C.	MPY 512	Bandura, Dmitry R.	ThOFpm 3:00	Bartlett, Michael G	MPT 381	Bedman, Timothy	MPE2 092
Augustin, Angélique	TPM 232	Bandura, Dmitry R.	TPZ 510	Bartlett, Michael G	ThPW 487	Bednár, Petr	ThPB 026
Aulkemeyer, Peter	MPD 055	Bane, Thomas K.	TPZ 507	Bartlett, Michael G.	TPF 112	Bee, Trevor	WPQ 288
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Auriola, Seppo	TPL 220	Banoub, Joseph H	MPP 299	Bartmess, John E.	WOEpm 4:40	Beegle, Luther	ThPC 033
Austin, John W.	ThPV5 439	Banoub, Joseph H	WPS 331	Bartner, Peter	WPO 248	Beer, Ilan	ThPV2 408
Aveline-Wolf, Lauren	WPW 425	Banoub, Joseph	MPC 033	Basa, Louise	TPE 092	Beer, Ilan	WPW 428
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Awazu, Kunio	MPJ 206	Bantscheff, Marcus	WPW 442	Basa, Louise	MPO 272	Beeser, Scott	ThPV1 400
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Ayres, David	TPD 071	Barak, Rina	MPU 391	Basa, Louise	ThPF3 101	Behn, Christian	TPN 254
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Baba, Takashi	MPK 227	Baranov, Vladimir I.	WPH 152	Bashir, Sajid	TPN 245	Beissel, Frank	TPE 090
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Bach, Stephan B. H.	ThPO 280	Baranowski, David	WPR2 316	Bast, Robert	WPT 352	Belford, Michael	ThOApM 3:20
Bacher, Bruno	WPV 410	Barber, Cynthia M.	MPU 412	Basta, Patricia A.	ThPV6 463	Belgacem, Omar	MPU 416
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Backlund, Jr, Peter S.	WPP 276	Barclay, Tim	WPT 357	Bateman, Bob	ThOApM 4:00	Bell, Alexander W	WPS 335
Backus, Sean M.	ThPG 126	Baril, Marcel	ThPJ1 159	Bateman, Kevin P.	ThPF3 103	Bell, Alexander W	WPS 349
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Badman, Ethan R.	ThPT 369	Barker, Lisa	WPV 407	Bateman, Robert H.	MPK 226	Bell, Alexander	MPT 384
Badman, Ethan R.	WOBpm 4:40	Barket, Jr., Dennis J.	ThPB 025	Bateman, Robert H.	TPJ 183	Bell, Alexander	ThPE 054
Bae, Weon	ThPV5 438	Barnard, Donald R.	MPF 149	Bateman, Robert	TPI 165	Bell, David S.	ThPM 264
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Baessmann, Carsten	MPX 480	Barnes, Stephen	TPT 353	Baumann, Christian	TPW 440	Bender, Christina M	TPN 245
Baessmann, Carsten	TPA 001	Barnett, David A.	ThPK1 187	Baumann, Nicole	MPM 239	Bender, Christina	TPX 463
Baessmann, C.	WOAam 11:55	Barnett, David A.	ThOAam 10:35	Baumert, Mark J.	MPD 049	Benen, Jacques A.E.	WPR2 317
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Bahr, Ute	MPM 241	Barnett, David A.	WPE 078	Baumgardner, M J.	ThPF3 096	Benesch, Justin	ThOEam 11:55
Bahr, Ute	TPM 230	Barnidge, David R.	MPI 194	Baumgart, Sabine	ThPS2 344	Benetton, Salette	MPG 162
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Bailey, Chris	TPP 281	Barofsky, Douglas F.	ThPL 226	Baynham, Michael	MPD 061	Benevides, Christopher	TPP 294
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Bailey, Sonja	TPX 460	Barofsky, Douglas F.	TPZ 506	Beardsley, Richard L.	WPO 251	Benkestock, Kurt	WPC 061
Baker, Andrew	ThPF1 067	Barofsky, Douglas F.	WPY 517	Beardsley, Richard L.	WPU 375	Bennet, David A.	TPZ 530
Baker, Diana	WPH 142	Barofsky, Elisabeth	WPY 517	Beato, Brian D.	ThPC 030	Bennett, Al	ThPV5 442
Baker, Jason	ThPV5 458	Baronas, Elizabeth	WPQ 285	Beato, Brian D.	WPG 136	Bennett, Erin	MPF 136
Baker, Peter R.	MPW 444	Barr, Dana B.	ThPG 121	Beaton, Leanne	ThPF1 074	Bennett, Hugh P.J.	ThPV5 450
Baker, Samuel E.	ThPG 121	Barr, Dana B.	WPY 506	Beattie, Iain G.	TPP 289	Bennett, Hugh P.J.	WPR2 316
Baker, Timothy R.	MPE2 087	Barr, Dana B.	WPY 516	Beaudet, Sylvie	ThPE 047	Bennett, Justin B.	WPJ 197
Baker, Timothy R.	ThOCam 11:55	Barr, John R.	ThPB 024	Beaudet, Sylvie	ThPJ1 161	Bennett, Keiryn L.	MPX 454
Baker, Timothy R.	ThPF3 110	Barr, John R.	WPA 012	Beaudet, Sylvie	ThPN 271	Bennett, Keiryn L.	WPW 416
Baker, Timothy R.	TPO 268	Barran, Perdita E.	ThPS1 325	Beaudoin, Michael	WPA 011	Bennett, Pat	ThPF2 082
Bakes, David	ThPP 285	Barran, Perdita E.	ThPS1 325	Beaudry, Francis	ThPL 238	Bennett, Pat	ThPF3 109
Bakhtiar, Ray	WPE 107	Barran, Perdita E.	ThPS1 325	Beaudry, Francis	WPB 041	Bennion, Beau	MPC 028
Bak-Jensen, Kristian	MPW 447	Barran, Perdita E.	ThPS1 325	Beaudry, Francis	WPB 043	Benoit, Frank M.	MPF 141
Balabaud, Charles	ThPV2 403	Barran, Perdita E.	ThPS1 325	Beaudry, Francis	WPE 093	Benotii, Mark	WOFpm 3:20
Balan, Alina	MPU 414	Barran, Perdita E.	ThPS1 325	Beauregard, C.	ThOCam 10:35	Ben-Rejeb, Samuel	WPR1 300
Balazy, Michael	WPL 225	Barran, Perdita E.	ThPS1 325	Beausoleil, Sean	ThPT 366	Bensaoula, Hakim	ThPK1 194

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Benson, Linda M	TPS 342	Bhoopathy, Sid	MPE3 110	Bloemberg, Guido V	TPG 131	Borisov, Oleg	ThPS1 318
Bento, Manuela	WPW 429	Bi, Honggang	ThPF1 070	Blondeau, Francois	MPW 440	Borisov, Roman S	TPL 212
Bentzley, Catherine M	MPR 340	Bialy, Zbigniew	MPP 311	Blonder, Josip	MPX 462	Borodovsky, Mark	WPS 329
Bentzley, Catherine M	MPR 345	Bian, Nanying	ThPK2 203	Blonder, Josip	TPW 437	Borts, David J	TPE 082
Bentzley, Catherine	TPN 262	BIARC, Jordane	WPS 344	Bloomfield, Nic	TPJ 174	Borysic, Antoni J H	ThPU 372
Benz, Christopher C	MPU 390	Bibb, Mervyn	ThPV6 478	Blueggel, Martin	MPB 008	Boscaini, Elena	TPI 157
Beranova-Giorgianni, S	MPX 460	Bickel, Carol A	TPF 101	Blueggel, Martin	MPS 367	Boscaini, Elena	WPI 162
Beranova-Giorgianni, S	ThTP 354	Bielenstein, M	WPB 027	Blueggel, Martin	WPW 452	Boschetti, Egisto	TPZ 504
Berg, Christian B	MPI 189	Bieller, Annette	MPW 448	Blüggel, Martin	TPX 460	Bose, Ajay K	WPO 248
Berg, Christian B	MPI 194	Bienvenuit, Willy	MPX 477	Blum, Andrew E	TPF 101	Bossard, Mary J	ThOEpm 3:40
Berg, Christian B	WPR2 322	Bier, Mark E	ThPV6 477	Bobrow, Mark	TPZ 530	Bossee, Anne	WPO 247
Berg, Eric A	ThPR 304	Bierbaum, V	MOEam 11:15	Bodenheimer, Bobby	MPY 507	Bosserhoff, Armin	TPN 254
Berg, Eric A	WOFam 10:55	Bierbaum, V	WOEpm 3:40	Boesche, Markus	WPW 442	Bouchard, Johanne	WPE 110
Berg, Eric A	MOAam 11:15	Biesenthal, Tom	ThPF1 075	Bogan, Michael J	MPN 264	Boucher, Brian J	WPW 422
Berg, Eric A	MPN 260	Biesenthal, Tom	TPE 089	Bogan, Michael J	WPN 237	Boucher, Brian	TPY 466
Berg, Eric A	TPV 394	Biessner, Patricia	MPN 266	Bogdanov, Bogdan	MPK 225	Boucher, Brian	TPY 492
Berg, Eric A	WPS 340	Bigwarfe Jr, Paul M	WPW 435	Bogdanov, Bogdan	TPY 484	Boucher, Brian	WPB 032
Berg, Matthias F.G	MPR 344	Bill, John	ThPJ2 168	Bohl, Casey	WPU 373	Boucher, Brian	WPX 471
Bergen III, H. Robert	MPI 193	Bilsborough, Shaun	MPK 221	Bohme, Diethard	MOEam 11:35	Bouchet, Valerie	TPB 022
Bergen III, H. Robert	TPC 047	Binns, Kathleen	WPX 455	Bohme, Diethard	WOEam 11:15	Boudakian, Mihran G	WPE 110
Bergen, III, H. Robert	WPT 354	Bioulac-Sage, P	ThPV2 403	Bohme, Diethard K	WPJ 186	Boué, Oscar	WPR2 321
Berger, Scott J	MPU 422	Biringer, Roger	MPW 441	Bohme, Diethard K	WPJ 200	Bouin, Anne-Pascale	TPQ 300
Berger, Scott J	MPX 494	Birks, Ed	ThPH 142	Boismenu, Daniel	MPT 384	Boulanger, Luce	ThPI 152
Berger, Scott J	TPM 227	Bischoff, Rainer	MPX 488	Boismenu, Daniel	MPW 440	Bour, Jerome	MPY 497
Bergeron, John J M	WPS 349	Bitan, Gal	ThOEam 11:35	Boismenu, Daniel	MPW 445	Bourg, Serge	WPB 025
Bergeron, John J.M	MPW 440	Bittnr, Nataly	ThPW 489	Boismenu, Daniel	ThPE 054	Bourgeois, Luc	TPZ 504
Bergeron, John JM	WPS 335	Black, David M	WOAam 10:35	Boismenu, Daniel	WPS 335	Bourgeois, Maurice	ThPF1 070
Bergeron, John, J. M	MPW 445	Black, David M	WPI 179	Boismenu, Daniel	WPS 349	Bourgogne, E	WPE 076
Bergman, Tomas	ThPS2 338	Black, David S.C	WPJ 193	Bolanos, Ben	ThPD 045	Bourque, Andre J	TPU 382
Bergman, Tomas	TPN 249	Black, David	MPK 227	Bolanos, Ben	TPI 166	Bouschen, Werner	MPY 500
Bergman, Tomas	WPX 457	Black, David	ThPJ1 165	Bolarinho, Cecilia	WPT 364	Boutin, Michel	TPU 369
Bergmann, Carl	TPB 030	Black, Terrence	ThPE 059	Bolbach, Gérard	TPW 432	Bouvier, Edouard	TPP 294
Bergmann, Carl	TPV 392	Black, Todd	ThPV5 448	Bolton, Judy L	MPO 275	Bouvier, Edouard	MPN 263
Bergmann, Carl	WPR2 317	Blackstock, W	MPS 370	Boltz, Stacey	TPY 478	Bovet, Jean-Marc	MPE1 084
Bergquist, J	TPP 280	Blackstock, Walter	WPS 338	Boltz, Stacey	TPZ 505	Bowen, Phillis	TPS 345
Bergquist, Jonas	MPM 242	Blades, Arthur T	ThPK2 210	Bonafini, James	TPU 375	Bowen, Phyllis E	TPQ 298
Bergquist, Jonas	TPY 481	Blades, Micheal W	TPJ 171	Bond, Meredith	WPV 411	Bowers, Gary D	TPE 082
Bergquist, Jonas	WPO 259	Blades, Mike W	MPK 215	Bonetto, Valentina	MPU 415	Bowers, Michael	ThOEam 11:35
Bergt, Constanze F	TPT 355	Blagoev, Blagoy	ThOCpm 4:40	Bonilla, Leo E	TPX 453	Bowers, Mike	ThOApM 4:00
Berhane, Beniam	TODam 11:35	Blagojevic, Tamara	ThPR 297	Bonilla, Leo E	TPY 477	Bowers, Mike	ThPK2 214
Berkenkamp, S	TOBpm 4:00	Blagojevic, V	MOEam 11:35	Bonneil, Eric	TPX 457	Bowsher, Caroline	WPP 283
Berkout, Vadym	MPJ 207	Blagojevic, V	WOEam 11:15	Bonneil, Eric	TPZ 511	Boyer, Anne E	ThPB 024
Berkova, Marketa	MPS 357	Blagojevic, Voislav	WPJ 186	Bonner, Ron	WPD 074	Boyes, Barry	MPX 465
Berkova, Marketa	ThPS1 318	Blair, Emek	ThPG 127	Bonneu, Marc	ThPU 371	Boysen, Gunnar	WPY 488
Berman, David M	TOCpm 3:40	Blair, Ian A	MPU 404	Bonneu, Marc	ThPV2 403	Boysen, Gunnar	WPY 513
Bernal, Javier	ThPE 060	Blair, Ian A	TPT 357	Boomershine, W	WPC 058	Bozigian, Haig	ThPM 266
Bernardo, K	ThPV5 455	Blair, Ian A	TODpm 3:00	Boon, Jaap J	WOApm 4:40	Bozigian, Haig	TPD 068
Bernards, Mark A	TOFpm 4:40	Blair, Ian A	TPC 040	Booth, Brenda	MPS 369	Bradbury, Andrew M	TPW 417
Bernhard, Oliver K	WPW 418	Blair, Ian A	TPC 044	Booth, Brenda	WPP 264	Bradbury, Andrew	WPU 385
Bernier, Ulrich R	MPF 149	Blair, Ian A	TPL 224	Booth, Brenda	WPP 267	Bradbury, Morton	WPU 385
Bernier, Ulrich R	ThPA 004	Blair, Ian A	WPE 100	Booth, Matthew M	ThPA 004	Bradley, John	TPZ 509
Berning, Doug	ThPG 120	Blair, Ian A	WPL 228	Booth, Tristan D	TPO 265	Braeuer, Corina	WPX 474
Bernstein, S	ThOEam 11:35	Blais, Jean-Claude	MPU 420	Boothe, Mirva	WPG 139	Brailsford, Andrew	WPG 134
Berode, Michele J	WPY 491	Blais, Jean-Claude	WPK 211	Boraas, Kirk	ThPM 255	Braisted, Andrew	WODam 10:55
Bery, Jamal I	MPY 495	Blais, Jean-Claude	WPK 217	Boraas, Kirk	TPP 292	Brambilla, Gabri	ThPW 480
Bertilsson, Maria	WPB 027	Blake, Daniel	MPD 045	Borbridge, Lisa	MPE3 111	Bramley, Peter M	WPB 045
Bertozzi, Carolyn R	ThPI 155	Blake, Daniel	MPD 061	Borchers, Christoph	MPQ 326	Bramley, Peter	MPO 288
Bertrand, Michel J	MPX 473	Blake, Thomas A	WPX 480	Borchers, Christoph	MPS 360	Bramley, Peter	ThPA 014
Bertrand, Michel J	MPX 481	Blake, Thomas	MPN 251	Borchers, Christoph	MPU 402	Branch, Todd M	MPC 030
Bertrand, Michel J	ThPE 047	Blake, Thomas	WPX 460	Borchers, Christoph	WPC 053	Brancia, Francesco L	TPN 255
Bertrand, Michel J	ThPJ1 166	Blakney, Greg T	ThOCpm 3:40	Borchers, Christoph	WPW 450	Brancia, Francesco	TPJ 186
Bertrand, Michel J	ThPN 271	Blakney, Greg T	ThOFam 10:15	Borchers, Christoph	WPX 459	Braun-Breton, C	WPS 346
Bertrand, Michel J	TPQ 297	Blakney, Greg T	TOAam 10:15	Borchers, Christoph	TPZ 527	Bravo, Roberto	WPY 506
Bertrand, Michel J	TPU 369	Blakney, Greg T	TPH 147	Borchers, Christoph	TPZ 531	Bravo, Roberto	WPY 516
Bertrand, Michel J	WPA 015	Blakney, Greg T	TPR 312	Borchers, Christoph	WPA 023	Brazeau, Jeremy	MPB 012
Bertrand, Patrick	MPY 511	Blakney, Greg	MPK 219	Bordas-Nagy, Joseph	WPR2 315	Breci, Linda	ThPK2 211
Besselmann, Michael	MPX 474	Blanc, Jean-Frédéric	ThPV2 403	Bordet, Francois	MPF 148	Breci, Linda	ThPK2 214
Betancourt, Lazaro	TPT 347	Blank, Paul S	ThOBam 11:35	Borgeat, P	WPL 223	Breda, Massimo	ThPF2 080
Beu, Steve C	TPH 147	Blankenship, Jim	MPE3 115	Borges, Chad R	ThPS2 336	Bredesen, Dale E	ThPV6 464
Beuerman, Roger W	WPV 409	Blay, Pearl	ThPW 482	Borges, Virginia	TPD 070	Breedijk, Annette	ThPV6 472
Bezdetnaya, Lina	TPE 086	Bliss, Tiffany	ThPI 150	Borisov, Oleg V	MPS 357	Brekenfeld, A	WOAam 11:55
Bhatia, Ajay	WPV 403	Bliss, Tiffany	WPR2 314	Borisov, Oleg V	TPX 446	Breneman, Curt	WPI 174

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Orals: M, T, W, Th = Day
Posters: M, T, W, Th = DayO = Oral
P = PosterA, B, C, D, E, F = Session
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Brenna, J. Thomas	MPL 235	Buchanan, Nathan	WPT 368	Cai, Xianmei	MPV 431	Carlsohn, Elisabet	MPV 427
Brenna, J. Thomas	ThPN 279	Buchanan, Nathan	ThPQ 289	Cai, Yang	ThPV1 398	Carlsohn, Elisabet	TPW 441
Brennen, Reid	TPP 290	Buchmann, William	TPU 366	Cai, Yang	TPN 248	Carnes, Erica	TPF 097
Brennen, Reid	WOCpm 4:40	Budakowski, Wes	TPG 124	Cai, Yong	WOAm 11:35	Carnes, Erica	WPB 025
Breuker, Kathrin	WOBAm 11:55	Budde, William L	MPF 155	Cai, Yun	MPR 335	Carnes, Erica	WPE 109
Brewer, Dyanne	ThPV5 440	Budimir, Natali	WPK 217	Cai, Zhang	TPD 071	Caro, Bertrand	MPU 420
Brewer, Dyanne	WPP 283	Budnik, Bogdan A	MPJ 195	Calaway, W.F.	MOBAm 11:55	Carpenter, Barry K	TPK 192
Brichory, Franck	TPW 429	Budnik, Bogdan A	TPX 461	Caldeira, J	TPL 222	Carr, Steven A	TPX 463
Bridgewater, Juma D	TPT 356	Budnik, Bogdan A	WOBpm 4:00	Caldwell, Jennifer	WPU 376	Carr, Steven A	WPX 461
Briem, Sveinn	WPB 024	Budowle, Bruce	ThPH 136	Callahan, John H	TPV 393	Carre, Vincent	ThOFam 11:15
Briker, Yevgenia	ThOFam 10:55	Budzikiewicz, H	MPG 160	Callahan, John H	WPR1 298	Carrick, Kevin L	ThPV3 421
Brill, Lawrence M	TPX 459	Buelna, Genoveva	ThPK2 197	Callahan, John W	MPD 057	Carrick, Kevin L	WPP 271
Brinkmeier, Heinrich	MPD 055	Buevich, Alexei	MPE2 089	Callahan, John W	MPD 044	Carrick, Kevin	WPA 023
Brissie, Nancy	TPO 270	Bugge, Chris	ThPK2 213	Callahan, John W	TPF 098	Carrier, Alain	ThPV2 418
Brisson, Jean-Robert	WPR2 324	Buhse, Lucinda	MPL 234	Caltabiano, Lisa M	WPY 506	Carrier, Alain	TPP 286
Britto, P. Jeram	MPU 424	Bui, Huy	TPD 072	Caltabiano, Lisa M	WPY 516	Carrier, Alain	WPU 448
Broadus, Layla	ThPM 256	Bukau, Bernd	WOBAm 11:15	Cameron, Terri I	WPR2 314	Carrillo, Brian	MPT 384
Brock, Ansgar	TOAam 10:35	Bunch, Josephine	MPY 509	Camp, David G	MPW 449	Carrillo, Brian	ThPE 054
Brock, Ansgar	TOBpm 3:40	Bundy, Jonathan L	MPB 011	Camp, David G	MPS 363	Carroll, Christopher A	MPS 365
Brockman, Adam	ThPM 241	Bundy, Jonathan L	ThPV6 463	Camp, David G	TPY 484	Carroll, James A	TPT 362
Brodbeck, Jennifer	ThPK2 202	Bunkenborg, Jakob	MPS 348	Camp, David	ThPQ 296	Carroll, James A	WPP 266
Brodbeck, Jennifer	TPR 308	Burdette, Joanna E	MPO 275	Camp, David	TPA 015	Carrick, Kevin L	MPC 024
Brodbeck, Jennifer	TOFam 11:15	Burgess, Jennifer A	WPU 371	Campa, Michael J	WPT 367	Carson, Travis	ThPV6 466
Brodbeck, Jennifer	TPR 308	Burgtorf, Carola	TPS 336	Campbell, J. Larry	TOEam 11:35	Carter, Andrew	WPC 059
Brodbeck, Jennifer	TPR 320	Burke, Erin E	TPW 431	Campbell, J. Larry	WPJ 192	Carter, Guy T	MPP 308
Brodbeck, Jennifer	TPR 325	Burke, Lorri-Anne	TOCpm 3:40	Campbell, James A	MPF 154	Carter, Guy T	ThPP 287
Brodbeck, Jennifer	WPI 169	Burke, Micheal J	MPI 193	Campbell, James	ThPV5 459	Carter, Guy T	ThPS1 310
Brodtkin, Heather	MPR 337	Burlet-Schiltz, Odile	TPZ 517	Campbell, J	ThOBam 11:35	Carter, Jennifer M	ThPU 380
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Bromstrup, Mark	ThPE 048	Burlingame, A. L	TPZ 519	Campbell, J	ThOAam 10:15	Carulla, Natalia	ThPU 381
Brombacher, S	MPN 249	Burlingame, A. L	WPK 220	Campbell, J	TPM 239	Caruso, Joseph A	MPA 005
Brombacher, S	MPN 261	Burlingame, A.L	MPW 444	Campbell, J	TOCam 10:15	Caruso, Joseph A	MPA 003
Brombacher, S	ThPW 481	Burlingame, Al	WPX 473	Campbell, J	TPX 464	Caruso, Joseph A	TOFam 11:35
Brombacher, S	ThPW 482	Burlingame, Alma L	WPC 060	Campbell, Karinna M	WPJ 190	Caruso, Joseph	TPF 107
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Brook, Jeffrey R	WPF 128	Burns, Cathy L	ThPA 003	Campopiano, DJ	ThPS1 325	Casado, Begona	WPV 400
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Brosnan-Cook, M	ThPM 249	Burns, Stephanie A	MPO 289	Cancilla, Mark T	WODam 10:55	Casale, Roger	WPE 081
Brown, Heather A	WPV 404	Burns, Stephanie A	WPR1 311	Cannon, William R	MPB 009	Casetta, Bruno	ThPM 262
Brown, Jeffery	TPM 227	Burt, Stanley K	TPC 039	Cannon, William R	WPD 075	Cash, Patricia	MPT 376
Brown, Melanie	TPY 478	Burton, Lyle	ThPF1 074	Cano, Leticia	WPW 427	Caskey, Patrick E	MPI 193
Brown, Paul	ThPF3 105	Burton, Richard D	WPR1 299	Cantone, Joseph L	TPF 102	Casley, William L	MPT 377
Brown, Robert S	MPJ 196	Busby, Scott A	WPS 343	Canuto, Antonio	ThPH 144	Cass, Carol E	TPW 425
Brown, Robert S	WPI 182	Busby, Scott	TPT 364	Cantulescu, Adrian	TPY 473	Cass, Robert T	WPB 046
Browne, David	ThPP 285	Busby, Steve	WPC 059	Cao, Ping	TPV 397	Cass, Robert	MPP 298
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Brubaker, William	WPB 040	Bush, Matthew F	TPK 199	Capacio, Benedict R	ThPB 027	Cassels, F	MOAam 10:55
Bruce, James E	TOCam 11:55	Bushnev, Anitoly	MPM 238	Capaldi, Roderick	MOAam 10:35	Cassidy, Kenneth	MPO 271
Bruckenstein, S	MPG 169	Busman, Mark	MPF 153	Capka, Vladimir	ThPG 119	Cassidy, Kenneth	TPE 079
Bruckner, James V	ThPW 487	Butler, Heather	WPW 448	Capka, Vladimir	TPG 127	Castello, Catherine	ThPV1 393
Bruckner, James	MPF 135	Butler, Michael	WOFam 11:35	Capobianco, John A	MPG 159	Castles, Mark	WPY 515
Bruening, Merlin L	TPN 260	Buttrill, Jr., S. E.	MOBAm 11:15	Caporuscio, Christian	ThPF1 072	Castro-Perez, Jose	TPO 274
Bruin, Gerard J	TPE 080	Buzatu, Daniel A	WPA 011	Cappellini, Luigi	WPF 127	Castro Perez, Jose	MPE2 091
Bruins, Andries P	MPX 488	Byers, Helen L	ThPV5 459	Cappiello, Achille	WOCam 11:15	Castro-Perez, Jose	MPE1 072
Bruins, Andries P	ThPL 227	Bykova, Natalia	MPX 478	Cappiello, Achille	WPF 126	Castro-Perez, J	ThOCam 11:35
Bruist, Michael F	MPR 340	Bykova, Natalia	TPM 233	Caprioli, Richard	ThPV2 420	Castro-Perez, Jose	ThPF3 110
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Brunelle, Françoise	MPE1 067	Bylund, Dan	MPM 242	Caprioli, Richard	MPN 262	Castro-Perez, Jose	TPP 289
Brunet, Sylvain	TPZ 511	Bylund, Jessica M. R	TPI 166	Caprioli, Richard	MPX 479	Castro-Perez, Jose	WPY 500
Bruno, Maribel	MPG 164	Byrd, Gary D	TPD 062	Caprioli, Richard	MPY 506	Castro-Perez, Jose	WPY 507
Bruno, Maribel	WPS 327	Byrd, Michelle	TOEam 11:15	Caprioli, Richard	MPY 507	Castro-Perez, J	ThOCam 10:55
Brus, Theodore	WPG 136	Byrd, Michelle	TPU 387	Caprioli, Richard	MPY 510	Cavalieri, Ercole	MPE2 088
Brusov, Vladimir S	ThPK1 191	Byrd, John	TPE 083	Caprioli, Richard	TPN 242	Cavalli, Paolo	WPF 115
Brusov, Vladimir S	ThPL 237	Caccamise, Sarah	MPF 134	Caprioli, Richard	WOApm 3:00	Cavalli, Paolo	WPN 238
Bryant, Stephen H	MPB 018	Caddy, Gemma L	ThPU 381	Caprioli, Richard	WPT 353	Cavett, Valerie J	ThPH 139
Bryant, Stephen H	ThPE 056	Cadieux, Benoit	ThPV5 450	Caprioli, Richard	WPV 405	Cavett, Valerie	ThPH 143
Bryden, Karen E	MPY 503	Caesar, John P	ThPK2 201	Caprioli, Richard	WPW 424	Cavola, Cameron	ThPV5 458
Brzak, Kathy A	TPO 272	Cafilisch, Amedeo	TPR 313	Caprioli, Richard	MPY 504	Cawkill, Karen E	ThPM 252
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Bubnov, Viatcheslav	ThPL 237	Cage, Brant	MPK 210	Caraiman, Doina	ThPF1 075	Cecal, Roxana	ThPR 303
Buchacher, Andrea	MPU 416	Cahill, Jeffery D	MPF 142	Carey, John	TPG 122	Cederbaum, Stephen	MPD 060

