

MONDAY POSTERS

INSTRUMENTATION: NEW CONCEPTS 1, 004 - 023

- MP 004 **High-Capacity Ion Trap for Two-Dimensional Mass Spectrometry;** Yuichiro Hashimoto; Hideki Hasegawa; Masuyuki Sugiyama; *Hitachi, Ltd, Central Research Lab, Kokubunji, Tokyo, Japan*
- MP 005 **Single Particle Charge Detection for Nanoparticle Aerosol Mass Spectrometry and X-Ray Diffractive Imaging;** Mike Bogan¹; W. Henry Benner¹; Urs Rohner¹; Sebastien Boutet²; Matthias Frank¹; ¹*Lawrence Livermore National Laboratory, Livermore, CA;* ²*Stanford Linear Accelerator Center, Menlo Park, CA*
- MP 006 **Continuous Time-of-Flight Mass Spectrometer Based on Ion Modulation, Ion Imaging, and Kinetic Energy Analysis;** Oh Kyu Yoon; Matthew Robbins; Ignacio Zuleta; Griffin Barbula; Richard N. Zare; *Stanford University, Stanford, CA*
- MP 007 **Development and Utilization of Aerodynamic Devices for Ambient Ionization in Mass Spectrometry;** Robert Dixon; Jason Sampson; Adam Hawkridge; David C. Muddiman; *North Carolina State University, Raleigh, NC*
- MP 008 **Planar Resistive Electrode Ion Traps;** Ying Peng¹; Ivan W. Miller¹; Zhiping Zhang¹; Brett J. Hansen¹; Miao Wang¹; Samuel Tolley²; Milton L. Lee¹; Aaron R. Hawkins¹; Daniel E Austin¹; ¹*Brigham Young University, Provo, UT;* ²*Torion Technologies Inc., Pleasant Grove, UT*
- MP 009 **Ion Extraction from Linear Quadrupole Ion Trap using Excitation Gate and Axial Gradient Fields;** Bruce B. Reinhold; Derin B Keskin; Ellis L Reinherz; *Dana Farber Cancer Institute, Boston, MA*
- MP 010 **Development of a Novel Analytical Platform Incorporating a Digital Ion Trap Interfaced with a Synchrotron Radiation Source for SAXS Experiments;** Francesco L Brancia¹; Bryan McCullogh²; Andrew Entwistle¹; Steve G Buffey³; Samar Hasnain³; Ikuo Konishi¹; J Gunter Grossmann³; Simon J Gaskell²; ¹*SRL, Manchester M17 1GP, UK;* ²*Department of Chemistry, University of Manchester, Manchester, UK;* ³*STFC Daresbury Laboratory, Daresbury, UK*
- MP 011 **Macromolecule Measurement using MALDI-DITMS;** Koichi Tanaka; Sadanori Sekiya; Masafumi Jinno; Makoto Hazama; Kei Kodera; Shinichi Iwamoto; *Shimadzu Corporation, Kyoto, JAPAN*
- MP 012 **Miniature Differential Mobility Ion Pre-Filtration in API-MS for Rapid, Non-Invasive Radiation-Exposure Biodosimetry;** Erkinjon G. Nazarov¹; Stephen L. Coy¹; Evgeny V. Krylov¹; David J. Brenner²; Kristopher W. Krausz³; John B. Tyburski³; Andrew D. Patterson³; Josef Slavik⁴; Albert J. Fornace, Jr.³; Frank J. Gonzalez⁵; Jeffrey R. Idle⁴; ¹*Sionex Corp., Bedford, MA;* ²*Center for Radiological Research, N-Y, NY;* ³*Lab of Methabolism, National Cancer Institute, Bethesda, MD;* ⁴*Institute of Clinical Pharmacology, Univ. of Bern, 3010 Bern, Switzerland;* ⁵*Lombardi Comprehensive Cancer Center, Washington, DC*
- MP 013 **Bridging the Gap between Theoretical and Experimental Mass Spectrum;** Donald Kuehl; Yongdong Wang; *Cerno Bioscience, Danbury, CT*
- MP 014 **Ion Camera: Fusing a Confocal Mass Spectrometer with an Ion-CCD;** Gottfried Kibelka; Omar Hadjar; Chad Cameron; Scott Shill; *O.I. Analytical, Pelham, AL*
- MP 015 **An Advanced Concept for Mass Spectrometry Simulations - The Ion Trajectory Simulation Program ITSIM 6;** Wolfgang R. Plass; Timo Dickel;

- MP 016 **Quadrupole Rod Sets with Added Decapole Fields;** Chuan-Fan Ding¹; Yu Xiao¹; Chan Luo¹; Gong-yu Jiang¹; Zejiang Huang²; You Jiang²; Xiang Fang²; ¹*Fudan University, Shanghai, Shanghai;* ²*National Institute of Metrology, Beijing, Beijing*
- MP 017 **Custom Data Acquisition with LTQInstControl COM Library of Functions for Thermo Fisher Scientific LTQ Mass Spectrometers;** Aleksey Nakorchevskiy; *TSRI, La Jolla, CA*
- MP 018 **A Mass Separating Travelling Wave Ion Guide;** Daniel J Kenny; *Waters Corporation, Manchester, UK*
- MP 019 **A New Ion Mobility Based Method Utilising Time Varying Collision Energy to Improve the Fragmentation Efficiency of Multiple Precursor Ions;** Steven D Pringle; Jason L Wildgoose; Kevin Giles; Chris Hughes; *Waters Corporation, Manchester, UK*
- MP 020 **Simulation of a Square Electrode MEMS Quadrupole Mass Filter Operating in Stability Zones 1 and 3;** Thomas Hogan¹; Stephen Taylor¹; Kerry Cheung²; Luis Velasquez-Garcia²; Akintunde I Akinwande²; ¹*University of Liverpool, Liverpool, UK;* ²*MIT, Cambridge, MA*
- MP 021 **Radio Frequency Power Supply for the Production of High Amplitude Asymmetric Waveforms;** Mark E. Ridgeway; Philip M Remes; Collin McKinney; Gary L. Glish; *University of North Carolina, Chapel Hill, NC*
- MP 022 **Simulations of a New Mass-Selected Ion Separation and Transmission Method between Linear Ion Traps;** Gong-Yu Jiang¹; Chan Luo¹; Xiao-xu Li¹; Chuan-fan Ding¹; Li Ding²; ¹*Fudan University, Shanghai, China;* ²*Shimadzu Research Lab (shanghai), Shanghai, China*
- MP 023 **Development and Applications of a New Non-Hybrid Orbitrap Mass Spectrometer;** Andreas Wieghaus; Alexander Makarov; Ulf Froehlich; Markus Kellmann; Oliver Lange; *Thermo Fisher Scientific, Bremen, Germany*

DIRECT IONIZATION 1, 024 - 044

- MP 024 **Comparison of Mass Spectrometric Methods for the Detection of Phosphodiesterase-5 Inhibitor Prescription Drugs in Dietary Supplements;** Martha L. Gay; John A.G. Roach; Gregory O. Noonan; *FDA, College Park, MD*
- MP 025 **Laser-Assisted Desorption Electrospray Ionization with a Wavelength Tunable Infrared Source;** Mark Little¹; Eli Margalith¹; Kermit K. Murray²; Yohannes Rezenom³; ¹*Opotek, Inc., Carlsbad, CA;* ²*Louisiana State Univ., Baton Rouge, LA;* ³*Louisiana State University, Baton Rouge, LA*
- MP 026 **Identification of Fluorochemical Paper Coatings and Characterization of Packaging by LC-MS-MS and DART-MS;** Gregory O. Noonan; Timothy H. Begley; Luke K. Ackerman; Gregory W. Diachenko; John A.G. Roach; *US Food & Drug Administration, College Park, MD*
- MP 027 **Recent Progresses of Extractive Electrospray Ionization Mass Spectrometry (EESI-MS) for Ambient Applications;** Huanwen Chen¹; Shuiping Yang¹; Konstantin Chingin²; Gerardo Gamez²; Liang Zhu²; Jianhua Ding¹; Arno Wortmann²; Renato Zenobi²; ¹*East China Institute of Technology, Fuzhou, CHINA;* ²*ETH Zurich, Zurich, Switzerland*

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- MP 028 **Evaluation of Desorption Electrospray Ionization (DESI) for Quantification of Small Molecules;** Brandy Young; Dariusz Janecki; Justin Wiseman; *Prosolia, Inc., Indianapolis, IN*
- MP 029 **Field Optimization of Data Collection using DART/DESI Mass Spectrometry;** Ronny C Robbins; William M. Lagna; *US Army, Gunpowder, MD*
- MP 030 **Development of Probe Electrospray using a Solid Needle;** Kenzo Hiraoka; Lee Chuin Chen; Kentaro Nishidate; Daiki Asakawa; Kunihiko Mori; Takeo Kubota; Sen Takeda; Hirokazu Hori; *University of Yamanashi, Kofu, Japan*
- MP 031 **Evaluation of DART Analytical Figures of Merit on Various Surfaces using High Resolution Mass Spectrometry;** Julia L. Rummel; John R. Eyler; David H. Powell; *University of Florida, Gainesville, FL*
- MP 032 **On-Line Monitoring and Mechanistic Studies of Chemical Reactions by Direct And Instant Analysis using Extractive Electrospray Ionization Mass Spectrometry;** Liang Zhu¹; Gerardo Gamez¹; Huanwen Chen²; Haoxi Huang¹; Konstantin Chingini¹; Renato Zenobi¹; ¹*ETH Zurich, Zurich, Switzerland*; ²*College of Chemistry, Jilin University, Changchun, China*
- MP 033 **Quantitative and Qualitative Analysis using ASAP Ionization Combined with SPME Sample Introduction on an Orbitrap Mass Spectrometer;** Bogdan Szostek; Charles McEwen; *DuPont CRD/CCAS, Wilmington, DE*
- MP 034 **Applications of Carbon Dioxide Induced Atmospheric Sample Desorption and Analysis;** Michael Tomany; Joseph A. Jarrell; *Waters Corporation, Milford, MA*
- MP 035 **Additive Analysis in Plastic Materials by DESI;** Sander Koster¹; Leon Coulier¹; Brian Laughlin²; William Dongen¹; ¹*TNO Quality of Life, Zeist, Netherlands*; ²*Prosolia, Indianapolis, IN*
- MP 036 **Direct Analysis in Real Time/Mass Spectrometry for Continuously Monitoring the States of Ongoing Chemical Reactions Involved with Volatile Compounds;** Yi-Tzu Cho; Che-Hsin Lin; Jentaie Shiea; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*
- MP 037 **Desorption Electrospray Ionization Reactions between Host Crown Ethers and the Influenza Neuraminidase Inhibitor Oseltamivir for Screening of Potentially Counterfeit Tamiflu®;** Leonard Nyadong¹; Kristin R. Johnson¹; Edward G. Hohenstein¹; David C. Sherrill¹; Michael D. Green²; Facundo Fernandez¹; ¹*Georgia Institute of Technology, Atlanta, GA*; ²*Center for Disease Control and Prevention, Atlanta, GA*
- MP 038 **Automated High Throughput Analyses using the Atmospheric Solids Analysis Probe (ASAP) Method;** Barbara S. Larsen¹; Richard G. McKay²; ¹*The Dupont Company, Wilmington, DE*; ²*M and M Mass Spec Consulting, Hockessin, DE*
- MP 039 **Optimizing DART-MS Sampling for Quadrupole MS-MS Analysis of Food Contaminants;** Luke K. Ackerman; Gregory O. Noonan; Timothy H. Begley; *FDA Center for Food Safety & College Park, MD*
- MP 040 **Direct Characterization of Polymer and Chemical Compounds in Strong Acids and Bases by Ambient Liquid Mass Spectrometry;** Li-Hua Lo; Min-Zong Huang; Jentaie Shiea; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*
- MP 041 **DART-TOF Validation and Applications in Forensic Science;** Yongyi Jiang; Stephen Houck; Mark Dixon; Ashraf Mozayani; *Harris County MEO, Houston, TX*
- MP 042 **Rapid, Automated Determination of Elemental Compositions of Ions in Mass Spectra Obtained with an Open-Air Ion Source;** Andrew H. Grange; G. Wayne Sovocool; *U.S EPA, Environmental Chemistry Branch, Las Vegas, NV*
- MP 043 **Desorption Electrospray Ionization of Flame Particulate;** Jianan Dong; Yohannes Rezenom; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
- MP 044 **Direct Probe-Atmospheric Pressure Chemical Ionization (DP-APCI) For Analysis of the Polyurethane Compounds;** Sara E. Whitson¹; Chrys Wesdemiotis¹; Robert P. Lattimer²; ¹*The University of Akron, Akron, OH*; ²*Lubrizol Advanced Materials, Cleveland, OH*
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- INSTRUMENTATION: ION SOURCES, ESI-RELATED, 045 - 063**
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- MP 045 **Synchronized Dual-Polarity Ion Production using Electrospray Ionization Method;** Yi-Sheng Wang¹; Han-Kwang Chen²; Min-Chia Huang¹; Chih-Che Wu²; ¹*Academia Sinica, Taipei, TAIWAN*; ²*Chi Nan University, Nantou Hsien, Taiwan*
- MP 046 **Chemometric Study of the Effects of Instrumental Parameters on Analyte Response across Three Commercial ESI-MS Instruments using Factorial Design;** Misjudeen Raji; Kevin Schug; *University of Texas, Arlington, TX*
- MP 047 **Design and Performance of a New Combination Electrospray and Atmospheric Pressure Chemical Ionization Source;** Victor Laiko¹; Craig M. Whitehouse²; ¹*Analytica of Branford, In, Branford, CT*; ²*Analytica of Branford, Inc., Branford, CT*
- MP 048 **Observation of Unstable Binding Compounds in Aqueous Solution on CSI-TOF-MS;** Haruo Hosoda; Noriyuki Iwasaki; Kazunori Saito; Shinichi Miki; Takashi Nirasawa; Jouji Seta; *Bruker Daltonics KK, Yokohama, Japan*
- MP 049 **Continuously Monitoring the States of Ongoing Chemical Reactions by Ambient Liquid Mass Spectrometry (ALMS);** Min-Zong Huang; Cheng-Hui Yuan; Jentaie Shiea; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*
- MP 050 **Elastomeric Microchip Electrospray Emitters for Stable Cone-Jet Mode Operation in the Nano-Flow Regime;** Ryan T. Kelly¹; Keqi Tang¹; Daniel Irimia²; Mehmet Toner²; Richard D. Smith¹; ¹*Pacific Northwest National Laboratory, Richland, WA*; ²*Massachusetts Gen. Hospital/Harvard Medical School, Boston, MA*
- MP 051 **Signal Enhancement in Negative Ion Polarity Electrospray using an Electrospray Membrane Probe;** Shida Shen; Thomas White; Craig M. Whitehouse; *Analytica of Branford, Inc., Branford, CT*
- MP 052 **A New Ionization Source for Mass Spectrometry: Subambient Pressure Ionization with Nanoelectrospray (SPIN);** Jason S. Page; Keqi Tang; Ryan T. Kelly; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- MP 053 **New Nano-Electrospray Tip with Platinum Wire to Improve Spraying Stability;** Yunjo Chung¹; Joseph Kwon²; Sunghwan Kim³; ¹*Chonbuk National University, Chon-Ju, South Korea*; ²*Korea Basic Science Institut, Kwangju, South Korea*; ³*Korean Basic Science Institute, Ochang-myun, South Korea*