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Celia, Hervé	MPU 397	Chang, Yoon-Seok	TPK 193	Chen, Yong	WPK 216	Choudhary, J	MPS 370
Cepa, Steve	TPI 164	Chapdelaine, John	ThPL 238	Chen, Yu-Chie	MPN 254	Choudhary, Jyoti	MPB 014
Cerniglia, Carl E.	ThPV5 447	Chapdelaine, John	WPB 041	Chen, Yu-Chie	MPN 256	Choudhary, Jyoti	TPZ 525
Chabot, Benoit	ThPV2 409	Chapleau, Melanie	MPE3 100	Chen, Yu-Chie	MPN 259	Choudhary, Jyoti	WPS 338
Chace, Donald	MPE1 080	Chappell, Angelina	ThPK2 204	Chen, Yue	ThPV1 386	Chow, Danny T.	TPX 454
Chaganty, S	MPE1 068	Chardakova, Ella V.	ThPK1 191	Chen, Yu-Ju	TPV 402	Chow, Marjorie M.	ThPV6 473
Chaganty, S	TPF 111	Chatman, Kelly	ThPC 031	Chen, Yu-Ju	TPW 418	Chowdhury, Swapan	TPO 266
Chai, Wengang	MPC 035	Chatterjee, Leah	TPZ 500	Chen, Yu-Luan	WOCpm 3:20	Chrestensen, Carol	ThPT 357
Chaimbault, Patrick	TPJ 181	Chau, Tung K.	TPM 238	Chen, Yung-Hsiang	ThPF1 069	Chrisman, Paul A.	TPK 195
Chait, Brian T.	ThOCpm 4:00	Chau, Tung K.	TOBpm 4:20	Chen, Zibin	MPT 387	Christians, Uwe	ThPM 248
Chait, Brian T.	ThPR 302	Chau, Tung K.	WOCam 10:35	Chenail, Gregg	ThPI 153	Christians, Uwe	ThPW 491
Chait, Brian T.	TPR 328	Chaudhary, Ajai	MODam 10:55	Chenail, Gregg	ThPU 378	Christians, Uwe	WPY 497
Chait, Brian T.	WPO 260	Chaurand, Pierre	MPY 506	Cheng, Dongmei	MPS 358	Christodoulou, John	TPR 326
Chait, Brian T.	MOCam 11:15	Chaurand, Pierre	MPY 510	Cheng, Keding	MPX 478	Chromy, Brett A.	WPS 347
Chait, Brian T.	TPX 465	Chaurand, Pierre	WPX 483	Cheng, Keding	TPM 233	Chu, Feixia	WPC 060
Chait, Brian T.	WPO 242	Chauret, Nathalie	ThPF3 103	Cheng, Keding	WPP 279	Chu, Inhou	MPE1 065
Chakraborty, Asish	MPU 422	Cheatham, Janet	WPC 049	Cheng, Keding	WPW 420	Chu, Inhou	WPD 063
Chakraborty, Asish	MPX 494	Cheguillaume, G.	TPU 366	Cheng, Kuo-Chi	ThPF1 069	Chu, Ivan K.	TPK 191
Chakraborty, Pranesh	MPD 057	Chelikani, Prashen	MPQ 323	Cheng, Michael T.	MPH 172	Chu, Ivan K.	WPP 275
Chalk, Rod	ThPJ2 179	Chelius, Dirk	WPU 370	Cheng, Xueheng	MPE1 077	Chun, Donald	TPO 265
Chalkley, Robert J.	ThPV2 414	Chelsky, Daniel	ThPV2 418	Cheng, Xun	TPR 324	Chun, Donald	WPE 078
Chalkley, Robert J.	MPW 444	Chen, C.Y.	MOBam 11:55	Cheng, Ying	MPE1 078	Chung, Loanne	ThPD 042
Chalkley, Robert J.	TPZ 519	Chen, Chung-Yu	ThPF3 108	Cheng, Ying	MPO 294	Churchill, Mark	ThPG 115
Chalkley, Robert	WPX 473	Chen, Cindy	TPD 060	Cheng, Ying	WPE 095	Churchwell, Mona I.	ThPC 037
Chalmers, Michael	ThOCpm 3:40	Chen, Ernie	ThPG 118	Chenier, Claude L.	ThPG 112	Churchwell, Mona I.	ThPW 485
Chalmers, Michael	TPW 441	Chen, Guodong	ThPN 274	Chepanoske, C.	ThPV4 437	Churchwell, Mona I.	WPY 502
Chalmers, Michael	MPV 427	Chen, Hao	ThPB 023	Chernokalskaya, E.	TPN 258	Churchwell, Mona I.	WPY 509
Chalmers, Michael	ThPT 345	Chen, Hao	WPJ 188	Chernokalskaya, E.	TPZ 530	Ciochina, Laurentiu	ThPJ1 161
Chalmers, Michael	ThPW 481	Chen, Hsuan-shen	ThPE 064	Chernushevich, I.	ThOEam 11:15	Ciosto, Cornelia	WPU 372
Chalmers, Michael	TOAam 10:15	Chen, Hsuan-shen	WPW 438	Chernushevich, I.	WPC 050	Ciosto, Cornelia	WPW 453
Chalmers, Michael	TPK 207	Chen, Hsuan-shen	WPW 449	Chervet, Jean-Pierre	WPG 135	Cisar, John O.	MOAam 10:55
Chalmers, Michael	WPO 243	Chen, Hsuen-Shen	MPK 214	Chervetsova, Iryna	WPW 446	Cistola, David P.	MPV 438
Chambers, Stephen	MPD 047	Chen, Huang-Chou	TPW 418	Chevallet, Mireille	TPY 472	Citrino, Rosemarie	ThPH 141
Chamot-Rooke, Julia	TPQ 300	Chen, Huanwen	TPJ 184	Chew, FT	WPV 409	Ciucanu, Ionel	TPB 021
Chamrad, Daniel C.	MPS 367	Chen, Huiping	TPU 384	Chi, A.	ThPT 359	Ciustea, Mihai	WPR1 292
Chamrad, Daniel C.	WPW 452	Chen, Jin	WPU 385	Chiarelli, M. Paul	ThPC 035	Clark, Scotty P.	TPU 382
Chamrad, Daniel	MPB 008	Chen, Jingran	ThPM 242	Chiarelli, M. Paul	TPS 335	Clark, Sonya M.	ThODam 10:55
Chan, Daniel	WPT 352	Chen, Jinhua	MPC 024	Chien, Ellen	WPR1 303	Clark, T. Nicole	TPF 112
Chan, Jenny C.Y.	TPK 191	Chen, Jinzhi	WPX 470	Chien, Winnie	MPL 237	Clarke, Joe T. R.	TPC 045
Chan, Jenny C.Y.	WPP 275	Chen, Jiwen	TPD 058	Chik, John K.	TPR 317	Clarke, Steven G.	ThPV1 394
Chan, Joseph	WPP 275	Chen, Ling	TPE 092	Chik, John K.	WODam 11:55	Clary, Taegen	MPO 294
Chan, Kenneth H.N.	TPA 011	Chen, Maolian	MPQ 312	Chilakuri, Reddy M.	MPR 333	Clary, Taegen	WPE 095
Chan, Kenneth H.N.	TPB 017	Chen, Michelle	TPY 466	Childers, Susan E.	ThPV3 423	Classon, Robert	MPD 052
Chan, Kenneth K.	TPE 083	Chen, Pei	ThPC 031	Chilton, Anthony S.	MPT 382	Classon, Robert	WPB 035
Chan, King C.	MPX 487	Chen, Po Yu	MPO 281	Chilton, Anthony S.	WPG 133	Classon, Robert	WPY 501
Chan, King	TPZ 496	Chen, Qing-Feng	WPF 117	Chilton, Anthony S.	ThPM 267	Clauser, Karl	WPX 461
Chan, Matthew T.V.	WPE 089	Chen, Rui	ThPV5 449	Chinn, Russell	WOFpm 3:40	Claverol, Stephane	TPZ 517
Chan, Michael	TPC 035	Chen, Rui	WPA 005	Chinnasamy, G.	WPR1 291	Clemmer, David E.	ThOApM 3:00
Chan, Sunney I.	TPW 418	Chen, Shu-Hui	WPU 386	Chitta, Raghu K.	WPC 048	Clemmer, David E.	ThPD 040
Chan, T.-W. D.	TPB 023	Chen, Su	MPD 059	Chiu, Norman H. L.	MPR 337	Clemmer, David E.	ThPK1 193
Chan, T.-W.D.	WPO 253	Chen, Sung-Fang	MPX 484	Chiu, Norman H. L.	TPC 049	Clemmer, David E.	ThPV3 427
Chan, Tommy L.K.	MPT 377	Chen, Susan L.	ThOCpm 3:00	Chiu, Shuet-Hing L.	WPE 107	Clemmer, David E.	ThPV5 456
Chance, Mark R.	ThPU 373	Chen, Susan	ThPF2 088	Chmurny, Gwendolyn	TPC 039	Clemmer, David E.	TPX 451
Chance, Mark R.	MPU 413	Chen, Ta-Kung	ThPM 266	Cho, Bongsup P.	ThPC 035	Clemmer, David E.	TPX 455
Chance, Mark R.	WPR1 301	Chen, Ta-Kung	TPD 068	Cho, Diane	ThPT 353	Clench, Malcolm R.	MPY 509
Chando, Theodore	ThPF1 067	Chen, Vincent C.	WPP 279	Cho, Robert	MPO 280	Clench, Malcolm R.	TPM 240
Chaney, Erin G.	WPR1 310	Chen, Wan-Nan U.	MPW 449	Cho, Seon-Young	WPS 351	Clench, Malcolm R.	TPW 395
Chaney, Stephen	WPW 450	Chen, Wei	WOCam 10:15	Cho, Sool Yeon	TPQ 299	Clench, Malcolm R.	WPY 496
Chang, Belle	TPX 463	Chen, Weibin	MPN 250	Choc, Gerry	ThPF2 084	Clerens, Stefan	WPR2 320
Chang, Belle	WPX 461	Chen, Weibin	MPX 459	Choi, Dongmi	MPF 133	Cliby, William A.	WPT 366
Chang, Daniel	TOBpm 3:20	Chen, Wei-Yu	MPN 259	Choi, Kyungku	MPF 133	Cliby, William	WPT 354
Chang, E J	ThOCpm 4:00	Chen, Xian	ThPV2 416	Choi, Man Ho	MPX 463	Clish, Clara B.	WPX 485
Chang, Flora	TPF 110	Chen, Xian	ThPV5 438	Chong-Conklin, B.	MPN 266	Clockie, Martha	ThPV1 396
Chang, Hsueh-Ling	WPD 066	Chen, Xian	TPY 486	Chou, Bilin	ThPF3 096	Coache, Melissa	TPE 088
Chang, HC	WOAam 11:35	Chen, Xian	WPU 385	Chou, Chi-Chi	TPG 135	Coales, Stephen J.	ThPU 379
Chang, Hui-Fang	ThPC 035	Chen, Xian	WPU 385	Chou, Lillian S.	WPB 036	Cocklin, Ross R.	TPV 407
Chang, Jim	WPG 134	Chen, Xiaoyu	ThPJ2 169	Chou, Ming W.	WPY 509	Coddington, Arthur	ThPK2 205
Chang, Min S	MPE3 106	Chen, Xunming	ThPE 062	Choudhary, Gargi	MPE3 112	Cody, Robert B.	ThPH 140
Chang, Min S	WPB 029	Chen, Yan	MPE3 123	Choudhary, Gargi	ThPT 353	Cody, Robert B.	WPF 121
Chang, Steve	WPE 107	Chen, Yet-Ran	TPW 418				
Chang, Ted T.	MOFam 11:55	Chen, Yiqiang	MPB 015				
Chang, Tracy	ThPM 242	Chen, Yi-Ting	MPX 484				

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Coffee, Keith R.	WPN 236	Conrads, Thomas P.	MPX 462	Costello, Catherine	MPC 029	Cristiani, Cinzia	ThPT 362
Coffee, Keith	MPO 293	Conrads, Thomas P.	MPX 487	Costello, Catherine	MPJ 195	Crockett, David K.	MPG 166
Coffey, Robert J.	ThPV2 420	Conrads, Thomas P.	ThPV4 433	Costello, Catherine	MPN 260	Cronin, Ciaran N.	MPU 408
Coffey, Robert	WPX 483	Conrads, Thomas P.	TPY 485	Costello, Catherine	MPU 403	Crosland, Susan	TPY 483
Cohen, Aharon S.	TPU 382	Conrads, Thomas P.	WPT 363	Costello, Catherine	ThPV3 426	Crouch, Rosalie K.	TPV 398
Cohen, Alejandro M.	WPS 331	Conrads, Thomas	TOCpm 3:40	Costello, Catherine	TPB 021	Crowley, Jan R.	TPT 359
Cohen, Jerry D.	TPT 354	Converset, Veronique	WPW 429	Costello, Catherine	TPB 025	Crowson, Andrew	TOBam 11:15
Cohen, Lucinda H.	ThPM 257	Cook, Jeffrey	MPI 191	Costello, Catherine	TPV 394	Crozier, Patrick W.	MPF 146
Cohen, Lucinda	TPD 061	Cook, Kelsey	MPQ 312	Costello, Catherine	TPX 461	Cruze, Charles A.	MPE2 087
Cohen, Lucinda	TPF 105	Cook, Kelsey	MPU 394	Costello, Catherine	TPY 493	Cui, Meng	WPE 097
Cohen, Martin L.	MOFam 11:55	Cook, Kevin L.	MPE1 082	Costello, Catherine	WPR2 318	Cui, Weidong	ThPJ2 182
Cohen, Richard A.	WPW 423	Cook, Kevin	WPB 040	Costello, Catherine	WPS 340	Cui, Weidong	ThPS1 314
Cohen, Richard A.	TPY 493	Cook, Lara A.	WPB 026	Cotter, Robert J.	ThPB 020	Cui, Weidong	WPO 251
Cohen, Steven A.	MPG 171	Cook, Steven T.	TPE 082	Cotter, Robert J.	ThPJ2 171	Cuiffi, Joseph D.	ThPD 044
Cohen, Steven A.	MPU 422	Cooks, Graham	TOEpm 4:40	Cotter, Robert J.	ThPJ2 173	Cummings, Paul G.	ThPS2 337
Cohen, Steven A.	MPX 494	Cooks, R. Graham	WOAam 10:15	Cotter, Robert J.	WPA 021	Cummins, Jon	TPV 408
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Cohen, Steven L.	WPR1 307	Cooks, R. Graham	MPN 251	Cotter, Robert J.	ThPJ2 186	Cummins, Lendell	WODpm 3:00
Cohen, Steven	ThOCam 11:35	Cooks, R. Graham	MPT 383	Cotter, Robert J.	ThPS1 313	Cummins, Timothy	WPA 023
Cojocar, Laura	WPB 031	Cooks, R. Graham	ThPB 022	Cotter, Robert J.	ThPS1 319	Cummins, W. Jon	TPV 396
Cojocar, Laura	WPB 044	Cooks, R. Graham	ThPB 023	Cottrell, Barbara A.	ThPV6 464	Cunningham, Tony L.	WPW 418
Colbran, Stephen	WPJ 193	Cooks, R. Graham	ThPC 033	Couch, Margaret	ThPH 144	Curley, Charles H.	WPF 124
Cole, Mark J.	ThPF1 076	Cooks, R. Graham	ThPK2 208	Couillard, Lon A.	TPG 132	Cutak, Benjamin J.	WPQ 288
Cole, Mark J.	TPM 238	Cooks, R. Graham	TOEpm 3:40	Courtney, Paul	TPD 069	Cutalo, Jenny M.	MPQ 325
Cole, Mark J.	TPD 065	Cooks, R. Graham	TPJ 184	Cousins, Lisa M.	TPJ 178	Cyr, Terry D.	MPB 012
Cole, Mark J.	WOCam 10:35	Cooks, R. Graham	TPR 311	Cousins, Lisa M.	WPI 173	Cyr, Terry D.	MPT 377
Cole, Mark J.	WPY 489	Cooks, R. Graham	WPH 140	Cousins, Lisa	TPX 446	Cyr, Terry D.	ThPV5 439
Cole, Philip A.	ThPS1 319	Cooks, R. Graham	WPH 155	Couture, Jean	TPF 106	Czerwiec, Gregg	WPA 017
Cole, Richard B.	MPQ 313	Cooks, R. Graham	WPI 180	Couture, Jean	TPF 109	Czerwiec, Gregg	MPO 293
Cole, Richard B.	ThPL 223	Cooks, R. Graham	WPJ 188	Couture, Jean	TPF 115	Czerwiec, Gregg	WPA 014
Cole, Richard B.	ThPL 239	Cooks, R. Graham	WPX 460	Couture, Wendy	WPE 094	Czerwiec, Gregg	WPA 020
Cole, Richard B.	TPE 096	Cooks, R. Graham	WPX 480	Covey, Thomas	ThOAam 11:35	Czerwiec, Gregg	WPN 236
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Colet, Jean-Marie	WPY 498	Coombs, Kevin	TPM 233	Covey, Thomas	TOBpm 4:20	Dablemont, Céline	ThPO 282
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Colinge, Jacques	MPB 020	Cooper, Brandi	TPI 166	Covey, Thomas	TPI 168	Dahiya, Jagroop	ThPA 009
Colizza, Kevin	MPE3 128	Cooper, Brian T.	MPG 158	Covey, Thomas	TPP 281	Dai, Suzy	WPC 054
Colizza, Kevin	TPE 074	Cooper, Donald P.	MPD 058	Covey, Tom	WPE 078	Daiber, Andreas	MPU 414
Collamati, Robert	TPP 294	Cooper, Helen J.	ThOFam 10:15	Cowan, David A.	TPU 377	Dalesando, David	ThPD 045
Collier, Katherine	ThPI 146	Cooper, Helen J.	TPK 207	Coward, Lori	WPB 026	Dalevi, Daniel	ThPE 055
Collin, Olivier	TOApm 4:00	Cooper, Helen J.	WPO 252	Cox, Brian	TPZ 495	Dally, Jennifer	TPN 262
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Collins, Jack	TPC 039	Copeland, Lisa	MPF 137	Cox, David M.	WPP 275	Dalton, James T.	MPD 050
Collins, M O.	MPS 370	Copley, Kathrin	WPB 028	Cox, Frederick J.	TPU 380	Dalton, James	WPU 373
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Colombo, Maristella	ThPD 046	Cordeiro-Stone, M.	WPW 450	Cozzolino, Rosaria	TPV 404	Daly, Amy E.	ThPQ 294
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Comeau, Brigitte	ThPF3 111	Corr, Jay J.	TOBpm 4:20	Crain, Pamela F.	TODam 10:15	Dancel, Maria C.	TPG 136
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Compton, Bruce Jon	MPN 263	Corr, Jay J.	WOCam 10:35	Cramer, Ranier	TPX 450	Danell, Allison S.	MPR 342
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Connelly, Heather	ThPV5 457	Corso, Thomas N.	TPP 288	Creclius, Anna C.	MPY 507	Daniels, Scott	TPY 492
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De Pauw, Edwin	WPI 163	Desiderio, Dominic	ThPV1 395	Dirr, Mary K.	MPE2 087	Douce, David S.	TPU 379
de Vries, Ronald	WPE 106	Desiderio, Dominic	MPT 379	DiSanzo, Frank	ThOFam 11:55	Douce, David	ThOFam 11:35
Deagon, Nick	MPE3 100	Desiderio, Dominic	MPX 460	Distler, Anne M.	MPQ 329	Doucette, Alan A.	TPW 425
Dealwis, Chris	ThPT 360	Desiderio, Dominic	MPX 464	Dixon, Amy M.	ThPW 487	Doucette, Alan	TOBpm 4:40
Dealwis, Chris	ThPU 375	Desiderio, Dominic	ThPT 354	Dixon, Kevin A.	MPG 158	Doucette, William J.	ThPG 113
Deandrade, Kim	MPR 337	Desiderio, Dominic	ThPV6 474	Dixon, Richard A.	ThPA 013	Douglas, Donald J.	MPK 212
Dear, Gordon	ThOCam 11:35	Desiderio, Dominic	ThPV6 474	Dmitrenok, Pavel S.	MPP 309	Douglas, Donald J.	MPK 218
Dearden, David V.	MPI 187	DeSimone, Anthony	ThPQ 290	Dobney, Andrew	TOAprm 3:40	Douglas, John	WVP 403
DeBlois, Christian	MPF 130	Desmazières, B.	TPU 366	Dobo, Andras	MPV 426	Dourdeville, Tad	ThPQ 294
DeBlois, Christian	TPG 143	DeSouza, Leroi V.	WPP 272	Dobo, Andras	MPV 436	Dowty, Martin E.	MPE2 087
Debrauwer, L.	TPS 338	DeSouza, Leroi	WPT 364	Dobos, Karen	WPU 385	Drader, Jared J.	TPJ 177
DeBrou, Gary B.	WPF 117	Despeyroux, D.	MPK 222	Dobrov, Anatol A.	WPI 172	Drader, Jared J.	TOAam 11:35
Dechert, Gary J.	ThOFam 11:55	Dessingy, Thierry	MPB 020	Dobson, C M.	ThPU 381	Drader, Jared J.	TPV 411
Dedeo, Anja	TPN 258	Dethy, Jean-Marie	MPE1 067	Dobson, Gareth	MPK 222	Drader, Jared J.	WODpm 3:00
Dedeo, Anja	WPG 138	Dethy, Jean-Marie	TPD 067	Dobson, Roy L. M.	MPC 030	Drader, Jared	ThODam 10:35
DeFilippo, Melissa	ThPI 153	Detlefsen, David J.	MPO 287	Dodard, Chenier	MPE3 104	Dragan, Y P	ThPV2 407
DeFilippo, Melissa	ThPU 378	Detlefsen, David J.	TPE 078	Dodard, Chenier	TPD 053	Dragna, Serge	MPF 148
Deforce, Dieter L.	ThPF2 086	Detlefsen, David J.	WODpm 3:40	Dodeller, Marc	MPY 497	Draper, Robert	ThPF2 091
Degen, Martha	ThPT 356	Deutsch, Ariel Y.	MPY 507	Dodeller, Marc	TPE 086	Dratz, Edward A.	TPY 477
DeGennaro, Louis	WVP 407	Deutsch, Eric	TPY 471	Dodonov, A.	ThPJ2 172	Dreger, Mathias	MPW 448
Deguchi, Kisaburo	MPC 025	Devchand, Pallavi	ThPI 147	Dodonov, A.	ThPK1 191	Dressel, Daniela	ThPI 154
DeGuzman, Raylyn	ThPD 042	Devenish, Angie	TPV 408	Dodonov, A.	ThPL 237	Dreux, Michel	ThPQ 296
Dehring, Karen	TPD 052	Devereaux, Richard	ThPQ 296	Doerge, Daniel	ThPC 037	Dreux, Michel	TPJ 181
Deiningner, Sören	TPM 231	DeVoe, Donald L.	WPX 470	Doerge, Daniel	ThPW 485	Drexler, Dieter	ThPF1 073
Deinzer, Max L.	ThPL 232	Deziel, Eric	MPP 300	Doerge, Daniel	WPY 502	Drexler, Dieter	TPF 102

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Driskell, W. Jack	ThPB 024	Ebanks, Roger	TPZ 514	El-Shourbagy, T	MPE3 106	Evans, David H.	ThPV5 440
Drumm, Patrick	TPQ 302	Eberhart, B. Loye	ThPA 002	Elssner, Thomas	MPN 247	Evans, Gareth	TPW 420
D'Sa, Ivy	MPF 136	Eberini, Ivano	MPU 415	Emerick, Mark	TPN 258	Evans, James E.	MPV 434
Du, Alicia Y	TPE 092	Ebert, Matthias	ThPV2 417	Emes, Michael J	WPP 283	Evans, Jason J.	TPL 218
Du, Alicia	MPO 272	Eckenrode, Brian A.	ThPH 136	Emili, Andrew	TPZ 495	Evans, Matthew D.	ThPB 019
Du, Alicia	ThPF3 101	Eckenrode, Brian A.	ThPH 139	Emmett, Mark R.	ThOCpm 3:40	Evans, Ronald A.	ThPB 016
Du, Alicia	TPE 095	Eckenrode, Brian A.	ThPH 143	Emmett, Mark R.	ThPV6 467	Evans, Su	WPV 406
Du, Min	TPZ 513	Eckenrode, Brian A.	WPA 008	Emmett, Mark R.	TPW 441	Evarts, Simone	WODam 10:55
Du, Min	WPP 275	Eckerskorn, Christoph	TPX 443	Emmett, Mark R.	WPR2 325	Evason, David J.	ThPV1 384
Du, Ping	ThPV4 431	Eckert, Gunter	WPE 096	Emmett, Mark R.	MPR 341	Evason, David J.	TPU 376
Du, Yi	TPZ 500	Eckstein, James	WPY 498	Emmett, Mark R.	MPV 427	Ewald, Deborah K.	ThPA 002
Du, Yi	WOBpm 3:40	Eckstein, James	MODam 10:55	Emmett, Mark R.	ThPT 345	Ewing, Andrew	WOApm 3:40
Du, Zhaohui	MPV 438	Edalji, Rohinton	ThPT 345	Emmett, Mark R.	TOAam 10:15	Ewing, Nigel P.	ThPI 153
Du, Zhaohui	ThPI 151	Edbey, Khaled M.	TOEam 11:55	Emmett, Mark R.	TPR 312	Ewing, Nigel P.	ThPU 378
Du, Zhaohui	WOBam 10:55	Eddes, James E.	TPA 016	Eng, Jimmy	TPA 004	Eyler, John R.	MPI 181
Duan, Jin	WPP 274	Eddes, James S.	TPA 013	Eng, Jimmy	TPY 488	Eyler, John R.	ThPR 297
Duarte, Robert	WPX 477	Edge, Tony M.	WPB 024	Eng, Jimmy	WPD 070	Eyler, John R.	MPK 219
Dube, David L.	WPY 515	Edgemond, William	ThPK2 213	Engel, Marc E.	MPF 144	Eyler, John R.	MPK 224
Dubé, Marc A.	TPU 370	Edinger, Kurt	ThPF1 073	Engelking, Joachim	MPN 257	Eyler, John R.	WPI 172
Dubin, Joshua	WPS 327	Edkins, John E.	TPG 120	Engelstein, Marcy	WPG 138	Eyler, John R.	WPR1 292
DuBois, Raymond	WPL 228	Edlund, Per-Olof	WPC 061	Engen, John R.	ThPU 380	Eyles, Stephen J.	MPV 426
Ducharme, Julie	MPE1 076	Edmondson, Ricky	ThPV5 447	Engen, John R.	ThPU 383	Ezan, Eric	WPY 492
Duchoslav, Eva	ThPF1 078	Edmondson, Ricky	TODpm 4:40	Engen, John R.	TPL 222	Fabris, Dan	MPR 333
Duckett, Catherine	MPE2 091	Edwards, D. Scott	MPE3 095	English, Ann M.	MPG 159	Fabris, Dan	MPR 334
Duckworth, Harry	MPQ 323	Edwards, Jennifer L.	ThPB 016	English, Ann M.	MPU 393	Fabris, Dan	MPR 339
Ducret, Axel	WPW 419	Edwards, Selvin H.	MPF 152	English, Ann	WPU 391	Fabris, Dan	MPR 346
Duempfeld, B.	TPY 491	Edwards, Simon P.	WPM 234	English, Robert D.	ThPJ2 171	Fabris, Daniele	ThPS2 334
Duewel, Henry S.	WPU 376	Eerkes, Angela	MPE3 096	English, Robert D.	WPA 021	Fabris, Daniele	TODam 10:35
Duewel, Henry S.	MPX 491	Egan, Thomas	MPK 213	English, Robert D.	ThPJ2 173	Fagerquist, Clifton	WPO 246
Duewel, Henry S.	ThPQ 295	Egan, Thomas	ThPK1 188	Enke, Christie G.	TPJ 188	Fagin, Adelaide	TOEpm 4:20
Duff, Janice L.	WPM 468	Egan, Thomas	ThPK1 194	Enright, James M.	ThPH 142	Fahey, Angela M.	WPI 191
Duff, Keith J.	ThMP 264	Ehleringer, J.	TOBam 10:55	Ens, Werner	MPX 478	Fahie, Brian	WPE 077
Duffin, Kevin L.	TPT 362	Eichelberger, B.	MOEam 11:15	Ens, Werner	MPY 502	Fahr, Kristina	MPN 247
Duffin, Kevin L.	MPT 374	Eichhold, Thomas	ThPF3 095	Ens, Werner	ThPA 006	Fahy, Eoin	MOAam 10:35
Duffin, Kevin L.	ThPM 259	Eichhorst, Jeff C.	ThPW 483	Ens, Werner	ThPA 010	Fahy, Eoin	MPW 443
Duffin, Kevin	ThPV6 469	Eijkel, Gert B.	MPY 505	Ens, Werner	ThPK1 190	Faircloth, Glynn	WPE 082
Dufield, Dawn R.	MPT 374	Eijkel, Gert B.	WOApm 4:40	Ens, Werner	TOFpm 4:40	Falick, Arnold M.	ThPS2 339
Dufield, Dawn	ThPV6 469	Eisenbach, M.	MPU 391	Ens, Werner	TPM 233	Fallis, Brooks	ThPS2 343
Dufresne-Martin, G.	MPX 490	Ejsing, Christer	MPM 241	Ens, Werner	WOFam 11:35	Famiglioni, G.	WOCam 11:15
Dufresne-Martin, G.	ThPV2 409	Ek, Bo	TPN 256	Ens, Werner	WPP 279	Famiglioni, G.	WPF 126
Duggan, Jeffrey X.	TPF 104	Ek, Bo	WPX 458	Ens, Werner	WPW 420	Fan, Erkang	ThPD 038
Duggan, Jeffrey X.	ThPM 250	Ek, Jared	WODam 10:15	Entwisle, John R.	ThPF3 110	Fan, Guang	TPZ 509
Dumlao, Darren S.	ThPV1 394	Ek, Jared	WPG 134	Epstein, Jonathan	WPD 067	Fan, Hongran	ThPM 242
Dunaway-Mariano, D.	WPQ 284	Eklund, Eivor	WPB 024	Erdmann, Nicole	WPF 115	Fan, Xinghua	WPF 128
Duncan, Mark W.	WPW 417	Ekroos, Kim	MPM 241	Erdmann, Nicole	WPN 238	Fanculli, Giuseppe	ThPR 307
Dunn, Jamie	TOApm 4:40	Ekstrom, Simon	ThOBpm 3:40	Erel, Eric	WPM 230	Fancy, Paul D.	WPI 178
Dunn, Stanley D.	MPV 429	El Aribi, H.	ThOBam 10:55	Ericson, Christer	TPX 459	Fancy, Sally-Ann	MPI 192
Dunn-Meynell, K.	TPD 073	El Aribi, Houssain	WPI 161	Ericsson, Lowell	WPU 394	Fanelli, Roberto	WPF 127
Dunn-Meynell, K.	WPE 081	El-Andaloussi, N.	TPT 348	Eriksson, Bengt	TPW 420	Fang, Jan	ThPM 256
Durairaj, Anita	MPR 330	Electricwala, A.	WPR2 313	Eriksson, David	ThOBpm 3:40	Fang, Ruihua	ThPT 366
Duran, Anthony L.	ThPA 013	Elenitoba Johnson, K.	MPG 166	Erlanson, Daniel	WODam 10:55	Faria, George	ThPL 238
Durham, Heather	ThPV6 470	Elfakir, Claire	TPJ 181	Erskine, Annette	MPN 262	Fariss, Marc	TOCam 11:55
Durocher, D.	ThPT 359	El-Faramawy, A.	ThPL 230	Erskine, Annette	TPN 242	Farmer, Patrick	ThPG 127
Durr, Eberhard	WPV 396	Elias, Dwayne A.	ThPV1 392	Esch, S. Wynn	WPR1 293	Farnós, Omar	WPR2 321
Durrant, Edward E.	WPI 182	Elias, Joshua E.	WPX 477	Escoubas, Pierre	TPQ 300	Farrow, Emily G.	MPE3 105
Dussault, Gerard	MPE1 069	Elias, Joshua E.	MPS 358	Eshraghi, Jamshid	MPO 297	Farrow, Emily G.	ThPF3 102
Dutta, Sucharita M.	MPN 265	Elias, Joshua E.	TPA 005	Esmans, Eddy L.	ThPQ 291	Farrow, Emily G.	MPE3 127
Duursma, Marc C.	TPH 146	Elisseev, Serguei	ThPJ2 172	Esmans, Eddy L.	TPS 329	Fast, Douglas M.	TPF 104
Duursma, Marc	TPH 155	Ellefson, Peter J.	ThPM 250	Esmans, Eddy L.	WPY 508	Fattahi, Alireza	ThPK2 199
Dworzanski, Jacek	WPA 005	Elliott, Brian	WODpm 3:40	Espourteille, FA.	ThPQ 290	Fauler, Günter	MPM 243
Dworzanski, Jacek	WPA 010	Ellor, Nicholas	WPB 038	Esser, Sara	ThPF2 081	Faull, Kym F.	MOAam 11:35
Dwyer, Casey	MPN 266	Ellrott, Kyle	ThPU 375	Estell, Dave	ThPI 146	Faull, Kym F.	MPD 060
Dyck, Monica	ThPA 007	Ellrott, Kyle	TPZ 528	Ethier, Jean C.	MPB 012	Faull, Kym F.	ThPV1 394
Dyck, Monica	ThPA 009	Ells, Barbara	ThOAam 10:35	Ethier, Jean C.	MPT 377	Faull, Kym F.	TPR 314
Dyke, Derek Van	TPW 420	Ells, Barbara	ThOApm 4:40	Ethier, Martin	WOFam 11:35	Faull, Kym F.	TPW 416
Dykstra, Andrew	WPR2 318	Elms, Phillip J.	MPU 402	Etter, Michele	ThPW 483	Faull, Kym	TPT 351
Dzerk, Alan	ThPF3 105	Elms, Phillip J.	WPX 459	Euerby, Melvin R.	WPB 030	Faull, Kym	TPW 436
Easterling, Michael	TPZ 505	Elms, Phillip	TPZ 531	Eugenii, Ericka E.	WPT 355	Faull, Kym	WPY 503
Easterling, Michael	WPR2 322	ElNaggar, S F.	ThPA 005	Evanchik, Marc	MPE1 073	Fausnaugh-Pollitt, J.	ThPF2 091
Easterling, Michael	MPI 189	Elfsson, Stefan	MPO 290	Evangelista, Lolita	TPY 492	Fausto, Nelson	TPY 471
Easterling, Michael	MPI 194	Elortza, Felix	TPW 438	Evans, Allan	MPE1 080	Favetta, Patrick	TPJ 181
Eaton, Dan L.	ThODpm 3:40	El-Shourbagy, T.	WPB 029	Evans, Anne M.	ThODpm 3:20	Fazili, Zia	MPD 051

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Feder, Debby	WPQ 285	Fine, Richard E.	WPS 340	Fornasini, G.	MPE1 080	Friedrich, Jochen	MPK 210
Feldman, Andrew B.	TPA 010	Finehout, Erin J.	ThPV6 460	Forni, Sabrina	MPE1 085	Friedrich, Joerg F.	TPU 391
Feldman, Andrew B.	TPC 032	Finkbeiner, Steve	TPZ 509	Foster, David E.	WPF 119	Friesen, Duane A.	TPG 130
Feldman, Andrew B.	WPA 006	Finley, Daniel	MPS 358	Foster, Kelly L.	WPU 377	Friso, Giulia	ThPV1 398
Felitsyn, Natalia M.	TPC 038	Finnessy, John J.	WPP 266	Foster, Leonard	WPU 387	Friso, Giulia	TPW 421
Fell, Lorne	TPI 168	Finnie, Christine	MPW 447	Foster, Mark P.	WPC 058	Froesch, Martin	MPI 180
Fellous, Samuel	ThPE 048	Fischer, Helmut	TPM 231	Fountain, Aaron	MPI 183	Froese, Kenneth L.	TPG 134
Fenaille, François	MPU 395	Fischer, Steve	TPX 456	Fountain, Kenneth	TPS 344	Fruehan, Peter	WPR1 299
Feng, Bo	TPD 065	Fisher, Jeffrey W.	ThPW 487	Fountain, Kenneth	ThPM 254	Fu, Irong	MPE3 117
Feng, Peter C.H.	WPR1 298	Fisher, Keith J.	WPM 234	Fountain, Kenneth	TPN 246	Fu, Peter P.	WPY 509
Feng, Wenqing	MPO 296	Fisher, Lawrence	MPD 057	Fountain, Kenneth	WODpm 4:00	Fu, Qiang	ThPR 306
Feng, Xedong	ThPS1 310	Fisher, Lawrence	MPD 044	Fountain, Scott	TPF 105	Fu, Siyu	ThPV6 466
Feng, Xiaoli	TPZ 502	Fisher, Lawrence	TPF 098	Fournier, Françoise	MPM 239	Fu, Siyu	WPT 356
Feng, Xidong	MPP 308	Fisher, Stewart	WODam 10:35	Fournier, Françoise	ThPK2 207	Fu, Xiaoyun	TPT 355
Fenselau, Catherine	TPW 442	Fisher, William	TOBpm 4:20	Fournier, Françoise	ThPN 270	Fu, Yan	MPB 015
Fenselau, Catherine	MPT 385	Fishman, David	TOCpm 3:00	Fournier, Françoise	ThPO 282	Fuhrer, Katrin	MPK 213
Fenselau, Catherine	ThPH 131	Fishman, Jordan	WPS 340	Fournier, Françoise	TPK 203	Fuhrer, Katrin	MOBam 10:55
Fenselau, Catherine	WPA 007	Fishman, Vyacheslav	ThPG 124	Fournier, Françoise	WPK 211	Fujii, Kiyonaga	MPX 476
Fenselau, Catherine	WPA 009	Fitzgerald, M.	WPT 367	Fournier, Françoise	WPK 217	Fujimura, Tsutomu	MPU 411
Fenselau, Catherine	WPA 018	Fitzgerald, M.	WODam 11:35	Fournier, Françoise	WPO 247	Fujita, Satoshi	MPN 268
Fenselau, Catherine	WPA 021	Fitzgerald, M.	WPC 054	Fournier, Rene	TOFam 10:55	Fujiwara, Hideji	ThPM 259
Fenselau, Catherine	WPS 342	Fitzgerald, Robert	MPL 236	Fowler, Sue	TPV 396	Fukada, Kei	WPS 336
Fenselau, Catherine	WPT 358	Fitzloff, John F.	MPM 284	Fowler, Sue	TPV 408	Fukuda, Hiroyuki	MPN 268
Fenude, Ema	ThPR 307	Fitzloff, John F.	TPQ 301	Fox, Brian G.	TPL 215	Fukuda, I-chiro	TPU 372
Fenyk-Melody, Judy	MPE3 107	Fitzloff, John F.	TPQ 305	Fox, Stephen D.	MPD 042	Fukui, Kazuhiko	ThPS1 328
Fenyo, David	TPZ 494	Flad, Thomas	ThPS1 329	Foxall, Wendy	ThPV1 396	Fulton, Jack E.	WPH 140
Fenyo, David	WPO 260	Flaim, Eric	MOEam 11:35	Foxall, Wendy	TPW 427	Fultz, Jodi L.	ThPC 037
Fergenson, Dave	WPA 014	Flaim, Eric	WOEam 11:15	Foxtton, Richard	MPD 048	Fung, Eliza N.	ThPF1 069
Fergenson, David P.	WPA 017	Flamand, L.	WPL 223	Foxwell, Amanda L.	TPT 353	Fung, Eliza N.	WPD 063
Fergenson, David P.	WPN 236	Flanagan, Michael	TPX 456	Fragiskatos, O.	ThPF3 094	Fung, Eliza	MPE1 065
Fergenson, David	MPO 293	Flanagan, Michael	WPR1 312	Fragiskatos, O.	ThPF3 099	Fung, Eric T.	WPT 352
Fergenson, David	WPA 020	Flarakos, Jimmy	TPO 279	Fragiskatos, O.	ThPF3 111	Fung, Kim	WPW 417
Ferguson, James A.	WPE 108	Flarakos, Themis	MPE3 125	Frahm, Jennifer L.	MPR 336	Fung, Selena	ThPK2 211
Ferguson, P. Lee	ThPJ2 178	Flarakos, Themis	TPC 033	Francis, Jennifer Y.	WPF 116	Fung, Y.M.E.	WPO 253
Ferguson, Patrick	ThPL 229	Flarakos, Themis	TPO 265	Franck, Zsofia	ThPV6 460	Funk, William E.	ThPJ1 160
Ferguson-Miller, S.	MPQ 329	Flarakos, Themis	TPO 279	Francois, Patrice	WPW 429	Furcolo, Patrick	WPO 286
Fernandez, Abel	MOEam 10:55	Flarakos, Themis	WPE 078	Franey, Robert	WPY 494	Furdui, Cristina M.	ThPV1 389
Fernandez, Beth	MPE3 109	Fleckenstein, B.	ThPV1 387	Frank, Aaron J.	MPK 218	Furlong, Edward T.	MPF 142
Fernandez, Beth	TPF 113	Fleer, Silke	ThPV5 455	Frank, Andreas	ThPW 491	Furtado, Milton	ThPL 238
Fernandez, Carolina	WPY 506	Fleming, Richard	MPI 184	Frank, Matthias	MPO 293	Furtado, Milton	WPB 043
Fernandez, Carolina	WPY 516	Fliegel, Larry	MPS 369	Frank, Matthias	WPA 014	Furtado, Milton	WPE 093
Fernandez, Facundo	MPY 503	Fliegel, Larry	WPP 267	Frank, Matthias	WPA 017	Fürtös-Matei, A M	ThPT 358
Fernandez, Facundo	ThPJ2 184	Floyd, David P.	WPF 124	Frank, Matthias	WPA 020	Furuno, Masahiro	ThPT 361
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Fernandez-Metzler, C.	WPH 145	Fodor, Szilan	TPV 406	Frankevich, Vladimir	WPK 209	Futrell, Jean H.	MOEam 11:55
Fernandez-Metzler, C.	WPE 080	Fogeron, M-L	ThPV2 417	Franssila, Sami	MPJ 200	Futrell, Jean H.	TPH 151
Fernandez-Ocana, M.	ThPA 014	Follistein, Duke W.	WPF 124	Franz, Andreas H.	ThPD 043	Futrell, Jean H.	WPJ 198
Ferrer, Damien	MPB 020	Folschweiller, N.	MPU 397	Fraser, Catharine	ThPC 034	Futrell, Jean H.	WPI 162
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Ferrer, Imma	WOFpm 3:20	Foltz, David J.	ThPF3 110	Fraser, Paul	ThPR 303	Gabryelski, Valérie	TPG 134
Ferrige, Antony G.	TPJ 176	Foltz, David J.	TPF 110	Frattelli, Maddalena	MPU 415	Gadberry, Melinda	MPO 271
Fetterolf, Dean D.	ThPH 131	Foltz, Rodger L.	ThPF2 082	Fred, Charlotta	MPT 375	Gade, Doerte	ThPV5 453
Fetterolf, Dean D.	WPA 007	Foltz, Rodger L.	ThPF3 109	Fredenhagen, A.	TPQ 295	Gade-Jorgensen, SS.	WPW 416
Feuers, Ritchie J.	TODpm 4:40	Fonash, Stephen J.	ThPD 044	Frédéric, Raphaël	MPU 396	Gadgil, Himanshu S.	ThPV1 401
Fialkov, Alexander	TPJ 176	Fong, Irving	TPF 110	Freeman, Colin G.	ThPK2 196	Gadgil, Himanshu	ThPS1 317
Ficarro, Scott B.	ThPT 363	Foote, Linda J.	MPQ 315	Freeman, Colin G.	MPD 047	Gage, Douglas, A.	ThPA 015
Ficarro, Scott B.	TPX 459	Forbes, Andrew	TOAam 10:55	Freeman, James P.	ThPW 490	Gagne, Sebastien	ThPG 128
Fidler, Isaiiah J.	ThPV2 410	Forbes, Andrew	TPA 003	Frego, Lee E.	WPR1 296	Gagné, Sébastien	TPF 106
Fieh, Oliver	MPP 303	Forbes, Andrews	WOBpm 3:40	Freiberg, Jessica F.	TPL 223	Gagnon, JF	WPA 011
Field, Helen	MPD 061	Ford, Lisa A.	MPT 382	Freitas, Michael A.	ThPV2 407	Gai, Wen Z.	WPT 362
Field, Jennifer A.	TPG 129	Ford, Lisa A.	WPE 102	Freitas, Michael A.	TPH 153	Gaillard, Elizabeth	MPU 409
Figays, Daniel	ThPQ 295	Ford, Lisa A.	WPG 133	Freitas, Michael A.	WPT 355	Gairin, JE	TPZ 517
Figueiredo de, P.	MPC 027	Ford, Lisa	ThPM 267	Freiwald, Sascha	MPE1 081	Gale, P. Jane	ThPF1 067
Fillet, Marianne	WOCpm 4:00	Ford, Michael J.	MPY 496	Fremont, Daved	ThPI 151	Gale, P. Jane	WPE 090
Fillet, Marianne	WPS 345	Ford, Michael J.	TPM 240	Frenzel, Gary	ThOCam 11:15	Galeva, Nadezhda	WPR1 293
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Finch, Jeffrey W.	MPG 171	Forest, Eric	ThPU 376	Frey, Brian L.	TPI 160	Gallaher, Kenneth	WPH 157
Finch, Jeffrey W.	MPN 263	Foret, Frantisek	ThOBpm 4:00	Friedlander, Arthur	ThPV5 452	Gallagos-Perez, J.	TPT 365
Finch, Jeffrey W.	TPM 227	Foret, František	ThPV5 451	Friedman, David	WPX 483	Gallo, Kathleen A.	ThPV4 436
Fine, Richard E.	ThPR 304	Forler, Daniel	WPX 484	Friedman, J.F.	MOEam 10:55	Gallo, Lorena	MPD 046