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- MP 054 **Means and Mechanism for Non-disruptive Calibrant Addition to an LC-MS Interface Designed for High Flow Rate Operation;** Bradley B. Schneider; Thomas R. Covey; *MDS Sciex, Concord, CANADA*
- MP 055 **Characterization of Spraying Modes from Microfabricated Nozzles on a Nanoelectrospray Chip;** Akos Vertes¹; Gary A. Schultz²; Jack D. Henion²; Jelena Lusic¹; Peter Nemes¹; ¹*George Washington University, Washington, DC*; ²*Advion Biosciences, Inc, Ithaca, NY*
- MP 056 **Nanoporous Alumina as a Dual Ionization LDI-DESI Platform for Increased Peptide Coverage in Shotgun Proteomic Analysis;** Ranu Nayak^{1,2}; Ashis K Sen^{1,2}; Daniel R. Knapp³; ¹*Med Univ of South Carolina, Charleston, SC*; ²*Med Univ of South Carolina, Charleston, SC*; ³*Medical University of Sc, Charleston, SC*
- MP 057 **Imaging of Nanoelectrospray Spray Current with an Automated Digital Control Positioning System;** Gary Valaskovic¹; Mike S. Lee²; ¹*New Objective, Inc., Woburn, MA*; ²*Milestone Development Services, Newtown, PA*
- MP 058 **Internal Energy Deposition of a Venturi-Assisted Array of Micromachined Ultrasonic Electrospays;** Christina Y. Hampton; Catherine J. Silvestri; Thomas P. Forbes; Mark J. Varady; J. Mark Meacham; F. Levent Degertekin; Andrei G. Fedorov; Facundo M. Fernandez; *Georgia Institute of Technology, Atlanta, GA*
- MP 059 **Exploring Mechanisms of Analyte Ionization in AMSUE (Array of Micromachined UltraSonic Electrospay) Ion Source Combined with an FT-ICR Mass Spectrometer;** Thomas P. Forbes¹; R. Brent Dixon²; David C. Muddiman²; F. Levent Degertekin¹; Andrei G. Fedorov¹; ¹*Georgia Institute of Technology, Atlanta, GA*; ²*North Carolina State University, Raleigh, NC*
- MP 060 **Analysis of Large Surface Areas by DESI;** Gary Abdiel Salazar; Richard H. Perry; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- MP 061 **Ultrasonic nebulizer Ionization Mass Spectrometry (UNI-MS) for Biomolecule Analysis;** Chen-i Wu; Wei-San Hsu; Yi-Sheng Wang; Chung-Hsuan Chen; *Genomics Research Center, Academia Sinica, Taipei, Taiwan*
- MP 062 **Comparison of Electrochemistry (EC) –Electrospray (ES) Cell Designs for Investigation of Electrochemical Transformations using EC–ES-MS-MS;** Boguslaw Pozniak; Richard B. Cole; *University of New Orleans, New Orleans, LA*
- MP 063 **Injection of Intact Molecular Ions through the Ring Electrode of a 3D Ion Trap via a Cluster Source;** Jeremiah Bowers; Scott A. McLuckey; *Purdue University, West Lafayette, IN*
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- APPI, 064- 073**
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- MP 064 **Polymer Additives Analysis using Liquid Chromatography with Atmospheric Pressure Photoionization Mass Spectrometry (LC/APPI/MS);** Christie Bowden; *Arkema Inc., King of Prussia, PA*
- MP 065 **New Dopants for Atmospheric Pressure Photo Ionisation in Mass Spectrometry Detection;** Boutayna Rhouiri Frih; Patrick Chaimbault; Michel Lafosse; *ICOA laboratory, Orléans, France*
- MP 066 **Theory and Operation of APPI for LC-MS;** Jack A. Syage; *Syagen Technology, Inc., Tustin, CA*
- MP 067 **Atmospheric Pressure Laser Ionization (APLI): Investigations on Ion Transport in Atmospheric Pressure Ion Sources;** Matthias Lorenz; Sonja Klee; René Mönnikes; Ana Lydia Mangas Suárez; Klaus J. Brockmann; Oliver J. Schmitz; Siegmär Gäb; Thorsten Benter; *University of Wuppertal, Wuppertal, Germany*
- MP 068 **Ionization Labeling: A Useful Tool in GC and LC-APLI-(TOF)MS;** Ralf Schiewek; René Mönnikes; Thorsten Benter; Siegmär Gäb; Oliver J. Schmitz; *University of Wuppertal, Wuppertal, Germany*
- MP 069 **Characterization of Building Blocks of Organic LEDs with Atmospheric Pressure Laser Ionization-(TOF)MS;** Ralf Schiewek; Ana Lydia Mangas Suárez; Nan Tian; Elisabeth Holder; Askin Bilge; Ullrich Scherf; Klaus J. Brockmann; Thorsten Benter; Oliver J. Schmitz; Siegmär Gäb; *University of Wuppertal, Wuppertal, Germany*
- MP 070 **Comparison of Dopants for Charge Exchange Ionization of Nonpolar Polycyclic Aromatic Hydrocarbons with Reversed-Phase LC-APPI-MS;** Derek Smith; Damon Robb; Michael W. Blades; *University of British Columbia, Vancouver, CANADA*
- MP 071 **Measurements of REMP Spectra of Selected Ionization Labels at Reduced and Atmospheric Pressure;** René Mönnikes; Ralf Schiewek; Hendrik Kersten; Matthias Lorenz; Oliver J. Schmitz; Siegmär Gäb; Klaus J. Brockmann; Thorsten Benter; *University of Wuppertal, D-42119 Wuppertal, Germany*
- MP 072 **Ionization Mechanism of NI-DART (Negative Ion-Direct Analysis in Real Time): A Comparative Study with NI-APPI (Negative Ion-Atmospheric Pressure Photoionization);** Liguo Song; Andrew Dykstra; Huifang Yao; John Bartmess; *University of Tennessee, Knoxville, TN*
- MP 073 **Non-Uniform Isotope Patterns Produced by CID of Homogeneously Labeled Ubiquitin: Implications for Spatially-Resolved H/D Exchange Studies;** Peter L Ferguson²; Lars Konermann¹; ¹*Univ. of Western Ontario, London, Canada*; ²*Univ of Western Ontario, London, ON*
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- ION STRUCTURES/ENERGETICS 1, 074 - 088**
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- MP 074 **IRMP and DFT Investigation of Discrete, Anionic Group II Metal Nitrate Clusters;** Christopher M. Leavitt¹; Jos Oomens²; Jeffrey Steill²; Gary Groenewold³; Michael J. Van Stipdonk¹; ¹*Wichita State University, Wichita, KS*; ²*FOM Rijnhuizen, Nieuwegein, Netherlands*; ³*Idaho National Lab, Idaho Falls, ID*
- MP 075 **Tandem Mass Spectrometry and *ab initio* Studies of Methylene Nucleotide Triphosphate Anions;** M. Paul Chiarelli¹; Eric C. Brown¹; Bongsup P. Cho²; Justin B. Sperry³; ¹*Loyola University, Chicago, IL*; ²*University of Rhode Island, Kingston, RI*; ³*Washington University, St. Louis, MO*
- MP 076 **The Optical Activity of Gas Phase Fluorescein Studied using Laser Induced Fluorescence and Quadrupole Ion Trap Mass Spectrometry;** Peter D. McQueen; Qunzhou Bian; Rebecca A. Jockusch; *University of Toronto, Toronto, Canada*
- MP 077 **Mass Analyzed Threshold Ionization of Chlorine Containing Aromatic Compounds;** Mikko Riese; Frank Witte; Jürgen Grotemeyer; *Christian-Albrechts- Univ, Kiel, Germany*
- MP 078 **Investigations of the Stability of Non-Covalent Interactions between Nucleotides and Amino Acids in the Gas Phase;** John Poutsma¹; Elise Dennis¹; Sandra Alves²; Jean-claude Tabet³; Ludovic Muller²; ¹*College of William & Mary, Williamsburg, VA*; ²*Université Pierre Et Marie Curie, Paris, France*

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- MP 079 **Fragmentation of an Adenine-Steroid Adduct: Experimental and Theoretical Studies II;** Daryl Giblin; Qiang Zhang; Michael L. Gross; *Washington University, St Louis, MO*
- MP 080 **Negative Ion Photoelectron Spectroscopy and Thermochemistry of Formylperoxyl and Acetylperoxyl Radicals;** Stephanie M. Villano; Scott W. Wren; Shuji Kato; Veronica M. Bierbaum; W. Carl Lineberger; *University of Colorado at Boulder, Boulder, CO*
- MP 081 **Probing Anionic Zwitterion Structure via IR Spectroscopy;** Matthew M. Meyer¹; Zhixin Tian¹; Jeff Steill²; Jos Oomens²; Steven R. Kass¹; ¹*University of Minnesota, Minneapolis, MN*; ²*Fom Rijnhuizen, Nieuwegein, Netherlands*
- MP 082 **TPEPICO Study of the Low Energy Dissociation Pathways of Ortho-, Meta- and Para-Difluorobenzene Ions;** Anne-Marie Boulanger¹; David M. P. Holland²; David A. Shaw²; Paul Michael Mayer¹; ¹*University of Ottawa, Ottawa, Canada*; ²*Daresbury Laboratory, Daresbury, UK*
- MP 083 **Carboxylate Coordination in Uranyl Complexes by IRMPD;** Gary Groenewold¹; Michael J. Van Stipdonk⁴; Wibe A. de Jong²; Jos Oomens³; ¹*Idaho Natl. Eng. Envir. Lab, Idaho Falls, ID*; ²*Pacific Northwest National Laboratory, Richland, WA*; ³*FOM Institute for Plasmaphysics, Nieuwegein, The Netherlands*; ⁴*Wichita State University, Wichita, KS*
- MP 084 **Spectroscopic Investigation of H Atom Transfer in a Gas-phase Dissociation Reaction: McLafferty Rearrangement of Model Gas-Phase Peptide Ions;** Dale R Kerstetter¹; Christopher Leavitt¹; Michael J. Van Stipdonk¹; Jeff Steill²; Jos Oomens²; Gary Groenewold³; ¹*Wichita State University, Wichita, KS*; ²*FOM Instituut voor Plasmafysica, Nieuwegein, The Netherlands*; ³*Idaho National Laboratory, Idaho Falls, ID*
- MP 085 **Gas Phase Peptide-Peptide Interactions Probed by ECD, Energy-Resolved CID and Tunable Free-Electron Laser Infrared Spectroscopy;** Guillaume van der Rest¹; Christian Malosse¹; Julia Chamot-rooke¹; Anne-Pascale Bouin²; Philippe Maitre³; Joel Lemaire³; ¹*Ecole Polytechnique, Palaiseau, France*; ²*Universite Joseph Fourier, Grenoble, France*; ³*Laboratoire De Chimie Physique, Orsay, France*
- MP 086 **IRMP of Ion-Molecule Reaction Products: Violation of the Even Electron Rule in the Dissociation of the [C₆H₄CCl₂COCH₃]⁺ Ion;** Jose M. Riveros; Tatiana Giroldo; *Instituto De Quimica-USP, Sao Paulo, Brazil*
- MP 087 **Gas Phase Infrared Spectroscopy and Tandem Mass Spectrometry;** Philippe Maitre; Joel Lemaire; Debora Scuderi; Joost M Bakker; *Laboratoire de Chimie Physique, Orsay, France*
- MP 088 **ESI-ICR Investigation of Rearrangement and Fragmentation Reactions of Different Steroid Ethers;** Cristoph Freudenhammer; Jurgen Grotemeyer; *University Kiel, Kiel, Germany*
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- ENVIRONMENTAL ANALYSIS, 089 - 099**
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- MP 089 **Column-Switching Chromatography / Polarity-Switching Tandem Mass Spectrometry for Determination of Sub-ppt levels of Free and Conjugated Estrogens in Water Samples;** Feng Qin; Yuan-yuan Zhao; Michael Sawyer; Xing-Fang Li; *University of Alberta, Edmonton, Canada*
- MP 090 **An Ultra-Sensitive Method for LC-MS-MS Analyses of 3-OH-Benzo[a]Pyrene in Human Urine;** Veniamin Lapko; Ridha Nachi; Yousef Basir; Kirk Newland; *MDS Pharma Services, Lincoln, NE*
- MP 091 **Study of Cigarette Smoke by FTICRMS and FTICRMS-MS in Electrospray and Laser Desorption Modes;** Frédéric Aubriet; *LSMCL Univeristé Paul Verlaine Metz, Metz, France*
- MP 092 **Measurements of Horizontal and Vertical Gradients of Dissolved Gas Concentrations using a Calibrated Underwater Membrane Inlet Mass Spectrometer;** Ryan J. Bell¹; Strawn K. Toler²; Peter G. Wenner³; R. Timothy Short²; Robert H. Byrne¹; ¹*College of Marine Science, St Petersburg, FL*; ²*SRI International, St Petersburg, FL*; ³*Florida Department of Environmental Protection, Tampa, FL*
- MP 093 **Quantitative, Multi-Analyte, High Throughput, HPLC-MS-MS Method for Hemoglobin Adducts of Environmental Chemicals;** Tunde Meyers; Hubert Vesper; Magaly Mendez; Maria Ospina; Gary Myers; *CDC, Atlanta, GA*
- MP 094 **Thermally Assisted Membrane Introduction Mass Spectrometry (TAMIMS) Interfaces - Improvements for Semi-Volatile Organic Compounds in Environmental Samples;** Nicholas G. Davey; Shakour Ghafouri; Erik T. Krogh; Christopher G. Gill; *Applied Environ. Res. Labs. (AERL), Malaspina, Nanaimo, Canada*
- MP 095 **Field Measurement Applications using a New Toroidal Ion Trap GC-TMS: Separating Fact from Fiction in Complex Mixtures;** Christopher R Bowerbank; Tiffany C Wirth; Joseph L Oliphant; Edgar D Lee; Douglas W Later; *Torion Technologies, Inc., Pleasant Grove, UT*
- MP 096 **Improved Sensitivity for PAH Analysis with GC-APLI-MS;** Ian Sanders¹; Thomas Arthen-Engeland¹; Armin Holle¹; Carsten Baesmann¹; Ralf Schiewek²; Oliver J. Schmitz²; Klaus J. Brockmann²; Thorsten Benter²; ¹*Bruker Daltonik GmbH, Bremen, Germany*; ²*University of Wuppertal, Wuppertal, Germany*
- MP 097 **Determination of PAHs, Methyl-PAHs, and Nitro-PAHs in Air Filter Samples using Isotope Dilution GC-HR-MS and GC-NCI-MS;** Zheng Li¹; Erin N Porter¹; Lovisa C Romanoff¹; Debra A Trinidad¹; Jame Mulholland²; Andreas Sjodin¹; ¹*Centers for Disease Control and Prevention, Atlanta, GA*; ²*Georgia Institute of Technology, Atlanta, GA*
- MP 098 **GC-MS Study of Microbiological Destruction of Pyridine with its Alkyl Derivatives and MALDI Characterization of the Strain Destructor;** Fatima Khasaeva; Petr Terentyev; Maria Troshina; Albert T. Lebedev; *Moscow State University, Moscow, Russian Federation*
- MP 099 **LC-MS-MS Determination of Perfluorinated Compounds (PFCs) in Fillets of Multiple Fish Species from the Cape Fear River Basin, North Carolina;** Amy D. Delinsky¹; Mark J. Strynar¹; Andrew B. Lindstrom¹; Jerry L. Varns²; Shoji F. Nakayama³; ¹*U.S. EPA, RTP, NC*; ²*NCBA Inc., See Program, Durham, NC*; ³*ORISE, Oak Ridge, TN*
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- ATMOSPHERIC/AEROSOL CHEMISTRY, 100 - 113**
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- MP 100 **Detection of Nitrated Polycyclic Aromatic Hydrocarbons in Diesel Exhaust Particulates by GC-NCI-MS;** Cheng-Han Hung¹; Hsin-Pin Ho¹; Chung-Yu Chen¹; Kuei-Chen Chang¹; Maw-Rong Lee¹; Youn-Yuen Shu²; Te-Lung Lai²; Pih Wang³; ¹*National Chung-Hsing University, Taichung, TAIWAN*; ²*National Kaohsiung Normal University, Kaohsiung, Taiwan*

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- MP 101 ³*Environmental Analysis Laboratory, Executive Yuan, Taoyuan, Taiwan*
Proton Transfer Reaction-Mass Spectrometry-Electroantennography to Measure Chemical Signal Dynamics (A New Insect Olfactory Ecology Tool); Leif Abrell; Jeffrey A. Riffell; John G. Hildebrand; *University of Arizona, Tucson, AZ*
- MP 102 **On-Line Monitoring of VOC Emissions from Nanofilm Coating Products using a Handheld Membrane Inlet Mass Spectrometer;** Asger Nørgaard²; Christian Janfelt¹; Peder Wolkoff²; Keld A. Jensen²; Frants R. Lauritsen¹; ¹*University of Copenhagen, Copenhagen, Denmark*; ²*Nat. Research Centre for the Working Environment, Copenhagen, Denmark*
- MP 103 **Proton-Transfer Reaction Ion Trap Mass Spectrometry (PIT-MS): Instrumental Improvements and Applications in Atmospheric Field Measurements;** Daniel Welsh-Bon; Carsten Warneke; Joost de Gouw; Troy Thornberry; *NOAA ESRL/CIRES/University of Colorado, Boulder, CO*
- MP 104 **Quantitative Analysis of Monoterpenes, Sesquiterpenes, and other Isomers using a Proton Transfer Reaction LIT and Triple Quadrupole Mass Spectrometry;** Levi H. Mielke¹; Markus Müller²; Martin Breitenlechner²; Pawel Cais²; Armin Wisthaler²; Scott A. McLuckey¹; Paul B. Shepson¹; Armin Hansel²; ¹*Purdue University, West Lafayette, IN*; ²*University of Innsbruck, Innsbruck, Austria*
- MP 105 **Analysis of Organic Compounds in Aerosol Particles by Liquid Chromatography and High Resolution Mass Spectrometry;** Andreas Roempp¹; Alexa Sadezky²; Richard Winterhalter²; Basem Kanawati²; Patrick Chaimbault³; Bernhard Spengler¹; Geert Moortgat²; ¹*Justus Liebig University, Giessen, Germany*; ²*Max Planck Institute for Chemistry, Mainz, Germany*; ³*University of Orleans, Orleans, France*
- MP 106 **Monitoring of Fast Changes in Aerosol Chemistry with a Time-of-Flight Aerosol Mass Spectrometer;** Joel R. Kimmel; Delphine K. Farmer; Donna Sueper; Jose-Luis Jimenez; *University of Colorado, Boulder, CO*
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- MP 108 **Characterization of Organosulfates and Nitrooxy Organosulfates from the Photooxidation of Isoprene using Liquid Chromatography/Negative Ion Electrospray Mass Spectrometry;** Magda M. Claeys¹; Jason D Surratt²; Yadian Gomez-Gonzalez¹; Reinhilde Vermeylen¹; Arthur WH Chan²; Mona Shaghali²; Willy Maenhaut³; John H Seinfeld²; ¹*University of Antwerp (Campus Drie Eiken), Antwerp, Belgium*; ²*California Institute of Technology, Pasadena, CA*; ³*Ghent University, Gent, Belgium*
- MP 109 **Real Time Detection and Quantification of Dangerous Substances in Air without Sample Preparation using SIFT-MS;** Gregory J Francis¹; Murray J. McEwan¹; Vaughan S Langford²; Daniel B Milligan²; ¹*University of Canterbury, Christchurch, New Zealand*; ²*Syft Technology Ltd, Christchurch, New Zealand*
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- MP 111 **Continuous Real-Time Trace Analysis of BTEX in Ambient Air using Direct Sampling LDTD-APCI-MS2 System;** Koffi Badjagbo¹; Pierre Picard²; Jean Lacoursière³; Sébastien Sauvé¹; ¹*Université de Montreal, Montreal, CANADA*; ²*Phytronix Technologies, Inc., Quebec, QC*; ³*Phytronix Technologies, Québec, QC*
- MP 112 **Structural and Mechanistic Characterization of Oligomeric Materials Found in Model Secondary Organic Aerosol (SOA) using Desorption-Electrospray Ionization (DESI) Tandem MS;** Marc Fiddler; R. Graham Cooks; Paul Shepson; *Purdue University, West Lafayette, IN*
- MP 113 **Examination of Ozone Depleting Iodine Species by Ion Chromatography in the Complex Salt Environment of Marine Aerosols;** Stacy Henday; Jinyuan Wang; William C. Schnute; *Dionex Corporation, Sunnyvale, CA*
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- MP 115 **Mass Spectrometric Imaging of Metabolic Dynamics in the Mouse Hippocampus;** Yuki Sugiura¹; Yoshiyuki Konishi²; Nobuhiro Zaima²; Hiroki Nakanishi³; Yoshiya Oda⁴; Ryo Taguchi³; Mitsutoshi Setou²; ¹*Tokyo Tech, Tokyo, Japan*; ²*Mitsubishi Kagaku Institute of Life Sciences, Tokyo, Japan*; ³*The University of Tokyo, Tokyo, Japan*; ⁴*Eisai, Tsukuba, Japan*
- MP 116 **In situ Lipidomic Analysis of Non Alcoholic Fatty Liver by Cluster-TOF-SIMS Imaging;** Delphine Debois¹; Marie-Pierre Bralet²; François Le Naour³; Alain Brunelle¹; Olivier Laprevote¹; ¹*ICSN / CNRS, Gif-sur-Yvette, France*; ²*AP-HP Hôp. P. Brousse - Univ. Paris-Sud, UMR-S 785, Villejuif, France*; ³*INSERM U602 - Univ. Paris-Sud, Institut A. Lwoff, Villejuif, France*
- MP 117 **Applications of MSI Techniques to the Study of Dermal Uptake of a Topically Treated Anti-inflammatory Acne Compound;** Brendan Prideaux¹; Dieter Staab¹; Andreas Billich¹; Olivier Laprevote²; Alain Brunelle²; Alexandre Seyer²; Markus Stoeckli¹; ¹*Novartis Institutes For Biomedical Research, Basel, Switzerland*; ²*Icsn - Cnrs, Gif Sur Yvette, France*
- MP 118 **Automated Collection and Analysis of Desorption Electrospray Ionization (DESI) Mass Spectrometry Imaging Data;** Nicholas E. Manicke; Sanket Khandelwal; Anthony B. Costa; Thomas Kistler; Demian R. Ifa; R. Graham Cooks; Zheng Ouyang; *Purdue University, West Lafayette, IN*
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- MP 130 **MALDI-Ion Mobility Separation-MS Imaging of Vinblastine and its Metabolites in Rat Tissue;** Paul J Trim¹; Jennie L Avery²; Andrew McEwen²; Marten F. Snel³; Emmanuelle Claude³; Peter S. Marshall⁴; Andrew West⁴; Alessandra P Princivale¹; Malcolm Clench¹; ¹*Sheffield Hallam University, Sheffield, UK*; ²*BioDynamics Research Ltd, Rushden, UK*; ³*Waters Corporation, Manchester, UK*; ⁴*GlaxoSmithKline, Harlow, UK*
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- MP 133 **Visualizing Low-Mass Biomolecules using Matrix-Enhanced Surface-Assisted Laser Desorption Ionization Imaging Mass Spectrometry (ME-SALDI-IMS);** Qiang Liu¹; Yongsheng Xiao¹; Coral Pagan²; Yu Matthew Chiu¹; Lin He¹; ¹*North Carolina State University, Raleigh, NC*; ²*University of Puerto Rico, San Juan, Puerto Rico*
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- MP 168 **Studies on Botulinum Neurotoxins C and C/D using Endopep-MS, Epitope Mapping by Mass Spectrometry, and Proteomics;** Hercules Moura¹; Suzanne R. Kalb¹; Adrian R. Woolfitt¹; Vince L. Maggio²; John R. Barr¹; ¹Centers For Disease Control And Prevention, Atlanta, GA; ²Battelle under contract at the CDC, Atlanta, GA
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- MP 171 **Identification and Protein Fingerprinting of Legionella using Whole Cell MALDI-TOF Mass Spectrometry;** Michal Drevinek¹; Vladimir Drasar²; ¹Natl Inst for NBC Protection, Milin, Czech Republic; ²Public Health Inst., Natl Legionella Reference Lab, Vyskov, Czech Republic
- MP 172 **Rapid and Sensitive Detection and Identification of Orthopoxvirus by PCR and Mass Spectrometry (PCR/ESI-MS);** Mark Eshoo¹; David J. Ecker¹; Aysegül Nalca²; Scott Zoll¹; Carson Baldwin²; Ranga Sampath¹; Lawrence Blyn¹; Thomas Hall¹; Chris A. Whitehouse²; Steven A. Hofstadler¹; ¹Ibis Biosciences, Inc., Carlsbad, CA; ²U.S. Army Med. Res. Inst. of Infectious Dis., Fort Detrick, MD
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- MP 174 **Processing of Microbial Samples using Protein Ultrafiltration Devices for Identification of Bacteria by Mass Spectrometry;** Rabih Jabbour¹; Jacek P. Dworzanski¹; Samir Deshpande²; Mary Wade³; Michael F. Stanford³; Charles H. Wick²; Alan W. Zulich³; ¹SALC, Gunpowder, MD; ²STC, Edgewood, MD; ³U.S. Army Edgewood Chemical Biological Center, APG, MD
- MP 175 **Ion Mobility Separation of Organophosphates using a Quadrupole Time-Of-Flight Mass Spectrometer;** Paul D'agostino¹; Claude Chenier¹; Andrew Baker²; ¹DRDC Suffield, Medicine Hat, AB, Canada; ²Waters, Inc., Dublin, CA
- MP 176 **Rapid Detection of Explosives on Human Skin by Neutral Desorption Extractive Electrospray Ionization (ND-EESI) Mass Spectrometry;** Bin Hu¹; Zhanfeng Zhao²; Yan Hu¹; Zhiquan Zhou²; Huanwen Chen¹; ¹East China Institute of Technology, Fuzhou, China; ²Harbin Institute of Technology Weihai, Weihai, China
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- MP 178 **The Use of 'Semi' UPLC-MS-MS to Enhance LLOQ and Cycle Time for Perphenazine and BL 1020;** Kean Woodmansey¹; Stephen Brookes¹; Tair Lapidot²; ¹Charles River Laboratories, Edinburgh, Scotland; ²Bioline RX, Jerusalem, Israel
- MP 179 **Validation of a Sensitive LC-MS-MS Bioanalytical Assay for CVT-6883 in Human Urine using SDBS Additive to Eliminate Adsorptive Losses;** Chungwen (William) Chen; Lakshmikanth Bajpai; Nevena Mollova; Kwan Leung; CV Therapeutics, Palo Alto, CA
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- MP 184 **Application of Laser Diode Thermal Desorption APCI-MS-MS in Early Stage Pharmaceutical Product Development;** Louis-Philippe Labranche¹; Audrey Tousignant¹; Yves G. Leblanc¹; Daniel Abran¹; Pierre Picard²; Patrice Tremblay²; Alain Carrier¹; ¹Sandoz Canada, Boucherville, Canada; ²Phytronix Technologies, Inc., Quebec, QC
- MP 185 **Rapid Determination of the "Chemical Zip Codes" of Diacylglycerol-Lactone Combinatorial Library Components using Mass Spectrometry;** James A. Kelley¹; Christopher C. Lai¹; Said El Kazzouli¹; Lawrence R. Phillips²; Lyndsay L. Smith²; Victor E. Marquez¹; ¹CCR, NCI-Frederick, Frederick, MD; ²DCTD, NCI-Frederick, Frederick, MD
- MP 186 **Method Development and Validation of a Bioanalytical LC-MS-MS Method for Bortezomib in Human Plasma;** Wenyi Hua; John Eddy; Brian Hoffman; Sara Jones; Daniel E Mulvana; Advion BioServices, Ithaca, NY
- MP 187 **A Highly Automated Workflow for Fast and Comprehensive Identification of Impurities and Degradation Products in Pharmaceutical Products using LC-MS-MS;** John Gibbons¹; David Ducan²; Nicolas Rupcich²; ¹MDS Sciex, Concord, Ontario, Canada; ²Genpharm Pharmaceuticals, Etobicoke, Ontario, Canada