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Galvan, Veronica	ThPV6 464	Gebler, John C.	TPW 433	Giguère, M.	TPU 370	Goeringer, Douglas	WPI 166
Gamache, Paul H.	MPO 269	Gebler, John C.	WODpm 4:00	Gikas, Evangelos	MPF 138	Goeters, Susanne	TPC 040
Gamache, Paul	ThPL 233	Geczy, Carolyn	ThPV6 462	Gilar, Martin	MPX 459	Goeters, Susanne	TPC 044
Gamage, Chaminda	ThPJ2 184	Geczy, Carolyn	TPT 360	Gilar, Martin	ThPM 254	Goetschi, Andreas	WPY 510
Gamble, Tanya	TPE 089	Gedamke, R	MODam 11:15	Gilar, Martin	ThPQ 294	Goh, Theo C.	MPX 491
Gamble, Tanya	TPJ 174	Gedig, Erk	WXP 466	Gilar, Martin	TPN 246	Goh, Theo	WPU 376
Gamboa da Costa, G.	WPY 502	Gee, Kenneth	WPB 041	Gilar, Martin	TPW 433	Goldberg, Harvey A.	TPT 358
Gan, Lawrence	MODam 11:35	Geenen, Lieve	WPR2 320	Gilar, Martin	WODpm 4:00	Goldberger, Natalie	WPU 373
Gan, Liang-Shang	MPO 282	Geer, Lewis Y.	MPB 018	Gilar, Martin	TPS 344	Goldstein, Richard	TPB 022
Gan, Margaret	ThPG 117	Geer, Lewis Y.	ThPE 056	Gilbert, Anthony J.	TPJ 183	Golenko, Eva	TPZ 530
Ganshaw, Grant	ThPI 146	Geer, Lewis	WPD 067	Gilchrist, Annalyn	MPW 445	Gologan, Bogdan	MPN 251
Gao, Feng	TPE 075	Gehrig, Peter M.	TPT 348	Gilchrist, Annalyn	WPS 335	Gologan, Bogdan	WPX 460
Gao, Hong	ThPK2 195	Gehring, Theresa	WPY 495	Giles, Kevin	MPK 226	Gologan, Bogdan	WPX 480
Gao, Jun	TPX 462	Gehrmann, Marion	WPT 358	Giles, Kevin	ThPK1 189	Golovanova, Marina	TPY 483
Gao, Junling	MPA 002	Geiser, Heidi A.	WPV 402	Giles, Kevin	TPI 165	Gomez, Francisco E.	TPL 215
Gao, Lan	MPE1 077	Geissel, Hans	ThPJ2 172	Gill, Andrew C.	WPR2 319	Gomez, Stephen	TPW 436
Gao, Rong	WPH 140	Gendeh, Gurmil	WPV 399	Gill, Chris G.	TPG 130	Gomibuchi, Mami	TPE 077
Gao, Vince C.X.	ThPA 011	Genin, Eric	ThPG 115	Gillen, Clemens	MPW 448	Gonin, Marc	MPK 213
Gao, Wen	MPB 015	Gennaro, Lynn A.	WPY 504	Gillespie, Todd	TPE 079	Gonin, Marc	MOBam 10:55
Gao, Xia	WPP 263	Gentzel, Marc	ThPE 058	Gillig, Kent J.	ThPK1 194	Gonnet, Florence	ThPV3 429
Garbis, Spiros D.	MPD 054	Gentzel, Marc	WXP 484	Gillig, Kent J.	MOBam 11:35	Gonzalez, Arlene D.	WPS 347
Garcia, Benjamin A.	TPT 364	George, Alisha	MPX 467	Gilligan, John J.	WOBam 11:35	Gonzalez, Ed	TPD 072
Garcia, David E.	MPQ 321	George, Bindu A.	WPR1 310	Gilligan, John J.	WOBam 11:35	González, Luis J.	WPR2 321
Garcia, David	ThOEam 10:55	George, Elisabeth	WPV 406	Gilly, William F.	ThPR 305	Gooden, Jonathon	MPI 186
Garcia, Liset	ThPF3 104	George, Kathleen M.	MPS 351	Gilmour, Sarah J.	WXP 486	Goodin, Richard	ThOEpm 3:40
Gard, Eric E.	WPA 017	Georgi, Ann	ThPT 366	Gilpin, Richard	WPY 507	Gooding, Karen M.	MPQ 328
Gard, Eric E.	WPN 236	Gerard, Ghislain	WPH 142	Gimbert, Yves	ThPK2 207	Goodison, Steve	ThPV2 406
Gard, Eric	MPO 293	Gerbeleu, Nicolae	WPI 172	Gin, Tony	WPE 089	Goodlett, Dave R.	TPZ 516
Gard, Eric	WPA 014	Gerber, Scott A.	MOCam 11:55	Ginter, Joy M.	TPZ 518	Goodlett, David R.	MPX 471
Gard, Eric	WPA 020	Gerber, Scott A.	MPT 378	Giordano, Giuseppe	MPD 046	Goodlett, David R.	TPY 471
Gardner, Ben D.	ThPJ2 171	Gergov, Merja	ThPH 135	Giorgianni, F.	MPX 460	Goodlett, David R.	TPZ 520
Gardner, Ben D.	ThPJ2 173	Gertz, Erik	MPL 236	Giorgianni, F.	ThPT 354	Goodlett, David R.	WPU 378
Gardner, Ben D.	ThPJ2 186	Geyer, Roland	ThPG 117	Girard, James E.	TPU 389	Goodlett, David R.	WPV 412
Gardner, Graeme G.	ThPC 034	Geyer, Roland	WPH 149	Girard, James E.	ThOEpm 4:20	Goodlett, David	TPY 469
Gardner, Michael S.	MPF 131	Geyer, Roland	WPL 227	Girault, Hubert H.	WXP 476	Goodley, Paul C.	WOCam 11:55
Garger, Stephan	ThPI 150	Ghalambor Dezfuli, A.	WPH 146	Girdaukaus, Gary	MPO 285	Goodley, Paul C.	ThPV1 397
Garger, Stephen J.	WPR2 314	Ghezzi, Pietro	MPU 415	Girjavallabhan, V.	WPC 062	Goodman, Keith	WPE 110
Garland, Jay L.	TPG 121	Ghobarah, Hesham	ThPC 030	Giron, Marc	MPB 020	Goodmanson, M.	WPU 392
Garlish, Rachel A.	ThPP 287	Ghosh, Dipankar	ThPG 115	Giroux, Isabelle	TPG 143	Goodrich, G.	TOCpm 4:20
Garozzo, Domenico	TPB 020	Ghosh, Soumitra	MOAam 10:35	Giskes, Frans G.	WOApm 4:40	Goodwin, Andrew	ThPV5 459
Garozzo, Domenico	TPB 027	Ghosh, Soumitra	MPW 443	Glaenzel, Ulrike	TPE 080	Gooley, Andrew	WPX 468
Garozzo, Domenico	TPV 404	Giacomelli, Lisa	ThPV1 398	Glandorf, Jörg	MPB 008	Gopaul, V. Sashi	MPP 310
Garrett, Timothy J.	TPL 221	Giacomelli, Lisa	TPZ 532	Glaser, Alison	TPS 332	Gopaul, V. Sashi	TPO 275
Gartner, Carlos A.	TPY 475	Giampiccolo, R.	ThPW 480	Glassmeyer, Susan	MPF 142	Gorby, Yuri A.	ThPV1 392
Gary, Gresham	MPL 237	Gianazza, E.	MPU 415	Glatz, Bernd	WXP 479	Gordin, Alexander	TPJ 176
Gaskell, Simon J.	MPU 419	Giannakopoulos, A.	ThPS1 321	Glavanovich, M.	WPB 033	Gorenstein, M.	ThOCam 11:35
Gaskell, Simon J.	ThOBam 10:15	Gibbons, Francis D.	TPA 005	Gleave, Michelle	MPE3 098	Gorman, C.	MPE3 095
Gaskell, Simon J.	ThPS1 316	Gibbons, Nicole	ThPA 007	Glenn, Gary M.	MOAam 10:35	Gorman, G.	WPB 026
Gaskell, Simon J.	TPY 483	Gibbons, Nicole	ThPA 009	Glinski, Mirko	MPS 352	Gorshkov, M.	TPH 156
Gaskell, Simon J.	TPZ 503	Gibbs, Bernard F.	WPV 408	Glinski, Mirko	ThPV3 422	Goshawk, Jeff	WPY 507
Gaskell, Simon J.	WPV 406	Gibbs, Bernard F.	ThPG 129	Glish, Gary L.	WOAam 10:35	Gosselin, J.	WPL 223
Gaspar, Peter P.	WPJ 199	Gibbs, Bernard F.	ThPS2 343	Glish, Gary L.	WPF 114	Gostick, Dominic	TPN 246
Gaspar, Peter P.	WPJ 204	Gibbs, Bernard F.	ThPV6 470	Glish, Gary L.	MPK 220	Goulding, Andrew	WPR1 307
Gasser, Rodolfo	TPE 076	Gibbs, Bernard F.	WPR1 291	Glish, Gary L.	MPK 227	Gourgues, G.	ThPV2 403
Gaucher, Sara P.	MOAam 10:35	Gibbs, Bernard	ThPI 152	Glish, Gary L.	ThPJ1 165	Gouzerh, Pierre	ThPO 282
Gaucher, Sara P.	MPW 443	Gibbs, Bernard	WPR2 316	Glish, Gary L.	WPI 177	Gozo, Stephen	MODam 11:15
Gaumet, J.	WPM 232	Gibbs, David	TPF 099	Glish, Gary L.	WPI 179	Gozo, Stephen	ThPF2 085
Gawinowicz, MA	WPP 273	Giblin, Daryl	TPK 190	Glisson, Frederic	MPH173	Gqamana, Putuma	WPJ 192
Gay, Martha L.	ThPW 484	Gibson, Bradford	TPW 426	Glocker, Michael	WPW 431	Gräning, Carsten	WPF 115
Ge, Hui	ThPV6 468	Gibson, Bradford	MOAam 10:35	Gloekner, Charles	ThPV5 454	Graber, Armin	ThPV4 432
Ge, Xue	MPE1 078	Gibson, Bradford	MPW 443	Glorioso, Joseph	ThPV6 477	Grace, James	MPE1 067
Ge, Xue	MPO 294	Gibson, Bradford	ThPV6 464	Glynn, Susan	TPD 052	Grafelman, Daryl	TPF 097
Ge, Xue	WPE 095	Gibson, Bradford	WPP 281	Go, Eden	WOCam 10:15	Grafelman, Daryl	WPE 109
Geahlen, Robert L.	TPZ 508	Gibson, Bradford	WPS 330	Gobey, Jason S.	TPM 238	Graham, Kendon	TPD 069
Geary, Richard S.	MPE3 120	Gibson, Bradford	WPU 388	Gobey, Jason S.	WOCam 10:35	Graham, LeRae B.	WPJ 197
Gebhardt, Wilhelm	ThPG 115	Gibson, Drew	TPD 063	Gobom, Johan	ThPJ2 176	Graham, Michael L.	MPD 062
Gebler, John C.	MPX 459	Gibson, Shen Lin	TPU 387	Gobom, Johan	ThPV5 453	Grainger, James	MPF 152
Gebler, John C.	ThPQ 294	Giddings, Michael	WPW 415	Gobom, Johan	WPU 382	Grandmaison, C.	WPB 025
Gebler, John C.	MPG 171	Gidrol, Xavier	ThPV3 429	Gobom, Johan	WPW 421	Grange, Andrew	TPG 126
Gebler, John C.	MPN 250	Giebelhaus, L.	ThPV5 448	Gobom, Johan	WXP 474	Grange, Paul	MPY 511
Gebler, John C.	ThPM 254	Giese, Roger	WPU 389	Goebbert, Daniel J.	WPJ 203	Granger, Jennifer	MPE1 072
Gebler, John C.	TPN 246	Giessmann, Ulrich	ThPJ2 167	Goeringer, Douglas	ThPB 017	Granger, Jennifer	WPY 500

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Granger, Jennifer	TPP 289	Grollman, Arthur P.	TPS 340	Guo, Jingzhong	TPY 467	Hagman, Charlotte	TPY 481
Granger, Jennifer	TPP 294	Gron, Ole	ThPD 045	Guo, Jingzhong	WPT 364	Hagman, Charlotte	WPO 259
Granger, Michael C.	ThPL 233	Gronborg, Mads	ThPV2 415	Guo, Juntao	ThPU 375	Hahn, Stephan A.	WPS 337
Granot, Ori	TPJ 176	Gronborg, Mads	TPZ 522	Guo, Wei	WPE 112	Hahnenberger, K.	TPP 281
Grant, Kathleen L.	MPS 366	Gronert, Karsten	ThPI 147	Guo, Xinhua	MPR 345	Hahnenberger, K.	WOCam 11:35
Grant, Patrick G.	WPU 393	Gronert, Scott	MPS 368	Guo, Xu	TPL 221	Haider, Shamim	ThPF1 075
Grant, Ray A.	WPP 273	Gronert, Scott	TOEpm 4:20	Guo, Xu	TPZ 513	Hail, Mark E.	MPO 287
Grant, Russell P.	WPE 077	Gross, Coleman	WPE 101	Guo, Xu	WPO 261	Hail, Mark E.	TPE 078
Grant, S G N	MPS 370	Gross, Deborah S.	WPF 119	Guo, Xu	WPW 441	Hail, Mark E.	WODpm 3:40
Grant, Seth	WPS 338	Gross, Heidrun B.	MPO 270	Guo, Yuzhu	ThPK1 192	Hakanpää, J.	MPQ 327
Grassi, Jeff	MPO 297	Gross, Julia	ThPV5 454	Guodong, Chen	WPC 062	Håkansson, Rolf	WPO 259
Gratz, Samuel R.	TPQ 296	Gross, Michael	ThPI 158	Gupta, Manju	ThPF3 099	Håkansson, K.	ThOCpm 3:40
Gratzfeld - Huesgen, A.	WPG 137	Gross, Michael	MPE2 088	Gupta, Ramesh C.	WPY 504	Håkansson, Kristina	ThPT 345
Graupe, Doris	ThPF2 091	Gross, Michael	MPI 186	Gupta, Vibha	ThPU 375	Håkansson, Kristina	ThPV6 467
Graves, Lee M.	WPP 271	Gross, Michael	MPN 255	Gurevich, V V	ThPU 380	Håkansson, Kristina	WPO 243
Graybill, Jeffrey	TPS 332	Gross, Michael	MPV 438	Gusev, Arkady	ThPF1 070	Håkansson, Kristina	WPR2 325
Graybill, Jeffrey	WODpm 4:00	Gross, Michael	TPK 190	Gusev, Isabelle M.	WPP 274	Håkansson, Per	MPJ 199
Grayson, Michael	WPH 147	Gross, Michael	WOBam 10:55	Gushue, Jennifer	WPS 335	Håkansson, Per	TOAam 11:15
Graziani, Edmund	MPP 308	Gross, Michael	WPC 048	Gushue, Jennifer	WPS 349	Håkansson, Per	TPY 481
Greaves, John	ThPG 127	Gross, Michael	WPD 071	Gushue, Jennifer	MPW 445	Håkansson, Per	WPH 156
Green, Brian	ThPV5 452	Gross, Michael	WPJ 204	Gustafsson, Magnus	TPN 256	Håkansson, Per	WPO 259
Green, Caroline E.	TPD 063	Gross, Michael	ThPI 149	Gustafsson, Magnus	WPP 282	Hakulinen, Nina	MPQ 327
Green, Edward G.	TPF 100	Gross, Michael	ThPI 151	Gustafsson, Niklas	WPU 382	Halden, Rolf U.	WPY 501
Green, Jason R.	TPJ 184	Gross, Michael	TPS 330	Gutierrez, Alejandro	WPE 100	Halgand, Frederic	MPU 401
Green, M. E.	ThOEpm 3:40	Gross, Micheal L.	WJP 199	Gutierrez, Jemy A.	WPR1 292	Halgand, Frederic	TPW 434
Green, Martin R.	TPU 379	Grossenbacher, JW	ThPB 025	Gutierrez, Virginia	ThPM 250	Halket, John M.	WPB 045
Green, Martin R.	ThPJ2 168	Grossert, J. Stuart	WPI 178	Guttman, Charles	TPU 389	Halket, John	MPO 288
Green, Martin	ThOFam 11:35	Grote, Jens	WPX 466	Guttman, Charles	ThOEpm 4:20	Halket, John	ThPA 014
Green, Martin	TPJ 189	Grottemeyer, J.	TPK 206	Guttman, Charles	TOEam 11:15	Hall, John T.	WPR1 310
Green, Susan M.	TPX 463	Grottemeyer, J.	WPI 183	Guttman, Charles	TPU 387	Hall, Lisa M.	ThPF3 095
Greenbaum, N L.	MPR 341	Groth, Clinton	ThOAam 11:35	Guttman, Charlie	ThPE 060	Hall, Mark C.	MPS 360
Green-Church, Kari	ThPV2 407	Grotz, Diane E.	MPO 296	Guy, Philippe A.	MPU 395	Hall, Mark C.	WPC 053
Green-Church, Kari	WPC 058	Gruber, Freddy	TPU 391	Guy, Robert D.	WPF 116	Hall, Mark C.	WPW 450
Green-Church, Kari	TPN 259	Grüning, Carsten	WPN 238	Guy, Robert D.	ThOFam 10:35	Hall, Steven C.	TPT 351
Greig, Michael J.	TPI 166	Grym, Jakob	ThOBpm 4:00	Guymon, Andrew	MPK 228	Hall, Tom	TODam 11:55
Greis, Kenneth	WPW 443	Grym, Jakob	ThPV5 451	Guymon, Andrew	WPX 460	Hallahan, David	MPX 461
Gremminger, Jessica	ThPM 241	Gu, Jianghong	ThOEpm 4:20	Guymon, Andrew	WPX 480	Halligan, Brian D.	MPB 019
Grever, Michael	TPE 083	Gu, Rong-Fang	WODam 10:35	Guzzetta, Andrew	MPX 455	Halls, Steven C.	TOCam 11:55
Grewal, R. N.	ThOBam 10:55	Gu, Sheng	TPY 486	Guzzetta, Andrew	ThPV3 428	Haltiwanger, Robert	TPT 352
Grewal, R. N.	ThPS1 322	Gu, Sheng	WPU 385	Guzzetta, Andrew	TPX 453	Hamad, Hussein	MPX 481
Griep-Raming, Jens	MPI 182	Guan, Fuyu	ThPH 130	Gvozdyak, Oksana	WPW 419	Hamel, Natalie	MPW 445
Griep-Raming, Jens	MPI 190	Guan, Fuyu	ThPH 133	Gygi, Steven P.	TPY 475	Hamel, Nathalie	MPW 440
Griep-Raming, Jens	MPK 228	Guan, Fuyu	ThPH 142	Gygi, Steven P.	WPU 374	Hamilton, L. Patrice	WPY 502
Griep-Raming, Jens	MPX 457	Guan, Fuyu	TPC 048	Gygi, Steven P.	WPX 477	Hamler, Rick L.	WPT 368
Griep-Raming, Jens	TPE 091	Guan, Jing-Qu	ThPU 373	Gygi, Steven P.	MOCam 11:55	Hammerstone, John	MPO 270
Griep-Raming, Jens	TPX 449	Guan, Jing-Qu	WPR1 301	Gygi, Steven P.	MPS 358	Hamon, Christian	TPW 440
Griest, Wayne H.	ThPB 018	Guanche, Yazmin	WPR2 321	Gygi, Steven P.	MPT 378	Han, Bingye	ThODpm 3:20
Griffey, R H.	ThODam 10:35	Guenther, Wolfgang	TPG 140	Gygi, Steven P.	TPA 005	Han, Jun	WPP 271
Griffey, R H.	TODam 11:55	Guerard, Florence	WPL 221	Gygi, Steven	ThPT 366	Han, Sang Beom	MPE3 118
Griffin, M. Todd	WPH 140	Guerry, Patricia	TPB 024	Gygi, Steven	TPX 464	Han, Sang Beom	MPE3 119
Griffin, Patrick R.	ThPU 379	Guevremont, R.	ThOAam 10:35	Ha, Vy	WPE 111	Han, Sang Beom	MPE3 126
Griffin, Steve	ThPJ2 181	Guevremont, R.	ThOApm 3:20	Hache, John J.	TPH 151	Han, Xianlin	TOCam 10:55
Griffin, Timothy J.	WPW 446	Guevremont, R.	ThOApm 4:40	Hache, John J.	WPJ 198	Han, Yonghua	TPA 012
Griffin, Timothy P.	WPF 118	Guilbaud, Rudolf	MPE1 071	Haddon, William	ThPV5 446	Han, Zheguang	MPJ 201
Griffin, Timothy P.	WPF 124	Guilbaud, Rudolf	MPE3 104	Haddrell, Allen E.	WPX 482	Hancock, James	ThPG 112
Griffith, Wendell P.	MPQ 319	Guilbaud, Rudolf	TPD 053	Haddrell, Allen E.	WPN 237	Hancock, Peter	ThOFam 11:35
Griffiths, William	MPQ 317	Guillemette, J. Guy	MPQ 324	Hadfield, Ted L.	TOApm 3:00	Hancock, William	TOCpm 4:20
Grigg, Matthew E.	ThPA 011	Guillemin, François	TPE 086	Hadfield, Ted L.	WPA 001	Hancock, William	WPT 369
Grigoras, Kestas	MPJ 200	Guillermier, C.	ThPJ1 164	Hadley, Kevin C.	WOEpm 4:20	Handberg, Eric	ThPB 023
Grillmaier, Denise	WPP 277	Guillier, Fabrice	TPY 470	Hadwiger, Phillip	MPR 344	Hanley, Kathleen	ThPI 150
Grim, Donna	TOApm 4:40	Guiney, Maureen	MPI 191	Haeuw, J.	TPW 429	Hanley, Kathleen	WPR2 314
Grimnell, Christine	ThPF1 065	Gulcicek, Erol E.	WPP 274	Hafezi, Rameh	ThPV3 428	Hanna, Dorothy	MPL 237
Gritsas, Ari	TPO 265	Gulcicek, Erol	TPA 014	Hagan, Nathan A.	MPR 339	Hannah-Hardy, J.	MPE2 087
Gritsas, Ari	TPO 279	Guler, Leonard P.	WPJ 196	Hagan, Nathan	MPR 333	Hanneman, Andrew	TPB 031
Gritsas, Ari	WPE 078	Gumerov, D R.	MPQ 322	Hage, Amal H.	MPE3 125	Hannis, James	TPJ 177
Grivet, Chantal	ThPF3 106	Gunasekera, A.	ThPT 345	Hagemeister, Timo	MPI 190	Hannis, James	TOAam 11:35
Grivet, Chantal	WPE 076	Gunawardena, H.	MPQ 316	Hager, James W.	TPX 448	Hannis, James	WODpm 3:00
Grobe, George L.	TPU 375	Gundersdorf, R.	WPH 145	Hager, James W.	WPI 176	Hanold, Karl A.	ThPB 019
Grobe, George L.	TPU 378	Gundry, R L.	ThPB 020	Hager-Braun, CM	ThODpm 4:20	Hanold, Karl	WOCam 10:55
Groeger, Thomas	WPB 045	Gunne, Lars	ThPR 299	Hägglund, Per	MPW 447	Hansen, Anne M.	WPX 487
Groenewold, Gary	MPL 237	Gunsalus, Robert	TPW 415	Haglund, Johanna	WPY 508	Hansen, Kirk C.	ThPV2 414
Groessl, Todd	ThPM 244	Guo, Baochuan	TPN 251	Haglund, Richard F.	WPK 213	Hansen, Kirk C.	TPZ 519