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- MP 189 **Structure Elucidation Utilizing a Unique, Complementary Product Ion Series Resulting from Collision Induced Dissociation of Silver Adduct Ions by LC/CIS/MS;** Byron S. Johnson; David J. Burinsky; *GlaxoSmithKline, Raleigh, NC*
- MP 190 **A Rapid Quantitative Method for Multiple Anabolic Steroids in Equine Serum by Turbulent Flow Chromatography Tandem MS-MS;** Benjamin C Moeller; Scott D Stanley; *University of California at Davis, Davis, CA*
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- MP 193 **Surface-Ionization Mass Spectrometry of Butyrophenone Derivatives;** Utkur Rasulev; Dilshodbek Usmanov; Usman Khasanov; *Arifov Institute of Electronics, Tashkent, Uzbekistan*
- MP 194 **API-MS Fragmentation Pathways of Methylphenidate and Related Compounds Revealed by Ion Trap MSⁿ and H/D Exchange;** R. Randy Wilhelm; John E. Johnson; *Covidien, Ltd / Mallinckrodt Pharmaceutical R&D, St. Louis, MO*
- MP 195 **LC-MSⁿ Analysis of New Erectile Dysfunction Drug Analogues in Regulatory Samples;** Teresa C. Cain¹; Samuel Gratz²; ¹*Food & Drug Admin. PLRSW, Irvine, CA*; ²*Fda Forensic Chemistry Center, Cincinnati, OH*
- MP 196 **Development and Characterization of Uniform Steroid Isotopic Standards for Gas Chromatography Combustion Isotope Ratio Mass Spectrometry (GCC-IRMS);** Ying Zhang; Herbert Tobias; J Thomas Brenna; *Cornell University, Ithaca, NY*
- MP 197 **Effect of pH on the Quantification and Ion Suppression of Basic Drugs in Samples of Biological Origin by RP LC-ESI⁺-MS-MS;** Tivadar Farkas; Liming Peng; *Phenomenex, Inc., Torrance, CA*
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- MP 199 **Determination of Antineoplastic Drugs by High Resolution MS-MS to Monitor Occupational Exposure;** Claudio Baiocchi¹; Claudio Medana¹; Francesco Carbone¹; Valeria Giancotti¹; Alberta Chiappa²; Enrico Davoli³; ¹*University of Turin, Torino, Italy*; ²*RQA srl, Rodano, Italy*; ³*Mario Negri Institute, Milano, Italy*
- MP 200 **A Novel Derivatization-LC-MS Approach for Determination of Trace Level Alkyl Esters of Sulfonates and Sulfates Genotoxic Impurities in Drug Substances;** Jianguo An²; lin bai¹; Mingjiang Sun¹; ted chen¹; Dr. David Q. Liu¹; alireza kord¹; ¹*GlaxoSmithKline, King of Prussia, PA*; ²*Glaxosmithkline Pharmaceuticals, King of Prussia, PA*
- MP 201 **Quantitation of a Low-Level Impurity with a Weak UV Chromophore in an Active Pharmaceutical Ingredient using the LC-MS Approach;** Hongfei Yue; Xin Bu; *Bristol-Myers Squibb, New Brunswick, NJ*
- MP 202 **Quantification of Small Pharmaceutical Drugs by MALDI-TOF;** Markus Persike; Michael Karas; *Johann Wolfgang Goethe University, Frankfurt/Main, Germany*
- MP 203 **Practical Automated Algorithm Design for High Throughput Method Optimization in ADME/PK Environments;** Xavier Misonne¹; Anthony Romanelli¹; John Janiszewski³; Kevin Shirey²; Ghobarah Hesham¹; Christopher Borton¹; Loren Olson¹; ¹*Applied Biosystems, San Jose, CA*; ²*Sounds Analytics, East Lyme, CT*; ³*Pfizer, Groton, CT*
- MP 204 **Enhanced LC-ESI-MS-MS Detection of the Benzoxaborole AN2718 by Derivatization with (+)-Pinanediol;** Dale Schoener¹; Liang Liu²; Conrad Wheeler²; Stephen Baker²; Michael Buonarati¹; ¹*Alta Analytical Laboratory, El Dorado Hills, CA*; ²*Anacor Pharmaceuticals, Palo Alto, CA*
- MP 205 **Overcoming Challenges in Development of LC-MS-MS Methods for Highly Polar, Low Molecular Weight, Zwitterionic Compounds: A Quantitative Assay for Pregabalin;** Ryan S. Adler; Spencer Carter; Troy Voelker; *Tandem Labs, Salt Lake City, UT*
- MP 206 **Evaluation of a Surface Sampling Probe for Quantitative Analysis of Drug Transporter Samples;** Richard King¹; Gary J. Van Berkel²; Vilmos Kertesz³; ¹*Merck & Company, Inc., West Point, PA*; ²*Oak Ridge National Laboratory, Oak Ridge, TN*; ³*Oak Ridge National Lab, Oak Ridge, TN*
- MP 207 **A Rapid and Simple Liquid Chromatography–Tandem Mass Spectrometry Method for Simultaneous Quantification of Multiple Antiepileptic Drugs in Human Serum;** Heng Shi; Dean Carlow; *Children's Hospital of Philadelphia, Philadelphia, PA*
- MP 208 **Determination of the Antifungal Posaconazole in Human Fingernails and Toenails using Liquefaction, Liquid-Liquid Extraction, Liquid Chromatography and Mass Spectrometric Detection;** Mark Leahy¹; Janet Nelson¹; Michelle J. Cannon¹; Monika Martinho²; Robert P. Clement²; Bhavna S. Kantesaria²; ¹*Covance, Madison, WI*; ²*Schering-Plough Research Institute, Summit, New Jersey*
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- MP 209 **A Quantitative General Unknown Screening Method for Drugs and Toxic Compounds in Urine using Liquid Chromatography–Mass Spectrometry;** Taha Rezaei; Marta Kozak; Alan E. Schoen; *Thermo Fisher Scientific, San Jose, CA*
- MP 210 **Structure Elucidation of Formaldehyde-Induced DNA-protein Cross-Links by Mass Spectrometry and NMR;** Kun Lu; Wenjie Ye; Li Zhou; Leonard Collins; Xian Chen; James Swenberg; *University of North Carolina, Chapel Hill, NC*
- MP 211 **Mass Spectrometric Analysis of the Nucleotide Pool as a Target for Nitrosative Deamination during Inflammation;** Vasileios Dendroulakis¹; William M. Deen¹; Peter C. Dedon²; ¹*MIT, Chemical Engineering Dept, Cambridge, MA*; ²*MIT, Biological Engineering Dept, Cambridge, MA*

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- MP 212 **4-Aminobiphenyl DNA Adducts as Biomarkers in Human Bladder Cell Samples and the Role of Isothiocyanates as a Chemopreventive Phytochemical;** Dayana Argoti¹; Kristen Randall¹; Yuesheng Zhang²; Paul Vouros¹; ¹Northeastern University, Boston, MA; ²Roswell Park Cancer Institute, Buffalo, NY
- MP 213 **Evaluation of the Toxicokinetics of Sub-Lethal Inhalation Exposures of Cyclosarin in Guinea Pigs via Large-Volume Injection GC-MS;** Jeffrey M. McGuire¹; Christopher E. Whalley¹; Ronald A. Evans¹; Julie A. Renner²; Allison L. Totura³; E. Michael Jakubowski, Jr.¹; Sandra A. Thomson¹; ¹US Army ECBC, APG, MD; ²SAIC, APG, MD; ³UNC School of Medicine, Chapel Hill, NC
- MP 214 **Mass Spectrometric Analysis of Protein Adducts Formed by Acrylates *in vitro*;** Christian Lindh; Marina Jeppsson; Bo AG Jönsson; *Occupational and Environmental Medicine, Lund, Sweden*
- MP 215 **Rapid LC-MS-MS Analysis of Biomarkers of Drug-Induced Phospholipidosis in Rats Treated with Amiodarone and Gentamicin;** David A. Peake¹; Bradley L. Ackermann²; David G. Hall²; Bartley W. Halstead²; Ming-Shang Kuo¹; Barry S. Lutzke²; Craig E. Thomas²; ¹Eli Lilly & Company, Lilly Corporate Center, Indianapolis, IN; ²Eli Lilly & Company, Greenfield Laboratories, Greenfield, IN
- MP 216 **Development of a LC-MS-MS Method for Determining Ethyl Methylphosphonic Acid (EMPA) Concentration in Plasma following VX Exposure;** Ronald A. Evans¹; Julie A. Renner²; E. Michael Jakubowski, Jr.¹; Sandra A. Thomson¹; ¹U.S. Army ECBC, Aberdeen Proving Ground, MD; ²SAIC, Aberdeen Proving Ground, MD
- MP 217 **Detection of Cytochrome P450 Adducts after Oxidative Desulfuration of Methyl Parathion;** Patrick B. Kyle; Rodney C. Baker; Robert E. Kramer; *University of Mississippi Medical Center, Jackson, MS*
- MP 218 **Identification of New Biomarkers of Organophosphates Intoxication in Peptide Fraction of Rat Plasma;** Ekaterina Podolskaya¹; Nikolay Goncharov²; Lidia Glashkina²; Nikita Polyakov³; Vladimir Babakov²; Ilya Krasnov¹; Andrey Radilov²; Nikolay Krasnov¹; ¹Institute for Analytical Instrumentation, RAS, St. Petersburg, Russia; ²Res Inst of Hygiene, Occup Pathol, Hum Ecology, St. Petersburg, Russia; ³Institute of Bioorganic Chemistry, Moscow, Russia
- MP 219 **Performance Evaluation of three Liquid Chromatography Mass Spectrometry Techniques for Broad Spectrum Drug Testing in the Clinical Laboratory;** Kara L Lynch¹; Judy A Stone²; Autumn Breaud³; Katherine Chen²; Eva Wong²; Marilyn Weeks²; Houssain El Aribi⁴; Alan H. B. Wu¹; William Clarke³; ¹University of California-San Francisco, San Francisco, CA; ²San Francisco General Hospital, San Francisco, CA; ³The Johns Hopkins Medical Institutes, Baltimore, MD; ⁴Applied Biosystems/MDS SCIEX, Concord, ON, Canada
- MP 220 **Ciguatoxin Analogues in Ciguatera Outbreak Samples;** Ann Abraham; Edward L.E. Jester; Hudson R. Granade; Steven M. Plakas; Robert W. Dickey; *FDA, Dauphin Island, AL*
- MP 221 **Targeted Quantitative Proteomic Analysis in Human Hepatoma HepG2 Cells Exposed by Cadmium;** Jun Adachi; Keishi Kihara; Tomonari Matsuda; *Kyoto University, Kyoto, JAPAN*
- MP 222 **An Automated SPE/LC-MS Method for the Analysis of THC and Metabolites in Biological Fluids;** Eshwar Jagerdeo¹; Martin Sibum²; Madeline Montgomery¹; Marc LeBeau¹; John Crutchfield²; ¹FBI, Springfield, VA; ²Spark Holland Inc., Emmen, Netherlands
- MP 223 **Reactivity Testing Strategies: Covalent Modification of Single Nucleophile Peptides;** Maja Aleksic; Delphine Roger; Emma Thain; Sandrine Jacquilleot; Raniero Zazzeroni; *Unilever, Bedford, UK*
- MP 224 **Damage Products in Cellular RNA and Blood-Borne Nucleic Acids as Biomarkers of Inflammation;** Erin G. Prestwich; Jose L. McFaline; Bo Pang; Matthew R. Sullivan; Koli Taghizadeh; Debra Dederich; Peter C. Dedon; *Massachusetts Institute of Technology, Cambridge, MA*
- MP 225 **Analysis of Rat Urine, Plasma and Tissues for Fluoride and Fluorosulfate via Ion Chromatography with Suppressed Conductivity and Mass Spectrometry;** Adam W Perala; Dan A Markham; Kathy A Brzak; *The Dow Chemical Company, Midland, MI*
- MP 226 **Gas Chromatography-Tandem Mass Spectrometry (GC-MS-MS) Analysis of Gottingen® Minipig Dermis following Percutaneous Exposure to the Chemical Warfare Agent VX;** Christopher Byers¹; Jeffrey M. McGuire¹; Benjamin Wright²; Stanley Hulet¹; E. Michael Jakubowski, Jr.¹; Sandra Thomson¹; ¹US Army ECBC, APG, MD, MD; ²SAIC, Abingdon, MD
- MP 227 **Rapid Method for Analysis of Dialkylphosphate Metabolites of Organophosphorus Insecticides in Human Urine using Weak Anion Exchange SPE and GC-MS-MS;** Martins Odetokun¹; Maribel Gallegos¹; Samuel Baker¹; Dana Barr¹; Larry Needham¹; Gayanga Weerasekera²; ¹CDC, Atlanta, GA; ²Nektar Therapeutics, San Carlos, CA
- MP 228 **Measurements of Estrogen-Modified DNA Adduct: Potential Biomarker for Breast Cancer;** Qiang Zhang; Michael L. Gross; Rebecca L. Aft; *Washington University, St Louis, MO*
- MP 229 **Does Genistein Help Prevent or Promote Breast Cancer? An *in vitro* Study of DNA Depurination by Genistein Quinone;** Ingting Tu; Qiang Zhang; Andre' D. d' Avignon; Michael L. Gross; *Washington University in St. Louis, Saint Louis, MO*
- MP 230 **Gas Chromatography Tandem Mass Spectrometry for Biomarkers of Alcohol Abuse in Human Hair;** Carolyn M. Zimmermann; Glen P. Jackson; *Ohio University, Athens, OH*
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- MP 231 **Facilitating CYP Inhibition Assays with the Use of Automated Open Access Software;** Jenny Moshin¹; Pengdeth Lim²; Alexandre Wang¹; Jane Huang²; Huafen Liu¹; Loren Olson¹; ¹Applied Biosystems, Foster City, CA; ²Roche Palo Alto, Palo Alto, CA
- MP 232 **Development of a High Throughput Cocktail Drug-Drug Interaction Screen using MALDI Tandem Mass Spectrometry;** Hui Zhang; Kevin Whalen; Mark Cole; Michael West; *Pfizer Inc., Groton, CT*
- MP 233 **Multiplexed LC-MS-MS for Rapid Method Development and Sample Analysis in Drug Discovery Bioanalysis;** Jian Wang; Christian Caporuscio; Georgia Cornelius; Bogdan Slecza; Asoka Ranasinghe; Mohammed Jemal; Timothy Olah; *Bristol-Myers Squibb, Princeton, NJ*

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- MP 235 **A Simple Metabolite Screening Method Requiring No Knowledge of Metabolism;** Jenny E. Moshin¹; James A. Ferguson¹; Sai Y. Chang²; Jeffrey D. Miller¹; ¹*Applied Biosystems, Framingham, MA*; ²*MSMS Science LLC, Sedona, AZ*
- MP 236 **Development of an LC-MS-MS Assay for Simultaneously Determining Metabolic Stability of 2-Arylthiazolidine-4-Carboxylic Acid Amide Derivatives;** Chien-Ming Li¹; Yan Lu²; Mitch A Phelps¹; Duane D Miller²; James T Dalton¹; ¹*College of Pharmacy, Ohio State University, Columbus, OH*; ²*College of Pharmacy, University of Tennessee, Memphis, TN*
- MP 237 **Is MALDI-TOF MS Ready for Bioanalytical Analysis?** Patrick Bennett²; Qing Zhu³; Kc Van Horne²; Ming-chih D. Ho³; Lily Li¹; ¹*TandemLabs, Woburn, MA*; ²*Tandem Labs, Salt Lake City, UT*; ³*Tandem Labs New England, Woburn, MA*
- MP 238 **A Heuristic Automated Software Workflow for Triple Quadrupole Linear Ion Trap Analysis of High Throughput *in vitro* Metabolite Screens;** Shaokun Pang¹; Elliott Jones²; Rongda Xu³; Daniel B. Kassel⁴; ¹*Takeda San Diego, San Diego, CA*; ²*Applied Biosystems, Foster City, CA*; ³*Takeda San Diego, Inc., San Diego, CA*; ⁴*Takeda San Diego, Inc, San Diego, CA*
- MP 239 **Screening for Protease Inhibitors using Liquid Chromatography/Electrospray-Mass Spectrometry (LC/ESI-MS) with a Post-Column Continuous-Flow Enzyme Assay;** Nils Helge Schebb¹; Ferry Heus²; Jeroen Kool²; Martin Vogel¹; Hubertus Irth²; Uwe Karst¹; ¹*University of Münster, Inst. of Inorg. & Anal. Chem, Münster, Germany*; ²*Vrije Universiteit Amsterdam, Analytical Chemistry, Amsterdam, The Netherlands*
- MP 240 **Approaches towards Rapid Drug Metabolite Identification using Ion Trap Mass Spectrometry;** Stephen Holman¹; Patricia Wright²; G. John Langley¹; ¹*University of Southampton, Southampton, UK*; ²*Pfizer Global Research and Development, Sandwich, UK*
- MP 241 **Detection and Characterization of Metabolites in Complex Biological Samples using Perfusion 2-D Chromatography Linear Ion Trap- Triple Quadrupole MS;** Robert Ellis¹; Takeo Sakuma²; Tom Biesenthal¹; Carmai Seto¹; Doina Caraiman¹; Curtis Campbell³; Masatoshi Takahashi³; ¹*MDS Analytical Technologies, Concord, Canada*; ²*Mds Sciex, Concord, ON*; ³*Shimadzu, Columbia, MD*
- MP 242 **Analysis of Metabolites by UHPLC-MALDI/MS-MS on a Triple Quadrupole Linear Ion Trap;** Gerard Hopfgartner¹; Guenter Boehm²; Emmanuel Varesio¹; ¹*University of Geneva, Geneva, Switzerland*; ²*Thermo Fisher Scientific (Flux Instrument), Basel, Switzerland*
- MP 243 **PIF: Precursor Ion Fingerprinting – Searching for Genesis Fragments using LC-ddMSn;** Julie A. Horner¹; Mark Sanders¹; Robert Mistrík²; ¹*Thermo Fisher Scientific, San Jose, CA*; ²*Highchem, Ltd., Bratislava, Slovakia*
- MP 244 **Midazolam and 1-Hydroxymidazolam Determination in Human EDTA Plasma by LDTD/MS-MS in 8 Seconds;** Jean Lacoursière¹; Pierre Picard²; Patrice Tremblay¹; ¹*Phytronix Technologies, Québec, CANADA*; ²*Phytronix Technologies, Inc., Québec, QC*
- MP 245 **Development of a High-quality Automated Bioanalytical Platform in Support of a High-Throughput *in-vitro* Metabolic Stability Assay;** Shu Li; Kasia Kieltyka; Marianne Vath; Andrew Wagner; Jun Zhang; Chris Baglieri; Cheryl Ferraro; Tatyana Zvyaga; Harold Weller; Wilson Shou; *Bristol-Myers Squibb Company, Wallingford, CT*
- MP 246 **Integration of Hardware and Software Systems for High-Throughput Sample Processing in ADME-Screening Bioanalysis;** James Federico¹; John Janiszewski¹; Peter Kovarik²; Wayne Lootsma³; Kevin Shirey³; Thomas Covey²; Mark Cole⁴; ¹*Pfizer Inc., Westerly, RI*; ²*Mds Sciex, Concord, ON*; ³*Sound Analytics, Llc, Niantic, CT*; ⁴*Pfizer, Inc., Groton, CT*
- MP 247 **Simultaneous Analysis of 19 Non-Steroidal Anti-Inflammatory Drugs in Equine Plasma by LC-ESI-MS-MS;** Youwen You¹; Cornelius Uboh²; Lawrence Soma¹; Fuyu Guan¹; Xiaoping Li¹; Yin Liu¹; Jinwen Chen¹; Jeffrey Rudy²; ¹*University of Pennsylvania, West Chester, PA*; ²*West Chester University, West Chester, PA*
- MP 248 **Screening Chinese Botanicals for COX-2 Inhibitors using Ultrafiltration LC-MS;** Hongmei Cao¹; Yongsoo Choi¹; Dejan Nikolic¹; Hongjie Zhang¹; Wei Xiang¹; Zhongze Ma²; David Y-W Lee²; Brian Berman³; Harry S. Fong¹; Richard B. Van Breemen¹; ¹*University of Illinois College of Pharmacy, Chicago, IL*; ²*McLean Hospital/Harvard Medical School, Belmont, MA*; ³*University of Maryland School of Medicine, Baltimore, MD*
- MP 249 **A Parallel Three-Column System and Direct Pooling of Samples in one Minute: Especially Suitable for *in vitro* Screens;** Annelie Lindqvist¹; Jenny Johansson²; ¹*Medivir AB, Huddinge, Sweden*; ²*AstraZeneca R&D Sodertalje, Sodertalje, Sweden*
- MP 250 **A High Sensitive and High Throughput LC-MS-MS Method for Determination of Fluticasone Propionate Various Rat Matrices;** Xiaodong Zhu²; Tom Addison²; Lisa Magis¹; Dennis Alton¹; Xiang-yu Jiang²; Qin Ji²; ¹*Covance Laboratories, Madison, WI*; ²*Covance, Bioanalytical Chemistry, Madison, WI*
- MP 251 **Development of a 384-Well, Single Time-Point, Microsome Stability Assay;** Christopher Wegerski; Sam Sperry; *SGX Pharmaceuticals, Inc., San Diego, CA*
- MP 252 **A Sub One Minute Assay for Determining P450 Inhibition and Drug Interaction Utilizing sub 2 micron particles and Mass Spectrometry;** Paul Rainville; Peter Alden; Joanne Mather; Rob Plumb; *Waters Corporation, Milford, MA*
- MP 253 **A New Approach for Screening and Identification of Radioactively Labeled Metabolites for *in vitro* and *in vivo* Metabolism Studies;** Timothy Snow; Shawn Gannon; *DuPont Haskell Laboratory, Newark, DE*
- MP 254 **Ideal Sample Preparation and HPLC Column Choice for the Analysis of Drug Compounds in Biomatrices;** Liming Peng; Tivadar Farkas; *Phenomenex, Inc., Torrance, CA*
- MP 255 **Cross-Validation of a High-Throughput Metabolic Stability Screening Assay using Laser Diode Thermal Desorption (LDTD) - Atmospheric Pressure Chemical Ionization;** Nicholas Duczak, Jr¹; James Kapron²; ¹*Thermo Electron Corporation, Somerset, NJ*; ²*Thermo Fisher, Ottawa, ON*

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- MP 256 **Development of LC-MS-MS Methods for P450 Inhibition Studies in Human Liver Microsomes and Optimization of Incubation Conditions;** Ganesh S. Moorthy; Xinhe D. Jiang; Richard J. Grater; Charles F. Mchugh; Charles B. Davis; Ramesh B. Bambal; *GlaxoSmithKline, Collegeville, PA*
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- MP 257 **Biosynthesis of Oxidative and conjugated Metabolites of VRX-480773, and Identification of their Structures by LC-MS-MS and NMR;** Hong Ki Kim; Virginia M. Borges; Dongmei Zhou; Li-tain Yeh; *Ardea Biosciences, Costa Mesa, CA*
- MP 258 **Characterization of *in vivo* Metabolites of the Potent 5-HT1D Receptor Antagonist, CP-448,187 in Sprague-Dawley Rats by HPLC/RAM/ESI/MS-MS;** Kevin Colizza²; Wendy Wang¹; John Davis¹; Amin M. Kamel¹; ¹*Pfizer, Inc., Groton, CT*; ²*Pfizer, Groton, CT*
- MP 259 **Plant Hormone Analysis by HPLC and Multiple Reaction Monitoring with Polarity Switching: SPE Fractionation of Plant Extracts and Trapped Injections;** Stephen J. Ambrose; *Nat'l Research Council, Saskatoon, Canada*
- MP 260 **Utilizing High Resolution Accurate Mass Spectrometry for Metabolite Identification of Small Interfering RNA Duplexes;** Yan Zou; Philip Tiller; I-Wu Chen; Michael B. Beverly; Jerome Hochman; *Merck & Co., West Point, PA*
- MP 261 **Structural Evaluation of Glucuronides of Morphine and Formoterol using Chemical Derivatization with 1,2-Dimethylimidazole-4-Sulfonyl Chloride and LC-MSⁿ;** Matilda L. Salomonsson¹; Ulf Bondesson²; Mikael Hedeland²; ¹*Uppsala University, Uppsala, Sweden*; ²*National Veterinary Institute, Uppsala, Sweden*
- MP 262 **Metabolite Profiling of Development Compounds using Accurate Mass UPLC-MS-MS;** Richard Clayton; John Kendrick; *Covance Laboratories, Ltd, Harrogate, North Yorkshire, UK*
- MP 263 **Utility of High Accurate Mass (MS_n) in the *in vitro* Disposition of Model CYP P450 Substrates-Novel and Known Metabolites;** Scott W. Womble¹; Ron Aoyama¹; Atul Ramaiya¹; Yan Chen²; Laurance Lee²; Sanjeev Thohan¹; ¹*Exelixis Inc, So. San. Francisco, CA*; ²*Thermo Fisher Scientific, Inc., San Jose, CA*
- MP 264 ***In vitro* Metabolism of CRX-137, an Orally Synergistic Combination Drug Candidate, Detected by Liquid Chromatography-Tandem Mass Spectrometry LC-MS-MS;** Jennifer Chen¹; Granvil Camille²; Mei Chen¹; Mahesh V Padval¹; Vikram Kansra¹; ¹*CombinatoRx, Inc, Cambridge, MA*; ²*Bausch & Lomb, Rochester, NY*
- MP 265 **¹³C Isotope Labeling in Combination with UPLC-FT-ICR MS and Fraction Collection for Accurate Metabolite Analysis;** Bettina Seiwert; Jan Hummel; Lothar Willmitzer; Patrick Giavalisco; *MP for molecular plant physiology, Potsdam, Germany*
- MP 266 **Metabolism and Metabolic Stability of a Novel Anti-Tuberculosis Compound Investigated using LC-MS-MS;** Yang Song; Jialin Mao; Richard B. Van Breemen; Scott Franzblau; *University of Illinois, Chicago, IL*
- MP 267 ***In vitro* Metabolism of Zapotin from Casimiroa edulis in Human Liver Microsomes and Cryopreserved Human Hepatocytes;** Jinghu Li¹; Mark Cushman²; John M. Pezzuto³; Richard B. Van Breemen¹; ¹*University of Illinois, Chicago, IL*; ²*Purdue University, West Lafayette, IN*; ³*University of Hawaii at Hilo, Hilo, HI*
- MP 268 **A Study of *in vitro* Metabolism of Minor Alkaloids in Tobacco using HILIC UPLC-MS-MS;** Gary D. Byrd; Michael Ogden; *R.J. Reynolds Tobacco Co., Winston-Salem, NC*
- MP 269 **Metabolite Identification of IPI-609, a Novel and Potent Inhibitor of the Hedgehog Pathway in Different Species;** Teresa M. Alvarez-Diez; Joseph Manna; Martin Tremblay; Michael J. Grogan; James R. Porter; Alfredo C. Castro; Jens R. Sydor; *Infinity Pharmaceuticals Inc., Cambridge, MA*
- MP 270 **Mass Spectrometric Analysis of Laccase-Mediated Transformation of Triclosan;** Kumarasamy Murugesan; Young-Mo Kim; Jong-Rok Joen; Eun-Ju Kim; Yoon-Seok Chang; *Pohang University of Science and Technology, Pohang, South Korea*
- MP 271 **Elucidation of a Novel Metabolic Pathway for 20-epi Analogs of Vitamin D₃: C-1 Esterification with Stearic and Oleic Acids;** Caroline Ceailles¹; Andrew Weiskopf¹; Paul Vouros¹; Gino J. Sasso²; Milan R. Uskokovic³; G. atyanarayana Reddy⁴; ¹*Northeastern University, Boston, MA*; ²*Hoffmann-La Roche Inc., Nutley, NJ*; ³*Bioxell Inc., Nutley, NJ*; ⁴*Epimer LLC, Providence, RI*
- MP 272 **Distinguishing Hepatic N-oxidation from Hydroxylation using High Mass Accuracy - Application in Elucidating the Role of Flavin-Containing Monooxygenase Enzyme;** Atul Ramaiya; Scott Womble; Ron Aoyama; Lester Bornheim; Sanjeev Thohan; *Exelixis Inc, So. San. Francisco, CA*
- MP 273 **Elucidation of the Impact of Met30 on the Phospholipid Profile of *Saccharomyces cerevisiae* using Matrix-Assisted Laser Desorption Mass Spectrometry;** S. Mariccor Andresa Batoy¹; Sabine Borgmann⁴; Peter Kaiser²³; Charles L. Wilkins¹; Jeffrey J. Jones²³; ¹*University of Arkansas, Fayetteville, AR*; ²*University of California, Irvine, Irvine, CA*; ³*University of California, Irvine, Irvine, CA*; ⁴*ISAS -Institute for Analytical Sciences, Dortmund, Germany*
- MP 274 **The Influence of Higher Mass Resolution and Larger Dynamic Range on the Identification of Relevant Metabolites of Pharmaceuticals by LC-MS;** Edgar Naegele; *Agilent Technologies, Waldbronn, Germany*
- MP 275 **Comprehensive Investigation of Injection Time and Auto Gain Control on Ion Trap Instruments for the LC-MS Application of Metabolite Identification;** Zhe-ming Gu²; Dan Bachalis²; Ming Gu¹; ¹*Cerno Bioscience, Yardley, PA*; ²*XenoBiotic Laboratories, Inc., Plainsboro, NJ*
- MP 276 **Metabolism and excretion of CP-448,187 in Humans: Structural Characterization of Novel Cyclized Products by 1H LC-NMR and Chemical Approaches;** Amin M. Kamel¹; Kevin Colizza²; Wendy Wang¹; Tom O'Connell¹; ¹*Pfizer, Inc., Groton, CT*; ²*Pfizer, Groton, CT*
- MP 277 **Characterization of Alkyl Hydroxylated Plasma Metabolites of Fentanyl, Verapamil, Amitriptyline, Doxepin and Pyrilamine by Accurate Mass Ion Tree Mass Spectrometry;** Jeffrey Rudy¹; Fran Xu²; Heidi M Snapp⁴; Cornelius Uboh³; Lawrence Soma⁴; ¹*PA Equine Toxicology, West Chester, PA*; ²*Jnj, Raritan, NJ*; ³*West Chester University, West Chester, PA*; ⁴*University of Pennsylvania, Kennett Square, PA*