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Hansen-Moller, Jens.....	ThPA 012	Hattan, Stephen J.....	WPX 464	Helferich, William G.....	ThPC 037	Higgins, LeeAnn.....	TPT 354
Hanson, Jennifer.....	TPZ 521	Hattan, Steve.....	MPN 246	Hélias, Nadège.....	TPI 164	Higgins, LeeAnn.....	TPY 487
Hanson, Jennifer.....	WPT 362	Hattan, Steve.....	ThPV4 432	Helle, Norbert.....	ThPW 488	Higgs, Richard.....	MPQ 328
Hanson, Kirk.....	MPW 444	Hauser, Loren.....	ThPB 017	Heller, David N.....	ThPA 008	Highkin, Maureen.....	TPT 362
Hansson, Maria.....	ThPT 348	Hauser, Loren.....	ThPV5 441	Heller, Nicola M.....	TPF 101	Hilderbrand, Amy.....	ThPD 040
Hanton, Scott D.....	MOFam 10:15	Hauser, Loren.....	ThPV5 457	Heller, Ronald.....	MPT 376	Hiles, Richard.....	WPB 028
Hanton, Scott D.....	TPM 237	Hautman, Daniel.....	TPG 139	Hellman, Ulf.....	WPX 458	Hilhorst, Martijn J.....	TPJ 172
Hao, Casey C.....	TPE 095	Havel, Chris.....	ThPF2 091	Hemenway, Eric.....	ThPT 353	Hill, Cameron.....	TPX 468
Hao, Chunyan.....	MPF 151	Havener, Jody.....	WPW 450	Henderson, George N.....	TPC 038	Hill, James.....	ThPJ1 164
Hao, Chunyan.....	ThPG 118	Haverkamp, Johan.....	ThPS1 323	Henderson, George N.....	TPC 051	Hill, Lander R.....	MPT 380
Hao, Chunyan.....	ThPG 123	Havey, Crystal D.....	WPA 013	Hendrickson, C L.....	ThOCpm 3:40	Hill, Lander R.....	ThPV6 461
Hao, Zhiqi.....	WPT 363	Havlicek, Vladimir.....	ThPS1 321	Hendrickson, C L.....	ThOFam 10:15	Hill, Lander R.....	TOFam 5:23
Haqqani, Arsalan.....	ThPV6 465	Hawke, David.....	MPS 349	Hendrickson, C L.....	WPH 151	Hill, Salisha.....	WPX 483
Harchevnikova, N.....	TPG 141	Hawthorne, Michael.....	MPE3 102	Hendrickson, C L.....	MPK 210	Hillegonds, Darren.....	WPU 393
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Harder, Philipp.....	MPN 257	Hayen, Heiko.....	ThPL 228	Hendrickson, C L.....	TOAam 10:15	Hillenkamp, Franz.....	TOBpm 4:00
Hardman, Mark.....	WPH 155	Hayes, Daniel J.....	ThPD 044	Hendrickson, C L.....	TPH 147	Hillion, Francois.....	MPY 501
Harkey, Gail A.....	WPH 149	Hayes, Gary R.....	TPV 394	Hendrickson, C L.....	TPH 150	Hillion, Francois.....	ThPJ1 164
Harkey, Gail.....	WPH 142	Hayes, Lisa A.....	ThPK2 204	Hendrickson, C L.....	TPK 207	Hillman, Steven L.....	MPD 043
Harland, Gary.....	TPO 274	Hayes, Michael J.....	MPE2 092	Hendrickson, C L.....	WPO 243	Hillmyer, Marc A.....	ThOEpm 3:00
Harmon, Alice.....	ThPT 368	Hayes, Roger N.....	ThPF3 097	Hendrickson, C L.....	MPK 219	Hilton, Christopher.....	WPH 141
Harms, Amy C.....	ThPT 352	Hayes, Ronald L.....	ThPV6 473	Hendrie, C.....	WPD 072	Himbert, Franck.....	TPJ 181
Harms, Amy C.....	WPS 339	Hayn, Gertraud.....	TPU 371	Hendriks, Rob.....	WPX 463	Hindemith, Agnes.....	WPY 505
Harr, James.....	ThPF1 071	Haynes, Chris A.....	TPL 219	Henion, Jack D.....	MPG 170	Hines, Kirk.....	ThPT 346
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Harrison, K.....	TOCam 10:15	He, Michelle M.....	MPO 271	Henriksen, Jens.....	MPC 036	Hirschberg, Daniel.....	WPX 457
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Hart, Shane.....	MPP 306	Heck, Albert J.R.....	ThPT 349	Herold, Michael.....	MPO 286	Ho, Elena.....	MPE1 078
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Haselden, J.....	MPE1 072	Heeren, Ron M.A.....	WOApm 4:40	Hettich, Robert L.....	WPU 381	Hoerner, Joshua.....	MPV 426
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Haselmann, K.....	ThPS2 340	Hefford, Mary A.....	MPT 377	Hettich, Robert.....	TPZ 528	Hoerner, Joshua.....	MPV 428
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Hong, Chung	TPE 094	Hsieh, Showchien	WPV 395	Hunt, Donald F.	MPU 412	Ishihara, Morio	MPJ 202
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Hopkinson, Alan	WPI 161	Huang, Lan	MPW 444	Hurst, Gregory B.	ThPV5 441	Ivonin, Igor A.	WPH 156
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Horn, Joanne	WPN 236	Huang, Xiaohua	TPF 102	Husser, Christophe	WPY 510	Jachmann, Nicole	ThPL 228
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Orals: M, T, W, Th = Day
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P = PosterA, B, C, D, E, F = Session
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Koroniak, Lukasz.....	WPR1 292	Krokhin, Oleg.....	WOFam 11:35	LaDuc, Myron T.....	WPA 019	Laramee, James A.....	ThPH 140
Korte, William D.....	ThPB 027	Krokhin, Oleg.....	WPW 420	Lafaye, Alexandra.....	WPY 492	Larbi, Ohenewaa.....	ThPF1 065
Kosara, Christine.....	WPB 040	Krol, Jim.....	ThPG 114	Lafitte, Daniel.....	TPR 315	Lardy, Henry A.....	TPL 215
Kosmeder, Jerome.....	TPO 267	Krone, Jennifer R.....	TPN 244	Lafosse, Michel.....	TPJ 181	Lardy, Henry.....	MPO 285
Köster, Claus.....	TPX 460	Krönke, Martin.....	ThPV5 455	LaFranchi, Brian.....	ThPJ1 162	Larger, Patrice J.....	ThPF2 080
Koster, Emile.....	ThPM 246	Krouse, Ian H.....	ThPK3 217	Lagendijk, Ellen.....	TPG 131	Larimer, Frank W.....	MPQ 315
Kostiainen, Risto.....	MPJ 200	Krueger, Christian.....	TPQ 304	Lagerstedt, Susan.....	TPC 050	Larimer, Frank W.....	ThPB 017
Kostiainen, Risto.....	ThPL 227	Krull, Ira S.....	MPX 494	Lager, William M.....	ThPH 138	Larimer, Frank W.....	ThPV5 441
Kostrzewa, Markus.....	MPN 247	Kruppa, Gary H.....	MOAam 11:55	Lai, Christopher.....	ThPL 231	Larimer, Frank W.....	ThPV5 457
Kothari, Sameer.....	WPX 480	Kruppa, Gary H.....	TPH 144	Lai, Frances.....	MPE1 079	Larimer, Frank.....	TPZ 528

Program Codes

Orals: M, T, W, Th = Day
Posters: M, T, W, Th = DayO = Oral
P = PosterA, B, C, D, E, F = Session
A, B, C, D, etc. = TopicTime
Poster Board Number

Author	Program Code	Author	Program Code	Author	Program Code	Author	Program Code
Larochelle, Fannie	ThPI 152	Lebrilla, Carlito B.	ThPD 043	Lehrach, Hans	ThPV5 453	Li, Fangbiao	TPD 071
Larsen, Barbara S.	MPX 461	Lebrilla, Carlito B.	TOEpm 4:00	Lehrach, Hans	TPS 336	Li, Fu-An	ThPP 283
Larsen, Barbara S.	TPG 125	Lebrilla, Carlito B.	TPK 194	Lehrach, Hans	WPU 382	Li, Fumin	MPA 001
Larsen, Erik	ThOFpm 4:40	Lebrilla, Carlito B.	WPA 014	Lehrach, Hans	WPW 421	Li, Fumin	WPA 022
Larsen, Martin R.	TPW 420	Lebrilla, Carlito B.	WPA 017	Lehrach, Hans	WPX 474	Li, Hongyan	TPJ 184
Lasater, Matt	MPF 145	Lebrilla, Carlito	MPO 293	Lehrer, Steven	WPT 359	Li, Hongyan	WPH 155
Lasater, Matt	TPG 133	Lebrilla, Carlito	WPA 020	Lehtinen-Obama, S.	WPE 092	Li, Hongyan	WPI 180
Lascoux, David	ThPU 376	Lebrilla, Carlito	WPN 236	Lei, Paula	MPT 376	Li, Hui	TPU 383
Laskin, Julia	MOEam 11:55	Lecchi, Paolo	TPN 255	Leipold, Douglas	ThPF2 089	Li, Huiming	WPV 405
Laskin, Julia	TPH 151	Lechene, Claude P.	MPL 231	Leipunsky, Ilya	WPK 220	Li, Jianjun	MPX 493
Laskin, Julia	WPI 162	Lechene, Claude P.	MPY 501	Leis, Hans-Jörg	MPM 243	Li, Jianjun	TPB 017
Laskin, Julia	WPJ 198	Lechene, Claude	ThPJ1 164	Leize, Emmanuelle	MPW 450	Li, Jianjun	TPB 022
Lassman, Michael	ThPH 137	Lectman, Moriel	WPW 428	Leize-Wagner, E.	TPY 470	Li, Jianjun	WPR2 324
Lassman, Michael	TOEam 10:15	Leclercq, Laurent	ThPF2 090	Leize-Wagner, E.	TPY 472	Li, Jiaxu	WPU 374
Lastelle, Marc	TPD 067	Ledertheil, T.	WOAam 11:55	Leize-Wagner, E.	WPS 344	Li, Jie	MPG 167
Lattova, Erika	TPB 028	Lee, Caroline	ThPF1 077	Leize-Wagner, E.	WPS 346	Li, Jie	TPP 288
Lau, Adam	WPW 430	Lee, Caroline	WPB 034	Lekpor, Kossi	MPT 384	Li, Ka Wan	MPD 059
Lau, Benjamin	MPF 132	Lee, Chang-Soo	ThPN 272	Lemaitre, Gilles	ThPV3 429	Li, Kathy H.	MPS 368
Lau, Calvin	WPW 430	Lee, Cheng S.	TPX 462	Lemaitre-Guillier, C.	TPY 470	Li, Liang	MPL 233
Lau, Yau Yi	ThPF1 069	Lee, Chien	ThPI 148	Lemanik, Stephanie	ThPG 123	Li, Liang	MPS 369
Laugesen, Sabrina	MPW 447	Lee, Chien	TODpm 3:40	Lemiere, Filip	ThPQ 291	Li, Liang	MPX 486
Laughlin, Brian C.	ThPB 022	Lee, Cindy C-Y	WPC 055	Lemiere, Filip	TPS 329	Li, Liang	ThPV5 449
Laughlin, Brian C.	ThPB 023	Lee, David	MPN 262	Lemieux, Daniel	MPE3 100	Li, Liang	TOBpm 4:40
Laukien, Frank	ThPJ2 167	Lee, David	TPN 242	Lemire, Sharon W.	ThPB 024	Li, Liang	TPV 413
Laurell, Thomas	ThOBpm 3:40	Lee, Hak-No	ThOAam 11:15	Lemoff, Andrew S.	TPK 199	Li, Liang	TPW 425
Laverdiere, Annie	MPF 130	Lee, Hee Joo	MPE3 119	Lemoyne, Christian	WPB 025	Li, Liang	TPZ 515
Lavielle, Solange	TPW 432	Lee, Hee Joo	MPE3 126	Lempicki, Richard A.	MPD 042	Li, Liang	TPZ 524
Lavigne, Pierre	ThPV2 409	Lee, Ho Sup	TPE 094	Lemr, Karel	ThPB 026	Li, Liang	WPA 005
Lavine, Gary	ThPV2 412	Lee, Hookeun	TPY 471	Lengqvist, Johan	MPQ 317	Li, Liang	WPP 264
Lavis, Annie	MPE1 067	Lee, Hookuen	TPZ 516	Lensmeyer, Gary	ThPM 268	Li, Liang	WPP 267
Lavrov, Vitali V.	WOEam 11:15	Lee, Hung V.	WPC 062	Lentz, David H.	WPD 066	Li, Liang	WPW 444
Law, Brandon	MPU 405	Lee, Jaeick	TPE 084	Lenz, Christof	WPO 249	Li, Lily	WPY 499
Law, Say-Jong	WPQ 287	Lee, Jean W.	ThPF3 105	Leon, Barbara	WPP 263	Li, Linge	ThPC 035
Lawrence, Ross	TPR 307	Lee, Jean	WPE 109	Leonart, Ricardo	WPR2 321	Li, Linge	TPS 335
Lawson, Alexander	MPC 035	Lee, Jeehiun K.	MPR 338	Leopold, Peter E.	WPT 368	Li, Lingjun	ThPR 306
Lawson, Steven	TPF 116	Lee, Jeehiun K.	TPK 210	Leopold, Peter	TPV 393	Li, Lingyun	WPW 438
Laxman, Bhrathi	TOCpm 4:00	Lee, Jeffrey R.	ThPV2 411	Lepine, Francois	MPP 300	Li, Meiling	WPU 380
Lay, Jackson O.	MPI 184	Lee, Jeong-Hwa	WPS 351	Lequart, Vincent	MPC 033	Li, Ming	WPD 072
Layh-Schmitt, G.	WPW 443	Lee, Jo Ellen	MPD 059	LeRoy, Christine	WPX 455	Li, Nan	MPX 486
Lazar, Alexandru	WPR1 289	Lee, Kelvin H.	ThPV6 460	Lesage, Denis	ThPK2 207	Li, Nan	ThPV1 402
Lazar, Iulia M.	ThOBpm 4:40	Lee, Kong-Joo	ThPV6 476	Lesage, Jacques	ThPG 128	Li, Nan	TOBpm 4:40
Lazarou, Catherine	TPY 471	Lee, Kongjoo	TPN 247	Lesage, Jacques	TPU 369	Li, Ning	WPV 397
Le Beyec, Yvon	MOBam 10:55	Lee, Kwang-Won	ThPN 272	Lesimple, Alain	WPI 184	Li, P.H.I.	TPB 023
Le Bihan, Thierry	ThPQ 295	Lee, Kyung Ryul	MPE3 118	Lesimple, Souad	WPS 335	Li, Qian	MPQ 329
Le Blanc, J.C. Yves	TPJ 174	Lee, Kyupum	MPE3 119	Lesimple, Souad	WPS 349	Li, Qian	ThPP 284
Le Blanc, J.C. Yves	TPX 448	Lee, Maw-Rong	ThPF3 108	Letarte, Lynda	WPB 025	Li, Qimin	WPE 084
Le Caer, Jean-Pierre	TPQ 300	Lee, Maw-Rong	ThPW 486	Letarte, Simon	WPA 015	Li, Qing X.	MPF 134
Le Gac, Severine	MPG 168	Lee, Maw-Rong	TPG 135	Letarte, Sylvain R.	ThPJ1 159	Li, Sam FY	WPV 409
Le Grimellec, C.	MPQ 313	Lee, Mei-Kuei	TPO 269	Letcher, Robert	MPF 136	Li, Weiqun	WPW 440
Le Guen-Robin, F.	MPU 420	Lee, Mike S.	TPJ 180	Leung, Catherine	MPE1 068	Li, Wenbao	TPE 092
Le, X. Chris	WPY 493	Lee, Mi-Young	ThPM 261	Leung, Louis	TPD 054	Li, Wenkui	MPO 284
Leach, Chet	TPF 116	Lee, Peter J.	MPX 459	Leuthold, Luc A.	ThPF3 106	Li, Wenkui	TPO 278
Leandersson, C.	TPO 274	Lee, Peter J.	MPN 250	Levander, Fredrik	ThPE 055	Li, Wenkui	TPQ 301
Leary, Julie A.	ThPI 155	Lee, Rebecca H.	ThPA 003	Lever, Keith L.	ThPH 136	Li, Wenkui	TPQ 305
Leary, Julie A.	TOFpm 4:20	Lee, Seon Hwa	TPL 224	Leverly, Steven B.	MPC 028	Li, Wenkui	WPL 226
Leary, Julie A.	TPR 321	Lee, Seon Hwa	TPT 357	Lévesque, Isabelle	TPF 109	Li, Wenlin Wendy	TPF 105
Leary, Julie A.	TPV 409	Lee, Seon Hwa	WPE 100	Levine, Lanfang H.	TPG 121	Li, Wenlin	ThPM 257
Leary, Julie A.	WOFam 11:55	Lee, Seon Hwa	WPL 228	Levine, Peter J.	WPT 363	Li, Xiao-jun	TPY 469
Leary, Julie, A.	ThPK2 195	Lee, Sik	WPI 164	Levine, Peter J.	WPT 363	Li, Xiao-jun	TPY 471
Leavell, Michael	ThPI 155	Lee, Tae Geol	WPI 164	Levine, Peter	TOCpm 3:00	Li, Xiaojun	TPZ 516
Leavell, Michael	TOFpm 4:20	Lee, Terry D.	WPW 427	Lewellen, J.W.	MOBam 11:55	Li, Xiao-jun	WPW 446
Leavell, Michael	ThPK2 195	Lee, Terry D.	TPZ 507	Lewis, Avalyn E.	WPV 413	Li, Xing-Fang	TODpm 4:20
Leaver, Neil V.	MPD 049	Lee, Terry D.	WPO 239	Lewis, Carrie	TPG 132	Li, Xing-Fang	WPC 052
Lebedev, Albert T.	ThPG 125	Lee, William	WPE 082	Lewis, Daniel M.	MPU 405	Li, Xue	ThPU 374
Lebedev, Albert T.	TPG 141	Lee, Young J.	TPX 451	Lewis, Steve	TPV 396	Li, Xueqing	MPC 029
Leblanc, Gerard	MOAam 11:35	Lee, Young-Moo	MPS 354	Lewis, Steve	TPV 408	Li, Y.	MOBam 11:55
Leblanc, Yves G.	WPB 025	Lefebvre, Paul M.	TPS 344	Li, Austin C.	ThPF3 093	Li, Yan	MPQ 313
LeBlanc, Yves	TPI 158	Lehmann, Britta	MPO 286	Li, Chen	ThPV2 405	Li, Yan	ThPL 223
LeBon, Jeanne M.	TPZ 507	Lehmann, Wolf	MPS 361	Li, Dequan	MPB 015	Li, Yan	ThPL 239
Lebrilla, Carlito B.	TPB 026	Lehmann, Wolf	ThOFpm 4:20	Li, Donghui	ThPV2 410	Li, Yan	WPT 360
Lebrilla, Carlito B.	TPM 229	Lehotay, Denis	ThPW 483	Li, Dr. Liang	ThPQ 292	Li, Yan	WPV 396
Lebrilla, Carlito B.	MPC 032						