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- MP 278 **Induction of Oxidative Stress in Human Lung Cells after Exposure to a Benzo[A]Pyrene Metabolite;** Dipti Mangal¹; Jong-Heum Park¹; Seon Hwa Lee²; Clementina Mesaros³; Trevor M. Penning³; Ian A. Blair³; ¹*Ctr for Cancer Pharmacology, UPenn, Philadelphia, PA;* ²*Tohoku Univ., Dept. Pharm, Sendai, Japan;* ³*Ctr for Excellence in Environ Tox, UPenn, Philadelphia, PA*
- MP 279 **Small Molecule Profiling of Saccharomyces Cerevisiae Secretions and the Related Effects of ABC Transporter Mutations;** Matthew R. Lewis; Elie G. El Kassir; Corey D. Broekling; Dayakar V. Badri; Jessica Prenni; Jorge M. Vivanco; *Colorado State University, Fort Collins, CO*
- MP 280 **Electrospray, APCI and MALDI MS of tert-Butyldimethylsilyl (TBDMS) Derivatives of Compounds of Biological Interest;** John M. Halket; Anna M. Przyborowska; Mark C. Parkin; Norman W. Smith; Andrew T. Kicman; David A. Cowan; Sukhvinder Bansal; *King's College London, London, UK*
- MP 281 **In vitro Identification of Intermediates from the Biodegradation of Chlorobenzenes by Pseudomonas benzenovorans;** Eun-Ju Kim; Young-Mo Kim; Jong-Rok Jeon; Kumarasamy Murugesan; Yoon-Seok Chang; *Postech, Pohang, South Korea*
- MP 282 **Use of Q-Trap Mass Spectrometry in Cytochrome P450 (CYP450) Reaction Phenotyping of Bupropion;** Yuan Chen¹; Khanh Nguyen¹; Liling Liu¹; Adrian Fretland¹; Elliott Jones²; Huaifen Liu²; ¹*Roche Palo Alto LLC, Palo Alto, CA;* ²*Applied Biosystems, Foster city, CA*
- MP 283 **Metabolite Identification of Astilpin in Biological Specimen by ESI-IT-TOF Tandem Mass Spectrometry;** Yan Liang¹; Lin Xie¹; An Kang¹; Longsheng Sheng¹; Leren Wan²; Guang-Ji Wang¹; ¹*China Pharmaceutical University, Nan Jing, China;* ²*Shimadzu Beijing Office, Beijing, China*
- MP 284 **Identification of Intermediates from the Bacterial Transformation of Triclosan using Mass Spectrometry;** Young-Mo Kim; Kumarasamy Murugesan; Jong-Rok Jeon; Eun-Ju Kim; Yoon-Seok Chang; *Postech, Pohang, South Korea*
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- MP 285 **High Throughput Metabolomics using Sample Fractionation and Direct Infusion Nanospray in Combination with High Resolution MSn;** Elwin Verheij; Leon Coulier; Ivana Bobeldijk-Pastorova; *TNO Quality of Life, Zeist, Netherlands*
- MP 286 **High-Throughput Screening of Plant Metabolic Phenotypes Based upon Fused-Core HPLC Coupled with Multiplexed CID TOF/MS;** Feng Shi; Anthony L. Schillmiller; Jeongwoon Kim; Robert L. Last; A. Daniel Jones; *Michigan State University, East Lansing, MI*
- MP 287 **Metabolic Profiling to Determine Phenotypes of Chronic Obstructive Pulmonary Disease (COPD);** Nichole Reisdorph¹; Michael Armstrong¹; Talia Muram²; Michael Burson²; Richard Reisdorph¹; Russell Bowler¹; ¹*National Jewish Medical and Research Center, Denver, CO;* ²*UCHSC, Denver, CO*
- MP 288 **Use of ICR-FT/MS to Study the Metabolic Evidence for Biogeographic Isolation of the Extremophilic Bacterium Salinibacter Ruber;** Marianna Lucio²; Ramon Rosselló-Mora¹; Josefa Antón³; Philippe Schmitt-Kopplin²; ¹*Institut Mediterrani d'Estudis Avançats, Esporles, Spain;* ²*Helmholtz Zentrum München, Neuherberg, Germany;* ³*Instituto Multidisciplinar de Estudios del Medio, Alicante, Spain*
- MP 289 **High-Throughput Non-Targeted Metabolic Profiling with Hybrid Stationary Phase LC Column Coupled to Q-TOF-MS in Cancer Research;** Hyun-Jin Jung¹; Man-Ho Choi¹; Kyung Mi Kim¹; Won-Yong Lee²; Bong Chul Chung¹; ¹*Life Sciences Division / KIST, Seoul, Korea;* ²*Dept. of Chemistry / Yonsei Univ., Seoul, Korea*
- MP 290 **Metabolic Analysis of Cancer and Normal Cells;** Munehiro Teshima; Norma Pawley; Steven Brumby; James Freyer; Clifford Unkefer; Pat Unkefer; *Los Alamos National Laboratory, Los Alamos, NM*
- MP 291 **Global Metabolite Profiling of Carbon Metabolism in Mycobacterium Tuberculosis: An LC-MS TOF-Based Approach;** Kyu Rhee¹; Steven M. Fischer²; Theodore Sana²; Steven Gross³; ¹*Weill Cornell Medical Colleg, NY, NY;* ²*Agilent Technologies, Santa Clara, CA;* ³*Weill Medical College of Cornell University, New York, NY*
- MP 292 **A Metabolomic Investigation of Novel Uremic Biomarkers by Two-Dimensional Liquid Chromatography Mass Spectrometry;** Ruth Godfrey¹; Gareth Brenton¹; Russell Newton¹; Edward Dudley¹; Peter Willshaw¹; Ashraf Mikhail²; Lisa Bastin²; Gary Woffendin³; Helen Welchman³; ¹*Swansea University, Swansea, UK;* ²*Morrisit Hospital, Swansea NHS Trust, Swansea, UK;* ³*Thermo Fisher Scientific, Hemel Hempstead, UK*
- MP 293 **Large-Scale Screening for Specialized Metabolites using Multiplexed Collision Induced Dissociation and Time-of-Flight Mass Spectrometry;** A. Daniel Jones¹; Feng Shi¹; Xiaoli Gao²; ¹*Michigan State University, East Lansing, MI;* ²*Michigan State University, East Lansing, MI*
- MP 294 **Lipidomics Based Diagnostics for Ovarian Cancer;** Aaron Z Fernandis; Narasimhan Kothandaraman; Gek Huey Chua; Xue Li Guan; Guanghou Shui; Mahesh Choolani; Markus Wenk; *National University of Singapore, Singapore*
- MP 295 **Application of Nano-Electrospray Tandem Mass Spectrometry for Direct Fingerprinting of Rat Urine in Metabolomics;** Haiwei Gu; Hongling Han; Yanping Sun; Zhengzheng Pan; Jian Zhang; Scott A. Mcluckey; Daniel Raftery; *Purdue University, West Lafayette, IN*
- MP 296 **Phytochemical Prospecting for Anti-Insect Molecules from Alfalfa (Medicago sativa) Trichomes;** Wensheng Li; Richard A Dixon; Lloyd W. Sumner; *The Noble Foundation, Ardmore, OK*
- MP 297 **Comprehensive Metabolomics Study of CHO Cell Line Cultivation;** Olaf Boernsen; Guido Wahl; Nadege Villemin; Joerg Schmidt; Stephan Gatzek; *Novartis Pharma AG, Basel, Switzerland*
- MP 298 **Searching Biomarkers for the Complex Regional Pain Syndrome by Metabolic Profiling of Urine using CE/MS;** Rawi Ramautar¹; Anne v.d. Plas³; Karsten Michelmann⁴; Rico J.E. Derks²; Gabriela Zurek⁴; Govert W. Somsen¹; Gerhardus J. de Jong¹; J.J. van Hilten³; Andre M. Deelder²; Oleg A. Mayboroda²; ¹*Biomedical Analysis, Utrecht University, Utrecht, Netherlands;* ²*Biomolecular MS, LUMC, Leiden, Netherlands;* ³*Neurology, LUMC, Leiden, Netherlands;* ⁴*Bruker Daltonik, Bremen, Germany*

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- MP 299 **Metabolomic Approach to the Identification of Robust Markers for the Detection of Mechanically Recovered Meat in Food Products;** Izabella Surowiec; Paul D. Fraser; John Halket; Raj Patel; Peter M. Bramley; *Royal Holloway University of London, Egham, UK*
- MP 300 **Integrated Plant Metabolomics by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Jun Han¹; Ryan M. Danell²; Dustin Lippert³; Monica H. Elliott¹; Joerg Bohlmann³; Christoph H. Borchers¹; ¹*University of Victoria-Genome BC Proteomics Center, Victoria, BC, Canada*; ²*Danell Consulting, Greenville, NC*; ³*University of British Columbia, Vancouver, BC*
- MP 301 **Differential Metabolomics Analysis of Serum from Metabolic Syndrome Ossabaw Swine by Stable Isotope Labeling and Pattern Recognition;** Xiaodong Huang¹; Cheolhwan Oh¹; Zhidong Xu²; Ashraf Madian¹; Mouhamad Alloosh³; Michael Sturek³; Charles Buck¹; Fred Regnier¹; Xiang Zhang⁴; ¹*Purdue University, West Lafayette, IN*; ²*Methodist Research Institute, Indianapolis, IN*; ³*Indiana University School of Medicine, Indianapolis, IN*; ⁴*University of Louisville, Louisville, KY*
- MP 302 **A Conservation Study to Investigate Mycobacterium Avium Lipid Metabolites in the Endangered White-Winged Wood Duck;** Heather Lucas; Razek Jennifer; Jody M. Modarelli; *Hiram College, Hiram, Ohio*
- MP 303 **Liquid Chromatography Time-of-Flight Mass Spectrometry-Based Metabolic Fingerprinting of Human Sera for Ovarian Cancer Biomarker Discovery;** Manshui Zhou; John McDonald; Facundo Fernandez; *Georgia Institute of Technology, Atlanta, GA*
- MP 304 **The Use of MS Based Metabonomics for the Discovery of a Potential Biomarker Associated Acute Kidney Injury;** Ricky D. Holland¹; Jinchun Sun¹; Laura K. Schnackenberg¹; Page Moore²; Catherine L. Dent³; Prasad Devarajan³; Didier Portilla²; Richard D. Beger¹; ¹*USFDA/NCTR, Jefferson, AR*; ²*UAMS, Little Rock, AR*; ³*University of Cincinnati School of Medicine, Cincinnati, OH*
- MP 305 **Probing the Plasmodium Metabolome;** Kellen L Olszewski¹; Joshua D. Rabinowitz¹; JoAnne Morrissey²; James M Burns²; Akhil Vaidya²; Manuel Llinas¹; ¹*Princeton University, Princeton, NJ*; ²*Drexel University, Philadelphia, PA*
- MP 306 **HPLC-MS Metabolic Profiling for the Detection of Bladder Cancer;** Haleem J. Issaq¹; Timothy Waybright¹; Brian Luke¹; Ofer Nativ²; Elias J Issaq²; Timothy D. Veenstra¹; ¹*SAIC-Frederick, Inc., Frederick, MD*; ²*Bnai-Zion Medical Center, Haifa, Israel*
- MP 307 **Application of Mass Spectrometry Based Metabolic Profiling to Bronchial Lavage Fluids from Cystic Fibrosis Subjects;** Gunnar Boysen¹; Thomas M. O'Connell¹; Justyna E. Wolak¹; Marianne S. Muhlebach¹; Julie Wingate²; Xu Guo²; Alina Dindyal-Popescu²; James A Swenberg¹; Charles R Esther Jr¹; ¹*UNC at Chapel Hill, Chapel Hill, NC*; ²*Applied Biosystems, Concord, ON*
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- MP 308 **Quantitative Analysis of a Therapeutic Protein in Human Plasma by LC-MS-MS using Accelerated Digestion;** Antoine Lesur¹; Emmanuel Varesio¹; Nathalie Oudry¹; Olivier Heudi²; Dieter Zimmer²; Stephan Beck²; Gérard Hopfgartner¹; ¹*Life Sciences Mass Spectrometry, Geneva University, Geneva, Switzerland*; ²*Novartis, Basel, Switzerland*
- MP 309 **Tandem Mass Tags and MRM Mass Spectrometry for the Evaluation of Candidate Markers of Alzheimer's Disease;** Darragh O'Brien¹; Simon Lovestone³; Karsten Kuhn²; Peter Schulz-Knappe²; Malcolm Ward¹; Helen Byers¹; Ian Pike¹; ¹*Proteome Sciences PLC, London, UK*; ²*Proteome Sciences R&D GmbH, Frankfurt, Germany*; ³*MRC Centre for Neurodegeneration Research, London, UK*
- MP 310 **Quantification and Normalization of Complex Label-Free Mass Spectrometry Data for Proteomic Analysis;** Noelle M Griffin¹; Jingyi Yu¹; Phil Oh¹; Sabrina Shore¹; Fred Long¹; Yan Li¹; Jim Koziol²; Jan E Schnitzer¹; ¹*Sidney Kimmel Cancer Cent, San Diego, CA*; ²*Scripps Research Institute, La Jolla, CA*
- MP 311 **Quantitating Dynamic Changes in Phosphorylation of the Vasopressin-Sensitive Water Channel Aquaporin-2 using Targeted MRM Methods;** Brigitte Simons¹; Jason Hoffert²; Mark Knepper²; ¹*MDS Analytical Technologies, Concord, CANADA*; ²*National Heart Lung and Blood Institute, NIH, Bethesda, MD*
- MP 312 **Quantitative Analysis of Oxytocin and Vasopressin by Nano-LC-MS-MS;** Theresa McLaughlin; Karolina M. Krasinska; Allis S. Chien; *Stanford University, Stanford, CA*
- MP 313 **Acid-Catalyzed 18O-Labeling of Peptides - a New, Versatile Tool for Proteomics;** Richard Niles¹; H. Ewa Witkowska²; Steven C. Hall²; Susan J. Fisher¹; Markus Hardt¹; ¹*University of California at San Francisco, San Francisco, CA*; ²*UCSF Core Mass Spectrometry Facility, San Francisco, CA*
- MP 314 **MS Approaches to Investigate the Role of an Amyloid-β Peptide Isoform in Alzheimer's Plaque Formation Onset;** Igor A. Popov²; Sergey A. Kozin¹; Alexey S. Kononikhin³; Elena V. Kugaevskaya¹; Philipp O. Tsvetkov⁴; Alexander A. Makarov⁴; Alexander I. Archakov¹; Eugene N. Nikolaev³; ¹*Orekhovich Institute of Biomedical Chemistry RAMS, Moscow, Russia*; ²*Emanuel Institute of Biochemical Physics, Moscow, Russia*; ³*The Institute for Energy Problems of Chemical Phys, Moscow, Russian Federation*; ⁴*Engelhardt Institute of Molecular Biology, Moscow, Russia*
- MP 315 **LC-FAIMS-MS-MS Quantitation of 1-Methyl and 3-Methylhistidine in the Assessment of Skeletal Muscle Degradation;** Gabriela A. Kulp¹; Calin G. Znamirovski²; ¹*Shriners Hospital for Children, Galveston, TX*; ²*Thermo Fisher Scientific, West Palm Beach, FL*
- MP 316 **Towards Comparative Peptidome Analysis of Unicellular Signaling Molecules using Isobaric Mass Tagging;** Martijn W.H. Pinkse¹; Inez M.O. Finoulst¹; Peter Schulze-Knappe²; Peter D.E.M. Verhaert¹; ¹*Delft University of Technology, Delft, The Netherlands*; ²*Proteome Sciences, Frankfurt, Germany*
- MP 317 **FAIMS: GLP-Validated Quantitation Method for a Peptide in Biological Matrix;** Axel Roemer; Tobias Klaassen; *A&M Labor fuer Analytik und Metabolismusforschung, Bergheim, Germany*
- MP 318 **High Throughput Plasma Stability Screening of Peptide Drug Candidates by LC-MS in a Parallel Mode;** Isabelle Tcholakov; Chris Bellows; Yan Wang; Chao-Xuan Zhang; *Amylin Pharmaceuticals, Inc., San Diego, CA*

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- MP 320 **Quantification of ANG1-7 and ANG1-5 in Rat Plasma by SPE-HPLC-MS-MS**; Sebastien Gagne; Marc Ouellet; Rene St-Jacques; Sylvie Toulmond; Jean-Francois Levesque; *Merck Frosst Canada & Co, Kirkland, CANADA*
- MP 321 **N, N-Dimethyl Amino Acids as iTRAQ Reagent for Improved Peptidomics and Proteomics**; Feng Xiang¹; Qiang Fu²; Lingjun Li¹; ¹*University of Wisconsin, Madison, WI*; ²*Schering Plough, Westfield, NJ*
- MP 322 **Proteomic Profiling of Glioblastoma Cells following miR-21 Knockdown**; MARJORIE MINKOFF¹; Thales Papagiannakopoulos²; Philip Ross¹; Matthew Willetts¹; Kenneth Kosik²; Darryl J Pappin¹; ¹*Applied Biosystems, Framingham, MA*; ²*University of Santa Barbara, Santa Barbara, CA*
- MP 323 **Investigation on the Use of MALDI MS-MS for Absolute Quantification of Peptides**; Carmen L. Fernandez-Metzler¹; Elizabeth A. Mahan²; Kristin Geddes²; Richard King³; ¹*Merck Research Labs, West Point, PA*; ²*Merck & Co., West Point, PA*; ³*Merck & Company, Inc., West Point, PA*
- MP 324 **Quantitative Analysis of Single Amino Acid Changes using a 4000 QTRAP® system**; Bruno Manadas¹; Vera Mendes¹; Raquel Silva²; Manuel Santos²; Euclides Pires¹; ¹*Center for Neuroscience and Cell Biology, Coimbra, Portugal*; ²*Department of Biology and CESAM, Un. of Aveiro, Aveiro, Portugal*
- MP 325 **Pandemic Influenza Preparedness: The New Role for Mass Spectrometry**; Tracie Williams; Jessica Norrgran; Leah Luna; James L Pirkle; John Barr; *Centers for Disease Control and Prevention, Atlanta, GA*
- MP 326 **MRM Based, Multiplexed, Absolute Quantitation of 31 High Abundance Proteins in Human Plasma**; Derek Smith¹; Michael A Kuzyk¹; Tyra Cross¹; Juncong Yang¹; Angela Jackson¹; Darryl Hardie¹; Leigh Anderson²; Christoph H Borchers¹; ¹*University of Victoria-Genome BC Proteomics Centre, Victoria, Canada*; ²*Plasma Proteome Institute, Washington, DC*
- MP 327 **Quantification of a Polypeptide Drug, Desirudin, in Human Plasma using Electrospray LC-MS-MS with an Analog Polypeptide as Internal Standard**; Wenzhong Liang¹; Xinping Fang¹; Jinn Wu¹; Tony Yu²; ¹*XenoBiotic, Plainsboro, NJ*; ²*Canyon Pharmaceuticals, Hunt Valley, MD*
- MP 328 **Model-Based Protein Quantification for Label-Free LC-MS Proteomics Profiling Experiments**; Melissa Key¹; Susanne Ragg²; Gunther Schadow²; Olga Vitek¹; ilka Ott³; ¹*Purdue University, West Lafayette, IN*; ²*Indiana University, Indianapolis, IN*; ³*Deutsches Herzzentrum Munchendes, Munich, Germany*
- MP 329 **Quantification of Endogenous α - and β -Endorphins in Rat Brain by LC-MS-MS**; Hari Kosanam¹; Suma Ramagiri²; Chhabil Dass¹; ¹*The University of Memphis, Memphis, TN*; ²*University of Tennessee Health Science Center, Memphis, TN*
- MP 330 **Rapid and Accurate Analysis of Peptides Used as Standards for Quantitative Proteomics**; Narisa K. Bordeerat¹; Nadia I. Georgieva¹; Leonard B. Collins¹; Christoph H. Borchers²; James A. Swenberg¹; Gunnar Boysen¹; ¹*University of North Carolina, Chapel Hill, NC*; ²*Uvic-gbc Proteomics Centre, Victoria, BC*
- MP 331 **Development and Validation of a Quantitative Assay for the Measurement of Desmopressin in Rat Plasma by Liquid Chromatography-Tandem Mass Spectrometry**; Yun Chen; Toni Jean Thompson; *Charles River Laboratories, Shrewsbury, MA*
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- MP 333 **Peptide Quantitation by Triple Quadrupole Mass Spectrometry using Selectively Sequence-Modified Internal Standards**; Steven K. Drake; Tracey A. Sutton; Glen L. Hortin; *NIH Clinical Center, Bethesda, MD*
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- MP 335 **Study of Fragmentation Pattern of Intramolecular Cross-Linked Peptides by ESI and MALDI-MS-MS**; Luiz Fernando A Santos; Amadeu H Iglesias; Fabio C Gozzo; *Brazilian Synchrotron Light Source, Campinas, Brazil*
- MP 336 **Manipulating the Dissociation Chemistry of Transition-Metal-Peptide Complexes by Controlling their Oxidation States**; Warren K. Mino¹; Nick C. Polfer¹; Craig M. Whitehouse²; Randall E. Pedder³; ¹*University of Florida, Gainesville, FL*; ²*Analytica of Branford, inc., Branford, CT*; ³*Ardara Technologies L.P., Monroeville, PA*
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- MP 339 **Structural Characterisation of α - and β - Ions Obtained by CID of Peptides using Ion Mobility and Tandem Mass Spectrometry**; Isabel Riba¹; Kevin Giles²; Robert Bateman²; Simon J. Gaskell¹; ¹*University of Manchester, Manchester, UK*; ²*Waters Corporation, Manchester, UK*
- MP 340 **Selecting Fixed-Charge Groups for Electron-Based Peptide Dissociations: A Computational Study of Substituted Pyridinium Charge Tags**; Thomas W. Chung; Frantisek Turecek; *University of Washington, Seattle, WA*
- MP 341 **Characterization of Formaldehyde Modified Peptides**; Maria Ospina; Adrienne Barry; Hubert Vesper; *Center/Disease Control & Prevention, Atlanta, GA*
- MP 342 **Fragmentation Pathways of Doubly Protonated Tryptic Peptides**; Christian Bleiholder¹; Arpad Somogyi²; Sandor Suhai¹; Bela Paizs¹; ¹*German Cancer Research Center, Heidelberg, Germany*; ²*University of Arizona, Tucson, AZ*
- MP 343 **Use of Reporter Ion for the Identification of Cross-Linked Peptides**; Fabio C Gozzo; Amadeu H Iglesias; Luiz Fernando A Santos; *Brazilian Synchrotron Light Source, Campinas, Brazil*