Author	Program Code	Author	Program Code	Author	Program Code	Author	Program Code
Li, Ying	MPN 255	Lin, Jinyan	TPE 074	Liu, Huaizhi	WPP 267	Loo, Joseph A.	TPV 400
Li, Yongfu	MPU 400	Lin, Linda	WPT 357	Liu, Huazhi	MPS 369	Loo, Joseph A.	TPW 415
Li, Yongmei	MPD 054	Lin, Melanie	TPM 239	Liu, Jane	ThPM 260	Loo, Joseph A.	WPV 397
Li, Yongmei	MPO 284	Lin, Michael	WPO 258	Liu, Jian	MPC 024	Loo, Rachel	TPW 415
Li, Yongmei	TPO 267	Lin, Patrick	ThPF3 105	Liu, Jian	MPG 157	Looser, Ralf	MPO 286
Li, Yongmei	WPL 226	Lin, Patrick	TPF 097	Liu, Ji-ang	WPJ 205	López de Castro, J.	ThPS1 311
Li, Yong-Xi	MPE3 097	Lin, Patrick	WPE 109	Liu, Jun	MPT 388	López Fernández, J.	WPL 225
Li, Yong-Xi	TPF 107	Lin, Pen-Jen	ThPV3 421	Liu, Lanying	ThPV4 435	Lopez, Linda L.	ThPD 039
Li, Yutai	WPY 488	Lin, Shanhu	TOBpm 3:20	Liu, Liang	ThPF2 091	Lopez, Linda L.	WPR1 312
Li, Yutai	WPY 513	Lin, Shanhu	WPX 454	Liu, Lida	MPE3 101	Lopez, Linda	TPX 456
Li, Zheng	MPF 152	Lin, Shujun	WPO 258	Liu, Lin	WPR1 308	Lopez, Mary F.	TPZ 530
Li, Zhili	MPQ 314	Lin, Ya-Shiuan	MPN 254	Liu, Ming Chen	ThPV6 473	Lord, Heather L.	WPE 077
Li, Zhili	WPQ 284	Lin, Ya-Shiuan	MPN 256	Liu, Ning	MPR 345	Lorreyne, Willy	MPE2 094
Li, Zhong	ThOBam 11:15	Lin, Yumei	MPL 236	Liu, Raymond	WPE 081	Lotti, Robert	MPY 504
Lian, Lu-Yun	TPY 483	Lin, Zhaosheng	MPG 166	Liu, Ruiwu	ThPD 043	Lotti, Robert	WPW 426
Liang, Chengzhi	WPD 072	Lin, Zhongping J.	MPE1 066	Liu, Rutao	WPR1 301	Lottspeich, Friedrich	TPR 323
Liang, Hairui	ThPF2 082	Lin, Zhongping J.	TPF 117	Liu, Shuying	MPR 345	Lottspeich, Friedrich	WPU 372
Liang, Hairui	ThPF3 109	Lindberg, Carl	TPZ 500	Liu, Si-qi	TPZ 502	Lottspeich, Friedrich	WPW 453
Liang, Wenzhong	MPO 284	Linden, H. B.	MPK 211	Liu, Siqi	WPR1 294	Lourenco, George	ThPN 274
Liang, Wenzhong	TPO 278	Linderholm, Karl	ThPF3 105	Liu, X. Michael	TPU 375	Lourette, Natacha	MPY 497
Liao, Hsin-Kai	TPV 402	Lindh, Christian	MPU 392	Liu, X. Michael	TPU 378	Lourette, Natacha	TPE 086
Liao, Hsin-Kai	TPW 418	Lindh, Christian	MPU 423	Liu, Xiaohong	TPF 102	Lovell, Mark A.	ThPV4 434
Liao, Jacob S. K.	ThPM 251	Lindmark, Bosse	ThPF2 079	Liu, Xiping	WPJ 203	Lovley, Derek R.	ThPV3 423
Liao, Kan	WPS 328	Lindner, Buko	TPB 019	Liu, Xiping	WPJ 204	Lowery, Kristin	ThODam 10:35
Liao, Linda	ThOFpm 3:40	Lindner, Yvonne	ThPS2 344	Liu, Yan-Hui	ThPV5 448	Lowes, Stephen	TPG 125
Liao, Linda	TPZ 510	Lindon, John	MPE2 091	LIU, YIDING	TPN 251	Loyet, Kelly M.	ThoDpm 3:40
Liberman, Rosa	ThPF3 092	Lineberger, Carl	WOEpm 3:40	Liu, Yifei	ThPF3 104	Lu, Lin	TPG 133
Libertine, Lyn	ThPF2 083	Ling, Victor T.	MPE3 123	Liu, Yongsheng	WPT 362	LU, Meiling	WPY 493
Licea-Perez, H.	MPF 139	Ling, Yun	ThPF2 091	Liu, Youcheng	WPY 491	Lu, Sharon X.	WPQ 287
Lieberman, S.	ThODpm 3:20	Ling, Yun	ThPK1 192	Liu, Zhaoyang	WPK 207	Lu, Wen-Ling	MPX 484
Liefhold, Juergen	TPE 075	Ling, Yun	WPC 055	Liu, Zhenjiu	WODpm 4:40	Lubda, Dieter	WPX 463
Liesener, André	WPX 475	Linscheid, Michael	MPI 190	Liu, Zhihe	TPY 486	Lubeck, Markus	MPX 480
Likos, John J.	ThPM 259	Linscheid, Michael	MPX 457	Livadaris, V.	WPK 211	Lubeck, Markus	TPA 001
Lill, Jennie R.	WPT 362	Linscheid, Michael	TPS 334	Liyanage, R.	WOEam 10:55	Lubeck, Markus	WOAam 11:55
Lill, Jennie R.	TPZ 521	Linse, Sara	MPU 401	Ljung, Elisabeth	WPS 341	Lubeck, Markus	WPW 419
Lilley, Kim	WPY 494	Lion, Niels	WPX 476	Ljungqvist, Anders	ThPK2 213	Lubman, David	MPX 451
Lim, Amareth	MPU 403	Liotta, Dennis	MPM 238	Lloyd, Thomas L.	TPD 054	Lubman, David	ThPV2 406
Lim, Amareth	TPY 493	Liotta, Lance A.	TOCpm 3:00	Lloyd, Thomas L.	TPD 071	Lubman, David	WPT 357
Lim, Amareth	WPR2 318	Liotta, Lance A.	TOCpm 3:40	Lo, Feng-Chun	MPX 484	Lubman, David	ThPV5 442
Lim, Amareth	WPW 423	Liotta, Lance	WPT 363	Lo, Man-Wai	TPD 055	Lubman, David	ThPV5 445
Lim, Jihyeon	TOFam 11:55	Lippa, Katrice A.	TPC 037	Loboda, Alexander	MPY 502	Lubman, David	TOCpm 4:00
Lim, Kheng B.	MPU 408	Lippemeier, S.	ThPW 488	Loboda, Alexandre	ThPK1 190	Lubman, David	WPT 365
Lim, Kheng B.	WPR1 303	Lipton, Mary S.	ThPV3 423	Loboda, Alexandre	TPX 445	Lubman, David	WPT 368
Lim, Kheng B.	TPX 447	Lipton, Mary S.	ThOBam 11:55	Lock, Chris M.	WPW 446	Lubman, David	ThPQ 289
Lim, Megan S.	MPG 166	Lipton, Mary S.	ThPV1 392	Lock, Chris	TPX 448	Lucas, David A.	TPC 039
Lima, Walt F.	TPV 411	Lipton, Mary S.	TPY 484	Lock, Chris	WPW 430	Lucas, John J.	TPV 394
Limbach, Patrick	MPR 332	Lipton, Mary S.	WPW 447	Lock, Stephen	MPD 061	Lucast, Louise	TOCam 11:35
Limbach, Patrick	TODam 11:35	Lipton, Mary	ThPQ 296	Lock, Steve	MPD 045	Ludwig, Dale	WPR1 305
Limbach, Patrick	TPJ 185	Lipton, Mary	TPA 015	Locke, Steven J.	TPY 489	Ludwig, Rick	TPD 059
Limbach, Patrick	TPN 259	Lipuma, John J.	ThPV5 445	Lockhart, Steven	MPD 058	Luebckemann, F.	TPH 152
Limbach, Patrick	WPC 051	Lishnevsky, Marta	ThPM 248	Lodes, Michael	WPV 403	Luetgen, Sarah	ThPS2 335
Limbach, Patrick	WPX 467	Lissemore, Linda	MPF 151	Loewen, Peter C.	MPQ 323	Luk, Emily	ThPN 274
Limbach, Patrick	MPR 330	Litman, Burton J.	ThPT 346	Loftus, Neil	MPK 221	Luke, Brian	TPC 039
Limbach, Patrick	TOFam 11:35	Little, David R.	TPD 058	Logan, Susan M.	TPB 024	Luna, Christopher	MPS 365
Liminga, Maria	TPX 444	Little, James L.	TPU 388	Logan, Susan M.	WPR2 324	Lund, Anders L.	WPT 361
Liminga, Maria	TPZ 494	Little, Mark W.	MPJ 209	Logan, Susan	TOFpm 4:00	Lund, Anders L.	MPX 475
Lin, Baiwei	WPD 069	Little, Mark W.	WPK 218	Loiselle, David	TPZ 527	Lund, Anders	TPY 473
Lin, C. Huie	ThPT 363	Little, Mark W.	WPW 439	Loiselle, David	WPA 023	Lundberg, Alexia	ThPV6 473
Lin, Cheng	TPK 192	Little, Reginald B.	MPK 210	Loitz, Ingo	TPL 220	Lundqvist, Ingmar	WPO 259
Lin, Cheng	WOBpm 3:00	Liu, Bo	WPB 034	Lomas, Lee O.	WPC 057	Lunine, Jonathan	ThPK3 219
Lin, Chin-Chung	ThPF3 104	Liu, Charles C.	TPI 168	Lomas, Lee	TPZ 509	Lunt, Martin	WPY 507
Lin, Chun-Hung	TPV 402	Liu, Charles C.	TPP 291	Lomax, Helen	WPB 030	Luo, Guanghong	WPK 208
Lin, Dayin	WPT 361	Liu, Chuanliang	ThPI 153	Lombardo, C R.	ThPV6 464	Luo, Moulun	MPS 365
Lin, Elizabeth	ThPN 274	Liu, Chuanliang	ThPU 378	Lomsadze, Alex	WPS 329	Luo, Wendy	TPS 343
Lin, Emme	WPS 334	Liu, David	ThPI 153	Londo, Tom	ThPV2 412	Luo, Yi	ThPH 130
Lin, Hua	MPT 380	Liu, Donghui	ThPV1 393	Londry, Frank A.	WPH 160	Luo, Yi	ThPH 133
Lin, Hua	ThPV6 461	Liu, Feng	MPJ 201	Longfellow, Carl	MPP 301	Luo, Yi	ThPH 142
Lin, Hua	TPZ 523	Liu, Frances	TPQ 302	Longo, Amy	ThPM 241	Luo, Yi	TPC 048
Lin, Hui	WPE 087	Liu, Gary	MPB 012	Loo, Joseph A.	MPQ 318	Lusk, Holly	WPB 025
Lin, Jeffery	TPC 032	Liu, Haiying	ThPN 274	Loo, Joseph A.	ThOEam 11:15	Lusk, Holly	WPE 109
Lin, Jeffrey S.	TPA 010	Liu, Hua-fen	ThPC 029	Loo, Joseph A.	ThPV1 391	Lutisan, Juraj	WPD 064
Lin, Jeffrey S.	WPA 006	Liu, Huaizhi	WPP 264	Loo, Joseph A.	ThPV1 397	Luxembourg, S L.	MPY 505

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Author	Program Code	Author	Program Code	Author	Program Code	Author	Program Code
Luxembourg, S L	MPY 514	Makino, Shoji	ThPE 049	Marginean, Ioan	ThPL 235	Martins, Nathalie	TPS 338
Luxembourg, S L	TPU 373	Malcomson, Mark	ThPK2 214	Marginean, Ioan	TPI 169	Marto, Jarrod A	WPU 376
Luxembourg, S L	WOApm 4:40	Malek, Robert	TOAam 11:55	Marginean, Ioan	WPK 208	Martosella, James	MPX 465
Ly, Carl	WPE 082	Malek, Robert	TPE 091	Mariappan, S	TPR 324	Marvin, Chris	TPG 124
Lynch, Jennifer	MPU 418	Maleki, Saber H	WPG 136	Mariappanadar, V	TPS 330	Marwah, Ashok	MPO 285
Lynn, Bert C	ThPV4 434	Majfers, Louis	TPD 072	Marie, Fraser E	ThOAam 10:55	Marwah, Ashok	TPL 215
Lynn, Tom	WOCam 10:55	Mallet, Claude R	MPE1 070	Marier, J	TPO 265	Marwah, Padma	MPO 285
Lyon, Gholson J	TPX 465	Mallet, Claude R	ThPM 254	Marimanikkuppam, S	MPY 512	Marwah, Padma	TPL 215
Lyons, Mary	TPQ 299	Mallis, Larry M	MPE1 075	Marina, Anabel	ThPS1 311	Masereel, Bernard	MPU 396
Lyubarskaya, Y	WPR2 326	Mallis, Larry M	ThPF1 066	Markaverich, Barry	TPT 359	Maslanka, Janet C	TPG 127
Ma, Bin	TPA 012	Mallis, Larry	ThPJ2 175	Markey, Sanford	MPB 018	Mason, Anne B	MPQ 322
Ma, Ji	TPE 078	Malmstrom, Johan	ThPV4 432	Markey, Sanford	ThPE 056	Mason, Chris	ThPM 243
Ma, Liyuan	WPC 054	Malone, Michael	TPL 218	Markey, Sanford	ThPV1 390	Mason, Dan	TPX 459
Ma, Peng	TPE 096	Malorni, Antonio	MPU 407	Markey, Sanford	WPD 067	Mason, Daniel	TOAam 10:35
Ma, Renli	ThOFpm 4:40	Maltas, John	ThPP 285	Markides, K	TPP 280	Mason, Daniel	WODam 10:15
Ma, Yanhe	WPR1 294	Maman, Itay	WPW 428	Markides, Karin E	MPM 242	Masse, Robert	ThPG 129
Maass, Kai	MPY 500	Mamer, Orval A	WPS 335	Markides, Karin E	WPO 259	Masse, Robert	ThPI 152
Mabury, Scott A	MPF 140	Mamer, Orval A	WPS 349	Marko-Varga, G	ThOBpm 3:40	Masse, Robert	ThPS2 343
Mabury, Scott A	WPF 128	Mamer, Orval	WPI 184	Marko-Varga, G	ThPV4 432	Masse, Robert	ThPV6 470
MaCarroll, Robert	WPY 499	Manalili, Sheri	WODpm 3:00	Marmor, S	WODam 10:35	Masse, Robert	WPR1 291
MacCauley, John	WPR2 319	Manalili, Sherilynn	TPV 411	Marnett, L J	WPL 222	Masse, Robert	WPR2 316
MacCoss, Michael	MPT 373	Mandal, Rupasri	TODpm 4:20	Maroto, Fernando	MPW 441	Masse, Robert	WPV 408
MacCoss, Michael	TPY 480	Mandal, Rupasri	WPC 052	Maroto, Fernando	WPO 254	Masselon, C D	MPK 225
Maccoss, Mike J	MPX 455	Mandarino, L J	MPS 365	Maroto, Fernando	WPW 436	Masselon, C D	TPH 156
Macher, Bruce	MPC 026	Mandel, Friedrich	MPD 055	Marquardt, A	ThODpm 4:00	Masselon, C	TPY 484
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Moore, Jason	WPV 405	Mueller, Dieter R	TPM 232	Musson, Donald	MPE3 101	Negahban, Andre	WPE 098
Moore, John P	ThODpm 4:20	Mueller, Dieter R	TPM 239	Musyimi, Harrison	MPK 229	Negahban, Andre	MPE3 127
Moore, Ray	TPO 270	Mueller, Walter E	WPE 096	Muthusamy, B	TPA 009	Nel, Andre E	WPV 397
moore, Robert B	WPH 146	Muenster, Helmut	MPI 182	Mutucumarana, V	ThPV3 421	Nellipudi, Prem	WPP 272
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Moore, Ron	ThPV1 392	Muenzenberg, G	ThPJ2 172	Muyldermans, S	TPR 316	Nelson, Bryant C	TPC 037
Moore, Ronald J	MPU 410	Muhammad, Jerry	ThPM 259	Muzzerall, Joel	TPZ 514	Nelson, Bryant C	TPC 042
Moore, Serge	TPG 138	Muirhead, David	TPF 100	Myers, Gary	MPF 139	Nelson, Clark J	ThPT 352
Moraga, Roger	TPW 440	Mukai, Norio	WPD 065	Myers, Sarah L	ThPU 372	Nelson, Clark J	WPS 339
Moran, G	TOEam 11:55	Mukherji, Mridul	TPX 459	Mylchreest, Iain	MPE3 113	Nelson, Gordon J	ThPJ2 181
Morand, K	ThOCam 11:55	Mulholland, Joseph	TPM 228	Mylchreest, Iain	ThPT 353	Nelson, Janet	TPG 130
Mordehai, Alex	TPX 458	Mulholland, Joseph	MPO 292	Myung, S-W	TPE 094	Nelson, Kristina	MPX 485
Mordehai, Alex	WPH 150	Mullen, John H	MPE3 127	Myung, Sunnie	ThPV3 427	Nelson, Randall	ThODpm 4:40
Mordehai, Alex	WPK 210	Müller, Claudia A	ThPH 135	Myung, Sunnie	TPX 451	Nelson, Randall	TPC 046
Mordenti, Joyce	ThPF2 091	Muller, J	MPY 497	Myung, Sunnie	TPX 455	Nelson, Randall	WPA 003
Morera, Lisa	TPZ 521	Muller, J	MPY 511	Nacson, Sabatino	TPN 250	Nelson, Robert E	MPD 041
Morgan, François	MPU 395	Muller, J	ThOFam 11:15	Nadler, Tim	MPY 504	Nembai, Tomoko	WPH 158

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Nesvizhskii, Alexey I.	WPD 070	Nishimura, T	WPV 398	O'Connor, Peter B.	MPJ 195	Oppenheimer, S.	MPY 504
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Neubert, Hendrik	TPU 377	Niwayama, Satomi	TPY 476	O'Connor, Peter	MPB 016	Organ, Andrew	MPD 048
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Newton, Russel P.	ThPQ 291	Nomanbhoy, T	TPZ 521	Ogorzalek Loo, R.	TPV 400	Ornatsky, Olga	WPU 376
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Niggebrugge, Adlai	WPG 133	Nugent, Kerry	WODpm 3:40	Olsen, Jesper V.	TPY 474	Ouyang, Zheng	WPX 460
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Nika, Heinz	MPS 349	Nühse, Thomas	MPX 453	Olson, Douglas	MPS 364	Owa, Takashi	WPX 471
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Nilsson, Carol L.	ThPV6 467	Nyberg, Tamara	TPZ 512	Omenetto, Nicolo	WPF 115	Pacaud, Karine	TPW 429
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Nilsson, Carol L.	WPR2 325	Nyholm, L	TPP 280	Ong, Shao-En	MOCam 11:35	Pace, Ellen	ThOBpm 4:20
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Smith, Richard	ThPV3 423	Soni, Manish	ThPE 048	Standing, Ken	WOFam 11:35	Stover, Eric D.	WPX 456
Smith, Richard	TPI 165	Soo, Evelyn C.	TPB 024	Standing, Ken	WPP 279	Stover, Ted	ThPM 258
Smith, Richard	MPK 225	Soper, Steven A.	MPK 229	Standing, Ken	MPX 478	Strachan, Camille	ThPT 368
Smith, Richard	MPS 363	Sorensen, E S.	WOBpm 4:00	Standing, Ken	TPM 233	Strader, Karen	ThOCam 11:55
Smith, Richard	MPU 410	Sørensen, E S.	WPO 255	Standing, Ken	WPW 420	Strader, Michael	MPQ 315
Smith, Richard	MPX 485	Sostek, Ron	TPN 244	Standlee, Maurice	MPE3 109	Strader, Michael	ThPV5 441
Smith, Richard	ThOBam 11:55	Soudakov, Michael	TPJ 173	Standlee, Maurice	TPF 113	Strader, Michael	WPU 381
Smith, Richard	ThPJ2 178	Soulimenkov, Ilia	ThPK1 191	Stanek, Dawn	ThPV5 457	Strahler, John	WPD 066
Smith, Richard	ThPL 229	Soulimenkov, Ilia	ThPL 237	Stanford, L A.	WOFpm 4:40	Stránský, Zdenek	ThPB 026
Smith, Richard	ThPQ 296	Sovocool, G. W.	TPG 126	Stanimirovic, D.	ThPV6 465	Straube, Ellen	ThPW 489
Smith, Richard	ThPV1 392	Sowell, Rena A.	ThPK1 193	Stankovic, Charles	TPD 052	Strauch, Eckhard	MPX 457
Smith, Richard	TPA 015	Sowell, Rena A.	ThPV3 427	Stanley, Scott D.	MPE3 122	Straus, Anita H.	MPC 028
Smith, Richard	TPH 156	Spaanderman, D.	MPY 514	Stapels, Martha D.	TPZ 506	Streitz Jr., John M.	MPY 512
Smith, Richard	TPJ 175	Spaanderman, D.	TPH 155	Staples, Martha	WPY 517	Stresau, Dick	WPH 159

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Stretton, Antony O	ThPR 301	Sun, Jun	ThPV6 478	Tabet, Jean-Claude	WPK 211	Tanner, Scott D	TPZ 510
Strich, Randy	TPY 473	Sun, Jun	TPW 439	Tabet, Jean-Claude	WPK 217	Tanokura, M	MPU 411
Strittmatter, Eric F	ThPJ2 178	Sun, Jun	WPX 462	Tabet, Jean-Claude	WPO 247	Tao, Lidan	ThPV5 449
Strittmatter, Eric F	TPA 015	Sun, MingJiang	TPC 041	Tabet, Jean-Claude	WPY 492	Tao, Lidan	TPZ 515
Strittmatter, Eric	TPA 006	Sun, Shixin	MPY 495	Tabolt, Glenn D	MPT 382	Tao, Lidan	WPW 444
Strom, Charis B	MPD 059	Sun, Wei	ThPF3 105	Tabolt, Glenn D	WPE 102	Tao, Limei	MPU 393
Strong, John	MPO 279	SUN, XIYUAN	TPN 251	Tabolt, Glenn D	WPG 133	Tao, W. Andy	TOEpm 3:40
Strong, Rachael F	WPS 342	Sun, Yongkai	TPQ 301	Tackett, Alan J	TPR 328	Tao, W. Andy	TPY 482
Strong, Roland K	TPR 307	Sun, Yongkai	TPQ 305	Tadros, Samy	TPD 058	Tao, Yi	TPQ 305
Strop, Petr	ThOAam 11:15	Sundaram, Bhaskar	WPE 086	Taguchi, Ryo	MPM 244	Tarakhovskiy, A	MOCam 11:15
Strouse, Geoffrey	WPM 232	Sunday, Brooks	MPU 422	Taguchi, Vince Y	MPF 146	Taranenko, Nelli	MPJ 208
Strouse, Jane	WPY 503	Sung, Crystal	TPC 042	Tahallah, Nora	ThOEam 10:15	Taranenko, Nelli	TPN 261
Stubbs, Rob	ThPM 243	Sunyer, Teresa	ThPV6 469	Taipale, Mikko	MPU 417	Taranenko, Nelli	WPP 269
Stuebiger, Gerald	TPM 241	Sussman, Michael	ThPT 352	Taka, Hikari	MPU 411	Taraszka, John	ThPV5 456
Stühler, Kai	WPS 337	Sussman, Michael	WPS 339	Takach, Edward	MODam 11:35	Taraszka, John	TPX 451
Stults, John T	ThoDpm 3:40	Suter, Marc J. F.	TPR 313	Takach, Edward	TPO 277	Tarleton, Rick	ThPV5 458
Stults, Kathy	WPP 268	Sutthisak, Tum	ThPA 011	Takach, Edward	WPQ 287	Tarnowski, Joseph	WPR1 305
Stump, Michael J	MPI 184	Sutton, Chris W	TOFpm 3:40	Takahashi, Helio	MPC 028	Tarnowski, Thomas	ThPC 029
Stumpf, Chris L	MPE1 072	Sutton, Chris	MPN 252	Takahashi, K	ThPS1 328	Tarnowski, Thomas	TPF 110
Stumpf, Chris L	MPN 263	Sutton, Chris	ThPS1 315	Takahashi, Toshie	ThPF3 100	Tasseau, Olivier	TPW 432
Stumpf, Chris L	WPY 500	Sutton, Chris	WPA 009	Takahashi, Yutaka	TPI 159	TASSEAU, Olivier	WPO 247
Stumpf, Chris	ThOCam 11:35	Sutton, Chris	WPW 431	Takamoto, Keiji	WPR1 301	Tatro, Diana	WPI 181
Stupak, Jacek	MPS 369	Sutton, Helen E	MPN 253	Takao, Toshifumi	MPN 268	Taverner, Thomas	WPR1 306
Sturgill, Thomas	ThPT 357	Suzuki, Hidesuki	ThPA 013	Takao, Toshifumi	MPU 425	Tawab, Mona	WPE 096
Sturiale, Luisa	TPB 020	Suzuki, Kenichi	ThPT 361	Takao, Toshifumi	ThPS1 327	Tawarada, Maki	MPX 452
Stuttaford, Kate	TPG 122	Svedberg, M	TPP 280	Takao, Toshifumi	TPT 347	Taylor, Alex	TPA 004
Stutts, M Jackson	TPZ 531	Svenningsson, Per	ThPR 299	Takarewski, J	ThPQ 290	Taylor, Anne	WPE 080
Su, Baoning	MPP 305	Svenningsson, Per	ThPV3 424	Takats, Zoltan	MPN 251	Taylor, C K	ThPF1 076
Su, Timothy	WPI 170	Svensson, Birte	MPW 447	Takats, Zoltan	TPR 311	Taylor, C G	ThPV5 454
Su, Timothy	WPI 181	Svensson, Marcus	ThPV3 424	Takats, Zoltan	WPX 460	Taylor, G K	TOAam 10:55
Subramanyam, B	MPE1 078	Svensson, Marcus	ThPV6 475	Takats, Zoltan	WPX 480	Taylor, G K	TPA 003
Subramanyam, B	MPO 294	Swaim, Catherine	ThPE 061	Takegawa, Y	MPC 025	Taylor, G K	WOBpm 3:40
Subramanyam, B	WPE 095	Swaim, Catherine	TPV 403	Takeuchi, M	MPX 452	Taylor, J. Alex	TPA 007
Suchy, Milos	WPD 064	Swaine, Brendan	MPE3 106	Takio, Koji	MPX 482	Taylor, John S	TPS 330
Suckau, Detlef	TPX 460	Swart, Remco	WPG 135	Talaat, Rasmy	MPO 274	Taylor, John S	WPP 263
Suckau, Detlev	ThPJ2 176	Swedmark, Stellan	MPO 290	Talaat, Rasmy	TPD 054	Taylor, Malena M	WPO 053
Suckau, Detlev	TPA 001	Sweedler, Jonathan	MPB 013	Tallmadge, Daniel	ThPA 002	Taylor, Paul A	WPE 086
Suckau, Detlev	TPM 231	Sweedler, Jonathan	ThPR 305	Talroze, Victor	WPK 220	Taylor, Robert	WPO 258
Suckau, Detlev	WOBpm 4:20	Sweedler, Jonathan	ThPR 308	Tamiri, Tsippy	TOBam 10:15	Taylor, Steven	MOAam 10:35
Suckau, Detlev	WPP 277	Sweeney, F	ThPT 359	Tamura, Jun	ThPE 049	Taylor, Steven	MPW 443
Suckau, Detlev	WPW 419	Swenberg, James	WPY 513	Tamura, Jun	TPI 159	Taylor, Todd	TPN 257
Sudakov, Michael	MPK 212	Swenberg, James	ThPM 251	Tamura, Yoshinori	MPN 268	Taylor, Todd	WPX 464
Sudakov, Michael	TPJ 186	Swenberg, James	WPY 488	Tamvakopoulos, C	MPE3 107	Tecklenburg, Ron	TPU 368
Sue, Quade	MPF 136	Swift, Dionne P	WPW 445	Tan, Aimin	MPG 162	Tegeler, Tony J	TPP 292
Suemchen, Peter	WPO 254	Switchenko, Art	WPB 041	Tan, Aimin	MPG 170	Teleis, Donna	ThPH 130
Sugimura, Hiroo	ThPE 049	Syage, Jack A	ThPB 019	Tan, Donald	WPV 409	Teleis, Donna	ThPH 133
Sugiyama, K	WPX 468	Syage, Jack	WOCam 10:55	Tan, Perpetua	WPE 089	Teleis, Donna	ThPH 142
Suh, Junghyuck	MPF 133	Syka, John E. P	WPO 241	Tan, Phillip V	MPJ 208	Tempez, Agnes	MOBam 10:55
Suh, Moo-Jin	WPC 051	Syka, John E.P	TOAam 11:55	Tan, Ye-Xiong	ThPV2 405	Ten Hove, Jan	ThPQ 293
Suhai, Sandor	ThPK2 211	Symolon, Holly	MPM 238	Tanaka, Kazuko	TPI 159	Tep, Samnang	WPR2 326
Suhai, Sándor	ThPS1 331	Syrstad, Erik A	MPK 217	Tanaka, Koichi	WPW 431	Teplow, David	ThOEam 11:35
Sulik, Patricia L	ThPM 253	Szagal, C W	WOApm 3:40	Tanaka, Nobuo	MPP 303	Terlouw, Johan	WOEam 11:35
Sullards, C	MPM 245	Szalma, Sandor	MPB 021	Tang Liu, Diane	MPE3 111	Terrier, Peran	TPU 366
Sullards, C	MPM 238	Szczap, Kathleen	TPF 105	Tang, Hui	MPE2 093	Terry, Doris E	MPX 464
Sullards, C	TOCam 11:15	Sze, Newman S-K	WPX 469	Tang, Jason X	MPP 301	Terry, Doris E	ThPV1 395
Sullards, C	TPL 219	Szostek, Bogdan	TPG 127	Tang, Keqi	ThPJ2 178	Terry, Erin	WPL 227
Sullivan, A G	MPX 467	Sztaray, Balint	MOEam 10:15	Tang, Keqi	ThPL 229	Terui, Yasushi	ThPJ2 174
Sullivan, A G	WPT 361	Szulejko, Jan E	WPJ 197	Tang, Keqi	TPI 165	Tess, David	ThPF1 070
Sullivan, David	TPC 032	Szumlas, A W	ThOApm 4:20	Tang, Keqi	TPJ 175	Tessier, Luc	ThPT 350
Sullivan, Michael	ThPK2 213	Szymanski, C M	WPR2 324	Tang, Ning	ThPV6 466	Tessier, Sylvain	WPW 448
Summers, Mia	MPP 308	Taban, Ionna	TPH 155	Tang, Ning	TOBpm 3:20	Testa, Jacqueline	ThPV2 404
Sumner, Lloyd W	MPX 466	Tabata, Kenji	ThPM 252	Tang, Wilfred H	TPY 490	Tetlow, Ian J	WPP 283
Sumner, Lloyd W	ThPA 013	Tabata, Tsuyoshi	MPX 452	Tang, Wilfred H	MPB 017	Thakur, Rohan	WOAam 11:15
Sumner, Lloyd W	WPK 207	Tabert, Amy M	MPK 228	Tang, Wilfred H	MPB 022	Thakur, Rohan	WPE 099
Sun, Aiming	MPM 238	Tabet, Jean Claude	MPM 239	Tang, Yong Q	ThPC 030	Thakur, Rohan	MPX 455
Sun, Aixia	ThPC 036	Tabet, Jean Claude	ThPO 282	Tangen, Anders	TPZ 494	Thakur, Rohan	ThPV3 428
Sun, Albert	ThPV6 468	Tabet, Jean-Claude	MPK 222	Tangen, Anders	WOCpm 3:40	Thakur, Rohan	TPX 453
Sun, B	TPB 023	Tabet, Jean-Claude	MPU 395	Tang-Liu, Diane	MPE2 093	Thakur, Rohan	TPY 477
Sun, Cynthia	MPO 294	Tabet, Jean-Claude	ThPK2 207	Taniguchi, Jun-ichi	MPK 221	Thalacker, Frederic	ThPF3 093
Sun, Cynthia	WPE 095	Tabet, Jean-Claude	ThPN 270	Tannenbaum, S	MPX 463	Thalassinios, K	ThPV1 396
Sun, Guangyu	ThPL 231	Tabet, Jean-Claude	TPK 198	Tannenbaum, S	ThPF3 092	Theberge, Roger	MPU 403
Sun, Jun	ThPV5 452	Tabet, Jean-Claude	TPK 203	Tanner, Scott D	ThOFpm 3:00	Theiss, Dorothea	ThPV5 453

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Thekkadath, G U	ThOAprm 4:40	Timmerman, Philip	WPE 113	Tremblay, T	MPX 493	Tynan, Tina A.	WPH 149
Thelin, William R	TPZ 531	Timmons, Richard	WPU 380	Tremblay, T	TPA 011	Tynan, Tina A.	WPL 227
Thevis, Mario	TPV 400	Timms, John	TPX 450	Trentani, Antonio	MPP 304	Tyrrell, David L	TPP 291
Thibault, Pierre	MPX 493	Timperman, Aaron	MPU 405	Trescher, Gudrun	ThPS2 337	U, Sally	TPY 490
Thibault, Pierre	ThPT 358	Tipton, J D	TPW 431	Trethewey, Richard	MPO 286	U, Sally	WPB 032
Thibault, Pierre	ThPV2 418	Tirumalai, R S	TPZ 496	Treyakova, N	TODpm 4:00	Ubhayakar, S	ThPF2 089
Thibault, Pierre	TOFpm 4:00	Tischler, Mark	ThPP 287	Tretyakova, N	WPY 514	Uboh, Cornelius	ThPH 142
Thibault, Pierre	TPB 024	Tita, Sidonia	ThPF1 074	Trimpin, Sarah	ThPT 356	Uboh, Cornelius	ThPH 130
Thibault, Pierre	TPP 286	Titsh, Craig	TPD 071	Trinh, An	ThPM 264	Uboh, Cornelius	ThPH 133
Thibault, Pierre	TPX 457	Tivel, Kathleen	ThPD 042	Trinh, Peter	MOBam 11:15	Uboh, Cornelius	TPC 048
Thibault, Pierre	TPZ 511	Tivel, Kathleen	ThPD 045	Tripathi, Ashish	WPA 010	Uchiki, Tomoaki	ThPT 360
Thibault, Pierre	WPS 331	Tjernberg, Agneta	MPU 399	Triscari, J M	ThOBam 11:55	Uchiki, Tomoaki	ThPU 375
Thibault, Pierre	WPW 448	Tobias, Herb	WPA 014	Triscari, J M	WPW 447	Udekku, Osita	WPR1 297
Thieffine, Sandrine	ThPT 362	Tobias, Herbert J	WPA 017	Troe, Jurgen	MOEam 10:55	Udseth, Harold	ThPV3 423
Thiele, Herbert	MPB 008	Tobias, Herbert J	WPN 236	Tromp, Jan	WOAprm 4:20	Udseth, Harold	TPI 165
Thiele, Herbert	WPW 452	Tobias, Herbert	MPO 293	Trotman-Pruett, S	MPM 238	Udseth, Harold	MPU 410
Thierse, Danièle	WPS 344	Tobias, Herbert	WPA 020	Truche, Jean-Luc	WPK 210	Udseth, Harold	TPH 156
Thieu, Vinh An	ThPS1 329	Tobias, Niels L	MPI 188	Trusheim, Mark	WPY 499	Udseth, Harold	TPJ 175
Thom, Catriona	MPI 192	Tobin, Allan J	ThPV1 391	Trygvason, Karl	WPR1 295	Udunka, Simeon	ThPG 121
Thomas, Craig E	WPY 498	Togan-Tekin, Ebru	TPN 245	Tryggvason, Sam	WPR1 295	Ueberheide, B M	MPU 412
Thomas, Darren	MPD 045	Toia, Robert	MPF 129	Tsai, Tsz-Feng	ThPW 486	Ueda, Yoshihisa	TPI 159
Thomas, Darren	MPD 061	Tokarski, Caroline	WPS 345	Tsang, Chun Wai	ThPG 116	Ueno, Yuki	MPO 295
Thomas, David, Y	MPW 445	Toledano, Michel	TPT 363	Tsang, Deborah	ThPH 142	Ugarov, Michael	MPK 213
Thomas, Elizabeth	MPE3 108	Toledo, Marcos S	MPC 028	Tsang, John	ThPV2 418	Ugarov, Michael	MOBam 10:55
Thomas, Isabell	MPN 247	Toler, Strawn K	TPG 120	Tsao, Russ	MPP 301	Ugarov, Michael	ThPK1 188
Thomas, John	ThOCam 10:35	Tolic, Nikola	TPA 015	Tsapin, Alexandre	ThPC 033	Ugarov, Michael	ThPK1 194
Thomas, John	TPC 042	Tollefson, Richard	TPF 103	Tsarbopoulos, A	MPF 138	Ugarov, Michael	WPA 002
Thomas, Papo	TPG 126	Tolmachev, Aleksey	TPJ 175	Tse, Francis L S	MPE2 092	Uhlinger, David	MPM 245
Thomas-Oates, J	TPG 131	Tolocka, Michael	WOFpm 4:20	Tse, Francis L S	TPD 060	Ulantz, Peter J	WPD 066
Thompson, A C	MPX 483	Tolstikov, Vladimir	MPP 303	Tseng, Jih-Lie	MPE1 078	Ullrich, Volker	MPU 414
Thompson, A C	WPS 348	Toma, R	TPQ 299	Tseng, Jih-Lie	MPO 294	Ummarino, S	TPB 018
Thompson, A J	WPP 265	Tomaino, Ross	MPT 378	Tseng, Jih-Lie	WPE 095	Umstot, Edward	MPX 464
Thompson, Andrew	TPW 440	Tomer, Kenneth	ThODpm 4:20	Tseng, Yu-Heng	TPW 418	Unanue, Emil R	ThPI 158
Thompson, Charles	MPS 351	Tomer, Kenneth	MPG 164	Tsipi, Despina	MPF 138	Unanue, Emil	ThPI 149
Thompson, Christine	MPI 192	Tomer, Kenneth	MPQ 325	Tsoukalas, Lefteri	WPH 140	Unger, Matthias	ThPW 491
Thompson, D K	ThPV5 457	Tomer, Kenneth	ThODpm 3:00	Tsybin, Oleg	MPJ 199	Unger, Steve	ThPM 260
Thompson, M S	ThPJ2 182	Tomer, Kenneth	WPS 327	Tsybin, Youri O	WPH 156	Unger, Steve	WPE 090
Thompson, M S	ThPS1 314	Tomita, Masaru	MPO 295	Tsybin, Youri O	MPJ 199	Unlu, Mustafa	TPX 463
Thompson, M S	WPO 251	Tomlinson, Andrew	TPY 492	Tsybin, Youri O	TOAam 11:15	Unlu, Mustafa	WPX 461
Thompson, Paul R	ThPS1 319	Tomlinson, Andy J	WPW 422	Tsybin, Youri O	WPO 259	Unson, J R S	TPG 136
Thompson, Richard	TPO 274	Tomlinson, Andy	TPN 258	Tsybin, Youri O	WPW 417	Uo, Takuma	MPX 462
Thompson, Stephen	MPJ 197	Tomlinson, Andy	WPW 451	Tu, Bo	MPJ 201	Uo, Takuma	TPY 485
Thompson, Stephen	ThPJ2 183	Tomski, Ilia	TPJ 178	Tu, The-Minh	MPE1 076	Uozumi, Naonori	ThPF3 100
Thompson, Steve	ThPV1 384	Tomy, Gregg	TPG 124	Tu, Ya-Ping	WPI 167	Upalawanna, Suvit	ThPA 011
Thompson, Steve	ThPS1 324	Tonellato, Peter J	MPB 019	Tubbs, K A	ThODpm 4:40	Upton, Pat	WPY 488
Thompson, Trellis	TPT 359	Tonelli, Fred	TPE 075	Tubbs, K A	TPC 046	Urso, Elena	TPW 428
Thomsen, Karen	ThPF2 091	Tong, Hui	TPN 250	Tucker, G B	MPE3 124	Ute, Koichi	TPU 372
Thomson, Bruce	ThPK1 192	Torchia, John W	ThPK3 222	Tuechler, M	WPB 045	Utermöhlen, Olaf	ThPV5 455
Thomson, Bruce	ThPL 230	Torella, Claudia	ThPV2 419	Tuerk, Jochen	TPE 081	Utem, Lucas J	TPE 088
Thomson, Bruce	WPC 050	Tornatore, Pete	MPJ 196	Tummala, Rama	TPN 259	Utle, Luke	WPE 094
Thomson, Bruce	TPN 250	Tornatore, Pete	WPT 352	Turck, Christoph	WPP 273	Uwakwe, Nnanna	TPV 396
Thomson, Sandra	ThPB 016	Tornatore, Peter	ThPV6 466	Turecek, F	MPK 217	Uwakwe, Nnanna	TPV 408
Thoreen, Carson	MPS 358	Törnqvist, M	MPT 375	Turecek, F	ThOAam 11:15	Vachet, Richard	ThPP 286
Thornberg, S M	ThPK2 197	Törnqvist, M	WPY 508	Turecek, F	ThPC 028	Vachet, Richard	WPJ 185
Thornton, C M	TPO 272	Torres, Matthew	MPS 360	Turecek, F	ThPD 038	Vachet, Richard	MPF 143
Thornton-Manning, J	ThPF3 102	Torres, Matthew	WPC 053	Turecek, F	TOEpm 3:00	Vachet, Richard	TOFam 11:55
Thorp, Suzanne	MPC 024	Tortajada, Jeanine	ThPV3 429	Turesky, Robert	ThPW 490	Vachet, Richard	TPT 356
Thrall, Brian D	MPW 449	Tortajada, Jeanine	TPU 366	Turesky, Robert	WPY 495	Vachet, Richard	WPJ 191
Thruston, Alfred	TPG 132	Tovera, James	MPE3 109	Turk, John	MPS 372	Vachon, Pascal	ThPS2 343
Thruston, Alfred	WOFpm 3:40	Tovera, James	TPF 113	Turk, John	TPT 359	Vadhanan, M	WPY 504
Thulasiraman, V	TPZ 509	Towers, Anita	WPE 111	Turner, Athol G	ThPN 276	Vadrevu, R	ThPU 377
Thulin, Eva	MPU 401	Townsend, Jennifer	TPD 064	Turney, Kevin P	MPJ 198	Vagts, Jens	MPB 008
Thurman, Michael	MPF 150	Townsend, Jennifer	WPD 073	Turnipseed, Sherri	ThPA 003	Vainiotalo, Pirjo	MPQ 327
Thurman, Michael	WOFpm 3:20	Toyoda, Michisato	MPJ 202	Tuytten, Robin	ThPQ 291	Vainiotalo, Pirjo	TPR 315
Tian, Xiaodan	ThODpm 4:00	Toyokuni, Tatsushi	WPY 503	Twaddle, Nathan	ThPC 037	Vainiotalo, Pirjo	TPR 327
Tian, Xiaodan	ThPR 303	Tozuka, Zenzaburo	TPV 401	Twaddle, Nathan	ThPW 485	Vais, Natalia	MPF 141
Tian, Ye	WPE 100	Tran, Thuy	TPF 110	Twigger, Simon N	MPB 019	Vakerich, Kenneth	MPE3 107
Tichy, Shane E	MOBam 11:35	Tran, Vinh	MPE3 109	Twine, Susan M	ThPV5 443	Vakhhrushev, S	MPK 223
Tie, Jian_Ke	ThPV3 421	Tran, Vinh	TPE 113	Twhig, Marian	WPB 038	Valade, Philippe	TPA 011
Tilve, Santosh	WPE 100	Treinen, Kimberly	WPE 081	Tyldesley, Richard	TPM 227	Valaskovic, Gary	MPX 472
Timchalk, Charles	MPF 154	Tremblay, Paul L	MPY 508	Tymiak, Adrienne	ThPF1 072	Valaskovic, Gary	TPJ 180
Timmerman, Philip	MPE2 094	Tremblay, Paul L	TPH 145	Tymiak, Adrienne	TPF 102	Valaskovic, Gary	TPP 293

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Valentine, Joan S.	TPR 314	Van Orman, Jordan	MPI 187	VerBerkmoes, N	TPZ 528	Vo, Laila R.	WPM 233
Valentine, Joan.....	TPT 351	Van Pelt, Colleen.....	MPE3 121	Verburg, Elizabeth	ThPF3 102	Voelkel, Wolfgang	ThPW 489
Valentine, Nancy	TOAprm 4:20	Van Pelt, Colleen.....	MPX 475	Verdier, Yann.....	TPW 424	Voelkel, Wolfgang	WPY 510
Valentine, Stephen	ThPK1 193	Van Pelt, Colleen.....	ThOBpm 4:20	Verduci, Cinzia.....	ThPW 480	Voelker, Dennis R.....	TPL 213
Valentine, Stephen	ThPV3 427	Van Pelt, Colleen.....	TPR 310	Verenchikov, A.....	MPK 216	Vogel, John S.....	WPU 393
Valentine, Stephen	TPX 451	Van Pelt, Colleen.....	TPX 452	Verentchikov, Anatoli	TPJ 187	Vogel, John S.....	MPL 236
Valentine, Steve	ThPV2 412	Van Pelt, Colleen.....	TPX 447	Vereyken, Liesbeth.....	WPE 113	Vogel, Martin.....	ThPL 228
Valenzuela, C F.....	TPL 222	Van Pelt, Colleen.....	WPT 363	Vergne, Matthew.....	TPU 383	Voinov, Valery G.....	ThPL 232
Valesky, Robert.....	MPE3 101	Van Pelt, Colleen.....	WPC 061	Verhaeghe, Tom	WPE 106	Voinov, Valery G.....	ThPL 226
Valle, Jose J.....	MPK 219	Van Peteghem, C	ThPF2 086	Verhaert, Peter	WPR2 320	Voinov, Valery V.	MPP 309
Valle, Jose.....	MPK 224	van Soest, Remco	WPG 135	Verhagen, Marc	ThPS2 341	Voisin, Sebastien	ThPT 350
van Amerom, FHW.....	TPG 120	Van Stipdonk, M.....	MPL 237	Veriotti, Tincuta	MPH 173	Voisin, Sebastien	WPR2 324
van Berkel, Gary	MPO 269	Van Stipdonk, M.....	ThPS1 330	Verjee, Zul	TPF 098	Vojdani, Fakhrieh	ThPI 150
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Wiegand, Roger.....	TPX 449	Wilm, Matthias.....	MPU 417	Wong, Yiu-chung.....	ThPA 001	Wu, Yan.....	TPL 222
Wiegand, Roger.....	WPH 154	Wilm, Matthias.....	ThPE 058	Woo, Gregory.....	WPC 049	Wu, Yannie.....	WPR2 314
Wieling, Jaap.....	TPJ 172	Wilm, Matthias.....	WPX 484	Wood, David.....	ThPG 122	Wu, Yun-Chun.....	TPO 269
Wienkoop, Stefanie.....	MPS 352	Wilson, David.....	ThPH 131	Wood, Karl V.....	TPZ 508	Wu, Zengru.....	WPU 373
Wienkoop, Stefanie.....	ThPV3 422	Wilson, David.....	WPA 007	Wood, Ken B.....	MPN 266	Wu, Zhanpin.....	MPL 232
Wilburn, Richard T.....	MPA 005	Wilson, Dennis.....	ThPF3 099	Wood, Simon.....	ThPP 285	Wu, Zhigang.....	MPH 178
Wilcox, Craig S.....	ThPV3 421	Wilson, Derek.....	ThOAam 10:55	Wood, Troy D.....	WPW 435	Wu, Zhigang.....	ThOFam 10:15
Wildgoose, Jason L.....	ThPK1 189	Wilson, Ian D.....	MPE3 108	Wood, Troy D.....	MPN 248	Wu, Zhigang.....	WOFpm 4:40
Wildgoose, Jason L.....	TPJ 183	Wilson, Ian D.....	WPY 500	Wood, Troy D.....	MPX 483	Wufer, Asiya.....	MPE1 066
Wildgoose, Jason L.....	ThPJ2 168	Wilson, Ian.....	MPE2 091	Wood, Troy D.....	ThPR 307	Wuilloud, Jorgelina.....	MPA 003
Wildgoose, Jason L.....	ThPK1 187	Wilson, Jeffrey.....	MPS 371	Wood, Troy D.....	TPU 374	Wuilloud, Rodolfo.....	MPA 003
Wildgoose, Jason L.....	TPJ 189	Wilson, Jonathan.....	ThPP 286	Wood, Troy D.....	TPU 390	Wulser, Kurt.....	ThPE 061
Wildgoose, Jason L.....	TPN 264	Wilson, Landon.....	TPT 353	Wood, Troy D.....	WPS 348	Wunderlich, Dirk.....	MPP 302
Wildsmith, Justin.....	WPU 377	Wilson, Mark.....	ThPH 136	Wood, Troy.....	MPG 169	Wunschel, David.....	MPY 499
Wiley, Sandra.....	MOAam 10:35	Wilson, Nicole.....	WOFam 10:35	Wood, William L.....	WPS 348	Wunschel, David.....	TPW 422
Wilkens, Dennis.....	TPC 042	Wilson, Paul.....	MPD 047	Wooding, Kerry M.....	ThPV1 397	Wunschel, David.....	TOApm 4:20
Wilkerson, Curtis.....	WPX 486	Wilson, Paul.....	ThPK2 196	Woodman, Michael.....	WPF 125	Wunschel, S C.....	TOApm 4:20
Wilkes, Jon G.....	WPA 015	Wilson, Raymond.....	TPD 072	Woodruff, Mark.....	TPD 059	Wurtz, Virginie.....	ThPV5 444
Wilkes, Jon G.....	WPA 011	Wilson, William.....	MPU 403	Woods, Amina S.....	ThPK1 188	Wurtz, Virginie.....	TPW 429
Wilkins, Charles L.....	MPI 184	Wind, Franck.....	ThPN 270	Woods, Amina S.....	ThPS2 333	Wurzer, Angelika.....	ThPF2 079
Wilkins, Charles L.....	MPS 371	Wind, Franck.....	WPK 217	Woods, Amina.....	MOBam 10:55	Wysocki, Ronald.....	MPY 503
Wilkins, John.....	MPX 478	Wind, Frank.....	MPK 222	Woodward, David.....	MPE3 111	Wysocki, Vicki.....	MPY 503
Wilkins, John.....	TPM 233	Wind, Mathias.....	ThOFpm 4:20	Woodward, Lee Ann.....	MPF 134	Wysocki, Vicki.....	ThOBam 11:55
Wilkins, John.....	WPW 420	Windischhofer, W.....	MPM 243	Woodward, Lee Ann.....	MPE3 117	Wysocki, Vicki.....	ThPJ2 184
Williams, Katherine.....	WPV 399	Windsor, William.....	WPC 062	Woolf, Eric J.....	MPE3 117	Wysocki, Vicki.....	ThPS1 309
Willcox, Mark.....	WPV 401	Windust, Anthony.....	MPO 278	Woolfitt, Adrian R.....	ThPB 024	Wysocki, Vicki.....	WPW 447
Willett, Gary D.....	ThPN 276	Winefordner, James.....	MPN 267	Woolfitt, Adrian R.....	WPA 012	Wysocki, Vicki.....	ThPK2 214
Willett, Gary D.....	TOEam 11:55	Winefordner, James.....	ThPP 284	Wooten, Joe V.....	ThPB 024	Wyss, Mike.....	TPO 270
Willett, Gary D.....	WPJ 193	Winefordner, James.....	WPA 019	Worboys, Phillip.....	ThPM 250	Wytenbach, T.....	ThOEam 11:35
Willett, Gary D.....	WPM 234	Winefordner, James.....	ThPT 368	Worthington, Kenneth.....	MPK 226	Wytenbach, T.....	ThPK2 214
Willett, Gary D.....	TPM 227	Wingate, Julie.....	TPM 236	Worthington, Mark.....	ThPT 357	Xavier, L A.....	WOEpm 4:00
Willett, Gary D.....	TPZ 525			Wrana, Jeffrey L.....	WPX 455		

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Xia, Qi-Chang	ThPV2 405	Yang, Eric	ThPM 243	Yikilmaz, Emine	WOBam 11:35	Yu, Wen	ThPV5 452
Xia, Qi-Chang	TPZ 529	Yang, F	ThPT 359	Yim, Yong-Hyeon	WPI 164	Yu, Wen	ThPV6 478
Xia, Qi-Chang	WPS 328	Yang, Heyi	MPR 335	Yin, Hongfeng	TPP 290	Yu, Wen	TPW 439
Xia, Qinsu	WPY 509	Yang, Linan	WPJ 195	Yin, Hongfeng	WOCpm 4:40	Yu, Wen	WPX 462
Xiang, Fan	MPT 388	Yang, Liyu	TPD 058	Yin, Jianming	WPE 082	Yu, Xinlei	TPZ 515
Xiang, Fan	WPP 270	Yang, Min	MODam 11:55	Yin, Jianning	TPZ 502	Yu, Xinlei	WPW 444
Xiao, Gary G.	WPV 397	Yang, Min	ThPF1 074	Yin, Jianning	WPR1 294	Yu, Yang	MPC 038
Xiao, Hui	MPV 426	Yang, Min	TPM 236	Yin, Sheng	WPV 397	Yu, Ying Qing	TPW 433
Xiao, Hui	MPV 428	Yang, Min	WPD 074	Yip, Tai Tung	TPZ 509	Yu, Ying-Qing	MPX 459
Xiao, Jim J.	TPE 083	Yang, Min	WPW 441	Yiu, Kenneth C.H.	MPO 291	Yu, Yonghao	TPR 321
Xiao, Lianchun	ThPV2 410	Yang, Paul	MPF 151	Ynddal, Lars	ThPF1 075	Yuan, Jing	MPE3 115
Xiao, Zhen	MPX 487	Yang, Paul	ThPG 118	Ynddal, Lars	TPF 114	Yuan, Jing	ThPS2 339
Xie, Guibo	WPY 501	Yang, Paul	ThPG 123	Yocum, Anastasia	MPU 404	Yuan, Minjia	MPJ 201
Xie, Hong	TPS 343	Yang, Pengxiang	MPT 383	Yocum, Anastasia	TPT 357	Yuan, Pau-M.	TPY 492
Xie, Min	TPB 030	Yang, Pengxiang	WPJ 188	Yokoi, Akira	WPX 471	Yuan, Xianglin	ThPV6 474
Xie, Min	WPR2 317	Yang, Pengyuan	MPJ 201	Yonish, Bryan A.	ThPV6 463	Yuen, Sylvia	TPY 492
Xie, Weiping	TPT 352	Yang, Qing	TPC 035	Yoo, Chul S.	MPX 451	Yuen, Sylvia	WPB 032
Xie, Yongming	MPQ 318	Yang, Qing	WPH 153	Yoo, Jong-Shin	WPS 351	Yurawecz, Martin P.	ThPN 279
Xie, Yongming	TPM 229	Yang, Xi	MPY 503	Yoshimura, Tsutomu	TPE 077	Zabka, Martin	ThPS1 321
Xie, Zhi Julie	ThPV4 431	Yang, Xi	ThPS1 309	Yoshinari, Kiyomi	ThPJ2 170	Zablakis, Earl	MPT 376
Xiong, Ying	MPR 341	Yang, Xiaofeng	ThPT 370	Yoshinari, Kiyomi	ThPJ2 174	Zabrecky, James	ThPI 153
Xu, Allan	MPE1 068	Yang, Xiaoyu	WPD 067	Yoshinari, Kiyomi	ThPS1 327	Zabrecky, James	ThPU 378
Xu, Allan	TPF 111	Yang, Yanan	TPQ 298	Yoshinari, Kiyomi	WPI 168	Zabrouskov, Vlad	TPZ 532
Xu, Baogang J.	ThPV2 420	Yang, Yanan	TPS 337	Yoshioka, Shinji	MPC 025	Zabrouskov, Vlad	WOBpm 3:00
Xu, Christin	ThPF3 104	Yang, Yanan	TPS 345	Yost, Richard A.	MPF 149	Zacchello, Franco	MPD 046
Xu, Dong	ThPU 375	Yang, Yang	MPC 035	Yost, Richard A.	TPL 221	Zachertowska, A.	ThPV5 440
Xu, Guifen	ThPF3 104	Yang, Yuhui	ThPM 264	Yost, Richard A.	MPJ 203	Zachrisson, K.	MPU 399
Xu, Guozhong	WPR1 301	Yang, Zhi	MPE2 088	Yost, Richard A.	ThOApM 3:20	Zadjura, Lisa	MPO 283
Xu, Keyang	MPE3 120	Yang, Zhi	TPK 190	Yost, Richard A.	ThPH 144	Zagorevski, Dmitri	WPI 174
Xu, Ming	MPB 018	Yanofsky, Corey	MPT 384	Yost, Richard A.	WPH 141	Zagorevski, Dmitri	WPI 172
Xu, Ming	ThPE 056	Yanofsky, Corey	ThPE 054	Younhovsky, Nikolay	MPU 414	Zaia, Joseph	MPC 029
Xu, Nafei	ThPV4 437	Yao, Yongjin	TPE 095	Younhovsky, Nikolay	WPX 476	Zaia, Joseph	MPC 037
Xu, Naxing	MPE3 106	Yao, Zhong-ping	TPR 322	Young, Brandy	MPT 383	Zaia, Joseph	MPC 040
Xu, Ron	TPD 057	Yao, Zuliang	MPE3 107	Young, Bryce	TPV 413	Zaia, Joseph	TPB 025
Xu, Rongda	ThPF1 078	Yapa, Udeni	TPD 052	Young, Carrie L.	ThPB 024	Zaikin, Vladimir	TPL 212
Xu, Tianshun	WPV 395	Yard, Benito A.	ThPV6 472	Young, Howard	TPW 437	Zakelj-Mavric, M.	WPW 434
Xu, Wei	ThPM 240	Yates III, John R.	ThPV3 430	Young, Kelly	TPF 110	Zaleski, Anthony	WPS 330
Xu, Xiaohua	MPO 291	Yates III, John R.	MPT 373	Young, Malin M.	MOAam 11:55	Zamfir, Alina D.	MPK 223
Xu, Xiaohui Sophia	TPD 055	Yates, Alexander	ThPS1 316	Young, Malin M.	TPW 423	Zamfir, Alina D.	TOFpm 3:00
Xu, Xiaoying	MPE3 124	Yates, Alexander	ThOBam 10:15	Young, Malin M.	WPR1 309	Zamfir, Alina D.	MPI 180
Xu, Yichuan	WPW 439	Yates, Deborah	ThPF1 071	Young, Martin	ThPT 350	Zamir, Lolita	WPI 184
Xu, Ying	ThPU 375	Yates, III, John R.	TPY 480	Young, Martin	WPR2 324	Zancan, Lucia	MPD 046
Xu, Yingda	TPN 260	Yates, III, John	MPB 010	Young, Mary K.	WPO 239	Zang, Li	TPT 282
Xu, Yuehong	WPM 231	Yates, John R.	MPX 455	Young, May	ThPC 029	Zang, Li	TPT 369
Xue, Yanfen	WPR1 294	Yates, John R.	WPV 396	Young, Phillip	MPX 453	Zappacosta, F.	WPP 276
Xue, Yongjun	ThPM 260	Ye, Binying	ThPB 021	Yousef, Muhammad	TPX 464	Zappacosta, F.	ThOCpm 3:00
Yagubskii, Eduard	ThPL 237	Ye, Louise	WPK 208	Ytterberg, A. Jimmy	TPW 421	Zappacosta, F.	ThPT 351
Yagüe, Jesús	ThPS1 311	Ye, Zhixiong	MPE3 107	Ytterberg, Jimmy	ThPV1 398	Zarabadipour, C.	WPB 044
Yakshin, Mikhail	MPJ 208	Yeh, Li-Tain	ThPF3 104	Yu Ip, Charlotte C.	ThPI 157	Zarbl, Helmut	TPS 343
Yakshin, Mikhail	MPJ 207	Yen, Ten-Yang	MPC 026	Yu, Chongwoo	ThPM 257	Zarini, Simona	WPL 229
Yalcin, Talat	ThOBam 11:15	Yeom, Seung-Bock	MPE3 126	Yu, Chongwoo	TPO 267	Zaugg, Steven D.	MPF 142
Yamaguchi, K.	MPR 331	Yeong, Victoriano	MPE2 086	Yu, Chongwoo	TPQ 299	Zdena, Malá	ThPV5 451
Yamaguchi, K.	TPI 159	Yergey, Alfred L.	ThOBam 11:35	Yu, Eizadora T.	MPR 346	Zdráhal, Zbynek	ThPV5 451
Yamaguchi, M.	MPG 161	Yergey, Alfred L.	WPJ 194	Yu, Eizadora	ThPS2 334	Zea, Corbin	MPC 038
Yamaguchi, Minoru	MPW 442	Yergey, Alfred L.	TPB 029	Yu, Eizadora	TODam 10:35	Zeevaart, Jan AD	ThPA 015
Yamaguchi, Shin-ichi	MPK 221	Yergey, Alfred L.	WOBam 11:35	Yu, Jingyi	WPV 396	Zeldenrust, Steven	TPC 047
Yamanaka, Hidenori	WXP 471	Yergey, Alfred L.	WPP 276	Yu, Jiong	MPV 432	Zell, Manfred	TPE 076
Yamaoka, Hiroshi	ThPK3 218	Yergey, Alfred	MPU 404	Yu, John	WPY 515	Zell, Manfred	WPY 510
Yamazaki, T.	MPM 244	Yergey, James A.	ThPM 247	Yu, Kate	ThPG 114	Zeller, Loreen C.	WPS 347
Yan, Fang	TOCpm 4:00	Yergey, James	TPD 066	Yu, Kate	ThPP 287	Zeller, Martin	WPP 278
Yan, Jian	WPY 509	Yeung, Anthony	TPY 473	Yu, Kate	WPY 494	Zemski Berry, Karin	WPL 223
Yan, Jun	TPV 396	Yeung, John H.K.	MPO 291	Yu, L.	MPS 370	Zeng, Chenhui	WPP 280
Yan, Jun	TPV 408	Yew, Joanne Y.	ThPR 301	Yu, Linning	MPO 275	Zeng, Hang	WPE 103
Yan, Kerri X.	TPD 055	Yi, Donghui	WPR1 312	Yu, Li-Rong	MPW 449	Zeng, Lu	MPP 306
Yan, Lin	ThPV6 468	Yi, Eugene C.	MPX 471	Yu, Li-Rong	MPX 462	Zeng, Lu	TPD 057
Yan, Lisa	MPB 021	Yi, Eugene C.	TPY 471	Yu, Li-Rong	TOCpm 3:40	Zeng, Rong	ThPV2 405
Yan, Wei	TPY 471	Yi, Eugene C.	TPZ 516	Yu, Li-Rong	TPW 437	Zeng, Rong	TPZ 529
Yang, Binghu	MPR 335	Yi, Eugene C.	TPZ 520	Yu, Li-Rong	TPY 485	Zeng, Rong	WPS 328
Yang, Cheng Y.	WPE 099	Yi, Eugene C.	WPU 378	Yu, Lu	WPS 338	Zeng, Wei	MPE1 085
Yang, Chin-Hsiung	MPN 254	Yi, Eugene C.	WPV 412	Yu, Rosie Z.	MPE3 120	Zenobi, Renato	ThODam 10:15
Yang, Eric C.C.	WPP 275	Yi, Eugene	TPY 469	Yu, Steve S.-F.	TPW 418	Zenobi, Renato	WPC 047
Yang, Eric C-C	WPT 364	Yi, Ping	MPO 271	Yu, Walter Z.	ThPF2 091	Zenobi, Renato	WPK 209

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Zenobi, Renato	WPK 212	Zhang, Wenzhu	WPO 242	Zhou, Jizhong	ThPV5 457		
Zenobi, Renato	WPK 219	Zhang, Xia	MPK 229	Zhou, Lei	WPV 409		
Zhai, Huili	WOBpm 3:00	Zhang, Xiao-Jun	MPL 232	Zhou, Michael	MPT 382		
Zhai, Huili	WPR1 290	Zhang, Xin	WPU 389	Zhou, Michael	ThPM 267		
Zhan, Qiao	ThPM 251	Zhang, Xinrong	ThOFpm 4:00	Zhou, Michael	WPE 102		
Zhan, Xianquan	ThPV6 471	Zhang, Xiaoakui K.	ThPE 052	Zhou, Michael	WPG 133		
Zhang, Bing	MOAam 10:35	Zhang, Yan Ling	ThPM 248	Zhou, Ming	ThPV4 433		
Zhang, Bo	MPA 001	Zhang, Yan Ling	ThPW 491	Zhou, Ming	TOCpm 3:40		
Zhang, Bo	WPA 022	Zhang, Yan Ling	WPY 497	Zhou, Qinwei	WPR1 305		
Zhang, Boyan	TOBpm 4:40	Zhang, Yan	ThOEpm 3:40	Zhou, Shaolian	ThPF2 081		
Zhang, Chao	ThOFpm 4:00	Zhang, Yan	TPY 487	Zhou, Shaolian	TPF 103		
Zhang, DeSheng	TPW 426	Zhang, Yanni	WPV 403	Zhou, Shaolian	WOCpm 3:20		
Zhang, Donglu	ThPF1 067	Zhang, Yibing	MPC 035	zhou, songtao	WPW 443		
Zhang, Donglu	ThPF2 085	Zhang, Yong	ThPR 302	Zhou, Wei	ThPF2 081		
Zhang, Duxi	ThPF1 067	Zhang, You X.	MOAam 11:15	Zhou, Wei	TPF 103		
Zhang, Fagen	MPO 275	Zhang, Zhen	WPT 352	Zhou, Yingyao	WPG 134		
Zhang, Fagen	WPU 384	Zhang, Zhihao	WPQ 284	Zhou, Zhengfeng	WPR1 294		
Zhang, Fujian	WPS 336	Zhang, Zhongqi	TPA 008	Zhu, Dongwei	WPL 226		
Zhang, Guangyu	TPS 334	Zhang, Zhongqi	TPV 406	Zhu, Haining	WPS 336		
Zhang, Guoan	MPJ 201	Zhang, Zhongqi	WPR2 315	zhu, kan	ThPQ 289		
Zhang, Hailong	ThPV1 388	Zhang, Zong-Ping	MPE3 110	Zhu, Mei M.	MPV 438		
Zhang, Hailong	TPB 031	Zhang, Zong-Ping	WPE 085	Zhu, Mei M.	WOBam 10:55		
Zhang, Haiyan	ThPV5 449	Zhao, Caifeng	WPR1 294	Zhu, Mingshe	MODam 11:15		
Zhang, Haiyan	WPA 005	Zhao, Cheng	MPG 169	Zhu, Mingshe	MPO 276		
Zhang, Haiying	ThPF2 085	Zhao, Dongyuan	MPJ 201	Zhu, Qing	MODam 11:35		
Zhang, Heidi	ThPV1 397	Zhao, Jamie J.	MPE1 074	Zhu, Qing	TPO 277		
Zhang, Hua	ThPV4 436	Zhao, Jamie J.	MPE1 085	Zhu, Qing	WPQ 287		
Zhang, Hui	TPY 469	Zhao, Jamie	MPE3 101	Zhu, Xiangping	ThPE 062		
Zhang, Hui	TPY 488	Zhao, Jane Y.	MODam 11:55	Zhu, Xiangping	TPN 257		
Zhang, Hui	WPU 378	Zhao, Jane Y.	TPM 236	Zhu, Xiangping	TPY 466		
Zhang, Hui	WPV 412	Zhao, Kang	WPR1 294	Zhu, Xiangping	WPW 451		
Zhang, Hui	WPW 446	Zhao, Sabrina	TPD 065	Zhu, Xun	TPZ 502		
Zhang, Hui	WPX 465	Zhao, Sabrina	WPY 489	Ziaie, Babak	ThPF3 094		
Zhang, Ji	WPU 380	Zhao, Shouxun	TPR 319	Ziaie, Babak	ThPL 238		
Zhang, Jie	ThPF2 084	Zhao, Shouxun	WPT 359	Zidarov, Dimo	ThPN 271		
Zhang, Jinghua	TPC 040	Zhao, Weiping	MODam 11:15	Zidarov, Dimo	TPQ 297		
Zhang, Jinhua	MPC 032	Zhao, Weiping	MPO 276	Ziegel, Rebecca	TODpm 4:00		
Zhang, Jinhua	ThPD 043	Zhao, Xiaohang	TPZ 502	Zientek, Keith D.	MPI 181		
Zhang, Juan	WPK 209	Zhao, Yingming	ThPV1 386	Zieske, Lynn R.	TPY 492		
Zhang, Juan	WPK 212	Zhao, Ying-Ming	TOCpm 3:40	Zieske, Lynn R.	WPB 032		
Zhang, Jun	MPE3 106	Zhao, Yingming	WPX 481	Zitar, Kirsti	TPS 332		
Zhang, Junmei	ThPK2 202	Zhao, Yingxin	WPX 481	Zittin-Potter, S.	TPT 351		
Zhang, Kaizhong	TPA 012	Zharikova, Alevntina	ThPR 297	Ziv, Tamar	ThPV2 408		
Zhang, Kangling	ThPV1 399	Zharikova, Alevntina	TPY 479	Ziv, Tamar	WPW 428		
Zhang, Kate	ThOCam 10:35	Zharkov, Dmitry	TPS 340	Znamenskiy, Vasily	ThPL 235		
Zhang, Kate	TPC 042	Zheng, Jing	WPP 264	Zobrist, Jodi M.	WPU 377		
Zhang, Lei	TPZ 529	Zheng, Jing	WPP 267	Zollinger, Markus	ThPK2 215		
Zhang, Likang	MPA 002	Zheng, Kefei	TPY 492	Zolodz, Melissa D.	TPZ 508		
Zhang, Li-Kang	WPO 248	Zheng, Suping	ThPV5 442	Zolotarjova, Nina	MPX 465		
Zhang, Liming	TPF 105	Zheng, Weiyi	ThPF3 098	Zong, Jian	ThPM 249		
Zhang, Liwen	ThPV2 407	Zheng, Xiaoyang	TPC 049	Zook, Douglas	TPE 075		
Zhang, Liwen	WPT 355	Zheng, Xubin	WPJ 188	Zoppa, Mariella	MPD 046		
Zhang, Mei-Yi	ThPC 032	Zhong, Feng	MPC 031	Zougman, A.	WPR1 291		
Zhang, Mingxuan	MPQ 322	Zhong, Feng	TPC 035	Zougman, A.	WPR2 316		
Zhang, Nan	MPX 486	Zhong, Feng	TPI 168	Zubarev, Roman	ThPE 057		
Zhang, Nan	ThPV1 402	Zhong, Feng	WPO 261	Zubarev, Roman	WPH 156		
Zhang, Nancy	TOBpm 4:40	Zhong, Feng	WPW 441	Zubarev, Roman	ThPS2 340		
Zhang, Ning	MPX 471	Zhong, Hongying	TOBpm 4:40	Zubarev, Roman	TOAam 11:15		
Zhang, Qiang	TPE 096	Zhong, Hongying	TPV 413	Zubarev, Roman	WOBpm 4:00		
Zhang, Qibin	TODpm 3:20	Zhou, Dawei	MPE3 097	Zubarev, Roman	WPO 255		
Zhang, Qibin	WPO 250	Zhou, Dawei	TPF 107	Zumwalt, Amy M.	ThPT 353		
Zhang, Rena	TPD 066	Zhou, Guangchun	MPE3 097	Zumwalt, Amy M.	WPW 436		
Zhang, Renliang	TPC 041	Zhou, Guangchun	TPF 107	Zumwalt, M.	WOCam 11:55		
Zhang, Rulin	MPU 398	Zhou, Haihong	MPT 380	Zurdo, Jesus	ThPU 381		
Zhang, Rulin	WPV 407	Zhou, Haihong	ThOCam 11:15	Zurek, Gabriela	MPP 302		
Zhang, Sheng	MPS 372	Zhou, Haihong	ThPV6 461	Zurek, Gabriela	WOAam 11:55		
Zhang, Sheng	TPR 310	Zhou, Haihong	TPZ 523	Zvyaga, Tatyana	WPE 092		
Zhang, Sheng	TPX 452	Zhou, Hu	ThPV2 405	Zweigenbaum, Jerry	TPM 237		
Zhang, Sheng	WPT 363	Zhou, Hu	TPZ 529	Zweigenbaum, Jerry	WPF 125		
Zhang, Shide	MPO 275	Zhou, Hu	WPS 328	Zyzak, David V.	ThPA 002		
Zhang, Terry	WPU 370	Zhou, Jie	TPT 350				
Zhang, Wei	WPX 481	Zhou, Jie	TPT 361				

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