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- MP 345 **The Utilization of Orbitrap Higher Collision Decomposition Device for PTM Analysis and iTRAQ-based Quantitation;** Katalin F. Medzihradzsky¹; Robert Chalkley¹; Jonathan Trinidad¹; Izhak Michaelevski²; David A. Maltby¹; Mike Fainzilber²; A.I. Burlingame¹; ¹UCSF, San Francisco, CA; ²Weizmann Institute, Rehovot, Israel
- MP 346 **The Effects of Peptide End Group (Acid versus Amide) on CID, ETD, and PSD Mass Spectra;** Samantha Bokatzian-Johnson; Carolyn J. Cassidy; University of Alabama, Tuscaloosa, AL
- MP 347 **The Use of Transition Metal Complex Cations for Electron Transfer and Metal Transfer Ion/Ion Reactions with Negatively Charged Peptides;** David Crizer; Yu Xia; Scott A. McLuckey; Purdue University, West Lafayette, IN
- MP 348 **ECD vs. ETD: Observations from an O-Glycosylated Peptide;** Matthew B. Renfrow¹; Stephanie B. Wall¹; Anthony High²; Raghu K Chitta²; James Mobley¹; Jan Novak¹; ¹University of Alabama at Birmingham, Birmingham, AL; ²St Jude Children's Research Hospital, Memphis, TN
- MP 349 **The Formation and Structures of Histidine-Containing b2 Ions: A Time-Resolved Tandem Mass Spectrometric and Theoretical Study;** Pui Yee Lau; Jackie M K Cheng; Carrie H S Wong; Ida N. Ma; Chun Wai Tsang; The Hong Kong Polytechnic University, Hong Kong, Hong Kong
- MP 350 **Gas Phase Fragmentation of Peptides by MALDI in-source Decay Occurs with Limited Amide Hydrogen (1H/2H) Scrambling;** Thomas J.D. Jorgensen; Nicolai H Bache; Kasper Rand; Peter Roepstorff; University of Southern Denmark, Odense M, Denmark
- MP 351 **Investigation of Acetylation Specific Neutral Loss in Collision Induced Dissociation of O-Acetylated Peptides;** Jiang Zhang; Qiang Fu; Lingjun Li; Univ Wisconsin, Madison, WI
- MP 352 **Radical Directed Dissociation at Aromatic Residues in Peptides Initiated by Noncovalently Attached Radical Precursors;** Qingyu Sun; Ryan R. Julian; University of California, Riverside, Riverside, CA
- MP 353 **Fragmentation Pattern of Intermolecular Cross-Linked Tryptic Peptides;** Amadeu H Iglesias; Luiz Fernando A Santos; Fabio C Gozzo; Brazilian Synchrotron Light Source, Campinas, Brazil
- MP 354 **Collision-Induced Dissociation and Electron Capture Dissociation in a Radio Frequency Ion Trap;** Hiroyuki Satake; Naomi Manri; Takashi Baba; Central Research Laboratory, Hitachi Ltd., Tokyo, Japan
- MP 355 **Preferential Fragmentation of Singly Charged Phosphopeptides Adjacent to Phosphorylated Serines and Threonines;** Peter M. Gehrig; Dorothea Rutishauser; Bernd Roschitzki; Ralph Schlapbach; Functional Genomics Center Zurich, Zurich, Switzerland
- MP 357 **On-line Capillary Weak-Cation Exchange Method for Removal of Non-Ionic Detergent from Monoclonal Antibody Samples;** Jakob Baudys; Ola M. Saad; Valerie Quarmby; Surinder Kaur; Genentech, Inc., South San Francisco, CA
- MP 358 **Novel Tandem IgY12-SuperMix Immunoaffinity Separation Strategy for Enhanced Detection of Low-Abundant Human Plasma Proteins;** Weijun Qian¹; David T. Kaleta¹; Brianne O. Petritis¹; Hongliang Jiang²; Tao Liu¹; Xu Zhang¹; Heather M. Mottaz¹; Susan M. Varnum¹; David G. Camp II¹; Lei Huang³; Xiangming Fang³; Wei-Wei Zhang³; Richard D. Smith¹; ¹Pacific Northwest National Laboratory, Richland, WA; ²Covance Laboratories Inc., Madison, WI; ³GenWay Biotech, Inc., San Diego, CA
- MP 359 **The Optimization for Enhanced Proteome Coverage of Complex Protein Mixture;** Sunil Hwang¹; Kimberly, Q. McKinney¹; Sung-Hee Park²; Deborah, H. Lundgren²; David, K. Han²; ¹Carolinas Healthcare System, Charlotte, NC; ²University of Connecticut Health Center, Farmington, CT
- MP 360 **Alternatives to SCX for the Separation of ITRAQ Labeled Plasma Proteins;** Monica H. Elliott; Michael Kuzyk; Derek Smith; Darryl Hardie; Christoph H. Borchers; University of Victoria-Genome BC Proteomics Centre, Victoria, Canada
- MP 361 **Comparison of Sample Preparation and Solubilization Techniques for Shotgun Proteomic Analysis of Laser Capture Microdissected Cells from Breast Tumors;** Lisa Zimmerman²; Eduardo C. Dias¹; Julie A. Coleman¹; Amy-joan L. Ham²; Carlos L. Arteaga²; Daniel C. Liebler²; Melinda E. Sanders²; ¹Vanderbilt University, Nashville, TN; ²Vanderbilt University School of Medicine, Nashville, TN
- MP 362 **Extensive Fractionation and Identification of Allergic Proteins within Nasal Lavage Fluids from Allergic Rhinitis and Asthmatic Chronic Rhinosinusitis Patients;** Linda M Benson; Christopher J Mason; Oren Friedman; Hirohito Kita; H. Robert Bergen III; Douglas A Plager; Mayo Clinic, Rochester, MN
- MP 363 **Rapid Digestion Protocol for Membrane Proteome using Phase Transfer Surfactants;** Takeshi Masuda; Tomita Masaru; Yasushi Ishihama; Institute for Advanced Biosciences Keio University, Tsuruoka, JAPAN
- MP 364 **New Application of Agarose Gel Electrophoresis in Proteomics;** Emiko Yamauchi-Kamakura; Yoshiya Oda; Tsuyoshi Tabata; Junro Kuromitsu; Eisai Co. Ltd., Tsukuba, JAPAN
- MP 365 **Multiple Protease Digestion using Immobilized Enzymes: An Effective Sample Preparation Method for the Protein Structural Analysis by Mass Spectrometry;** Yukie Sasakura; Ayumi Suzuki; Kimiyoshi Koda; Katsuhiko Kanda; Izumi Waki; Hitachi High-technologies, Hitachinaka, Japan
- MP 366 **Systematic Identification of Artificial in vitro Protein Modifications Introduced during Sample Preparation;** Yue Chen; Gang Xing; Junmei Zhang; Yingming Zhao; University of Texas Southwestern Medical Center, Dallas, TX
- MP 367 **Elimination of Polymer Contamination prior to Mass Spectrometric Analysis;** Tine E. Thingholm¹; Valentina A. Valova²; Martin R. Larsen¹; Phillip J. Robinson²; ¹Univ. Southern Denmark, Odense, Denmark; ²Children's Medical Research Institute, Westmead, NSW, Australia
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- MP 356 **NanoLC-QTOF MS-MS Analysis of Micro- and Nano-scale Proteomic Samples;** Mingguo Xu; Nan Wang; Peng Wang; Sandra Marcus; Liang Li; University of Alberta, Edmonton, AB

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- MP 369 **Mass Spectrometry Determination of the Phosphorylation Sites of the Four Serine/Threonine Protein Kinases and the Substrate MurC from Corynebacterium Glutamicum; Isabelle Zanella-Cleon; Maria Fiuza-Perez; Aurelie Cornut; Jean-Philippe Robin; Virginie Molle; Michel Becchi; CNRS, Lyon Cedex 07, France**
- MP 370 **Characterization of Endogenous Phosphorylation Level in p130Cas, an anti-Estrogen Resistance Generating Protein in Human Breast Cancer; Giuseppe Infusini; Anthony Makkinje; David H. Perlman; Adam Lerner; Catherine E. Costello; Boston University School of Medicine, Boston, MA**
- MP 371 **Characterization of Heat Shock Protein 27 in Human Umbilical Vein Endothelial Cells (HUVEC) with the Microbial Dithiole Thiolutin Stimulation; Shujia Dai¹; Shiao-Lin Wu¹; yifeng Jia²; David D. Roberts²; Barry L. Karger¹; ¹Northeastern University, Boston, MA; ²National Cancer Institute, Bethesda, MD**
- MP 372 **Identification of Phosphorylation Sites in Soluble Guanylyl Cyclase by Proteomic Analysis using Stable Isotope Labeling and LC-nESI Q-ToF Tandem MS; Fotini Bazoti¹; Spiros D. Garbis²; Andreas papapetropoulos³; Anthony Tsaropoulos³; ¹GAI A Research Center, Kifissia, Greece; ²Foundation for Biomedical Research of the Athens, Athens, Greece; ³University of Patras, Patras, Greece**
- MP 373 **Serine 395, Is Important for Transcriptional Activity in Mouse Aryl Hydrocarbon Receptor (AhR), is Phosphorylated by Protein Kinase A; Alan Friedman²; Michael Easterling¹; Brent R. Kobielski²; Daria Vorojeikina²; Gary D. Minsavage²; Thomas A. Gasiewicz²; ¹Bruker Daltonics, Inc., Billerica, MA; ²University of Rochester Medical Center, Palmyra, NY**
- MP 374 **Specific Phosphorylation Sites on Epidermal Growth Factor Receptor (EGFR) Dictate Recruitment of Downstream Signaling Proteins; Amanuel Y Kehasse; David H. Perlman; Giuseppe Infusini; Ilene Boucher; Mark E. McComb; Vickery Trinkaus-Randall; Catherine E. Costello; Boston Univ School of Medicine, Boston, MA**
- MP 375 **Mass spectrometry using ETD/CID Fragmentation and Neutral Loss Scanning Allows for Identification of Phosphorylation Sites on Centaurin-Alpha 1; BobbiJo Littrell-Miller²; Roger Powell¹; Nichole Reisdorph¹; Rick Reisdorph¹; ¹National Jewish Medical and Research Center, Denver, CO; ²CU Denver, Denver, CO**
- MP 376 **Identification of Novel Phosphorylation Sites in Poly (ADP-ribose) Polymerase-1 and Poly (ADP-ribose) Glycohydrolase using Mass Spectrometry; Sylvie Bourassa¹; Isabelle Kelly¹; Jean-Philippe Gagné²; Yves Labelle²; Arnaud Droit²; Mélissa Chevalier-Paré²; Guy Poirier²; ¹Proteomics, Quebec Genomics Center, Québec, Québec, Canada; ²Laval University Medical Research Center, Québec, Québec, Canada**
- MP 377 **Phosphohydroxyproline – a Proteinogenic Amino Acid: Identification and Characterization in Proteins by Mass Spectrometry; Sabine Metzger; Axel Kuehlberg; University of Duesseldorf, Duesseldorf, Germany**
- MP 378 **A Human Gene Polymorphism Reprograms Hormonal Signaling by Altering Kinase Recognition Sites: Identification of an SNP Generated Site of Phosphorylation; Saverio Gentile; Negin Martin; Erica Scappini; Peter Smutko; Jason Williams; Katina Johnson; Christian Erxleben; David Armstrong; NIEHS/NIH/DHHS, Research Triangle Park, NC**
- MP 379 **Differential Phosphoproteomics of Multiple Adhesion Proteins using Reversed-Phase C18 LC-MS-MS and TiO₂ Phospho-Enrichment; Erin D Jeffery; Pablo R. Grigera; J. Thomas Parsons; Donald F. Hunt; University of Virginia, Charlottesville, VA**
- MP 380 **Identification of Phosphorylation Sites on Heterochromatin Protein 1 by Electron Transfer Dissociation; Hillary Montgomery¹; Holger Dormann²; Jeffrey Shabanowitz¹; C. David Allis²; Donald F. Hunt¹; ¹University of Virginia, Charlottesville, VA; ²The Rockefeller University, New York, NY**
- MP 381 **Identification of Phosphorylation Sites in DNA/RNA Binding Proteins in Arabidopsis Thaliana by Mass Spectrometry; Kangling Zhang; Loma Linda University, Loma Linda, CA**
- MP 382 **Targeted On-Line Liquid Chromatography Electron Capture Dissociation Mass Spectrometry for Localization of Sites of *in vivo* Phosphorylation in Human Sprouty2; Helen Cooper; Steve Sweet; Faraz K. Mardakheh; Amy J Langton; Kevin J.P. Ryan; John K. Heath; University of Birmingham, Birmingham, UK**
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- MP 383 **Identification of Nitrosyl Iron Complexes by Nanospray Mass Spectrometry; Ya-Chen Cheng; Kuo-Kuo Ku; National Chiayi University, Chiayi City, Taiwan**
- MP 384 **Post-Translational Modifications of Histone H1 in Lung Cancer Cell Lines; Pang-Hung Hsu; Chi-Shuen Chu; Ming-Daw Tsai; Li-Jung Juan; The Genomics Research Center, Academia Sinica, Taipei, Taiwan**
- MP 385 **Characterization of Phosphorylation Sites on Histone H1t using Electron Transfer Dissociation Mass Spectrometry; Kristie Lindsey Rose¹; Andra Li²; Juan Ausio²; Jeffrey Shabanowitz¹; Donald F. Hunt¹; ¹University of Virginia, Charlottesville, VA; ²University of Victoria, Victoria, BC**
- MP 386 **Phosphoamino Acid Analysis and Identification of the Site of Histidine Phosphorylation of Histone H4 by a Variant of Transglutaminase 2; Paul V. Attwood¹; Aygul Abzalov¹; XinLin Zu²; Paul G. Besant¹; ¹The University of Western Australia, Crawley, Australia; ²Adolf Butenandt Institute, Munich, Germany**
- MP 387 **Histone H2b from Neurospora Crassa Is Extensively Methylated and some Post-Translational Modifications Are Sensitive to Histone Deacetylase 1 Inactivation; D. C. Anderson; Univ. of Oregon, Eugene, OR**

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- MP 388 **Utility of ETD for Quantitative Readout of Histone Acetyltransferase Activity**; Samuel Mackintosh; Lauren P. Blair; Rick Edmondson; Alan Tackett; *University of Arkansas For Medical Sciences, Little Rock, AR*
- MP 389 **Lysine Acetylation in Huntingtin and its Role in the Pathogenesis of Huntington's Disease**; Xin Cong; Birgit Schilling; Lisa Ellerby; Bradford W. Gibson; *Buck Institute For Age Research, Novato, CA*
- MP 390 **A Large Scale Screening Method for Analyzing Proteins with Heavy Post-Translational Modifications by Bioinformatics and Tandem FTICR/ECD Mass Spectrometry**; Frank Li; Raya Talroze; Feixia Chu; Shenheng Guan; Al Burlingame; *University of California, San Francisco, San Francisco, CA*
- MP 391 **Sensitive, Specific and Quantitative FT-ICR Mass Spectrometry of Combinatorial Post-Translational Modifications in Intact Histone**; C. Logan Mackay¹; Nick Gilbert²; R. Larry Hayward²; Ted Hupp²; Pat Langridge-Smith¹; Bernard Ramsahoye²; *¹SIRCAMS, Edinburgh, UK; ²Institute of Genetics and Molecular Medicine Divis, Edinburgh, UK*
- MP 392 **A Correlative Proteomics Study of Histone Methylation and Acetylation in Saccharomyces Cerevisiae**; Lanhao Yang; Shengjiang Tu; Ming-Daw Tsai; Michael A. Freitas; *Ohio State University, Columbus, OH*
- MP 393 **Identification of Post Translational Modifications of the Avian Linker Histones H1 and H5 using Tandem Mass Spectrometry**; Ambrosius Snijders¹; Sayampong Pongdam²; Christopher Wood³; John Baldwin²; Mark Dickman¹; *¹University of Sheffield, Sheffield, UK; ²Liverpool John Moores University, Liverpool, UK; ³CCLRC Daresbury Laboratory, Warrington, UK*
- MP 394 **Determination of Post-Translational Modifications of Histone H3 using Chromatography, Ion Mobility Tandem Mass Spectrometry and Customized Bioinformatics Tools**; Hye R Jung; Wei Liu; Ole N. Jensen; *University of Southern Denmark, Odense, Denmark*
- MP 395 **Evaluation of Human Histone H3 Lysine79 Methylation and Acetylation Status using MRM**; Lynn Spruce; Jessica Y. Lee; Christopher R. Vakoc; Gerd Blobel; Steven H. Seeholzer; *Children's Hospital of Philadelphia, Philadelphia, PA*
- MP 396 **Analysis of Post Translational Modifications of S. Cerevisiae Histones using LTQ-Orbitrap**; ANITA SARAFA¹; Joshua Gilmore²; Zhihui Wen²; Michael Coleman²; Laurence Florens²; Michael Washburn²; *¹Stowers Institute, Kansas City, MO; ²Stowers Institute For Medical Research, Kansas City, MO*
- MP 397 **Lifespan Analysis of the Modification States of Histone H4 in Xenopus laevis**; Joshua J. Nicklay¹; David Shechter²; Jeffrey Shabanowitz¹; C. David Allis²; Donald F. Hunt¹; *¹University of Virginia, Charlottesville, VA; ²The Rockefeller University, New York, NY*
- MP 398 **Mapping Novel Post-Translational Modifications in Yeast Histones by PTMap Algorithm**; Kai Zhang; Yue Chen; Zhihong Zhang; Yingming Zhao; *UT Southwestern Medical Center, Dallas, TX*
- MP 399 **Unbiased Post-Translational Modification Discovery through a Novel Spectral Matching Algorithm**; Corey E Bakalarski; Joshua E Elias; Jan Seebacher; Steven Gygi; *Harvard Medical School, Boston, MA*
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- MP 400 **A Collection of Novel Isotopically-Coded Crosslinkers for Structural Proteomics**; Evgeniy Petrotchenko; Jamie M. Thomas; Christoph Borchers; *UVic-GBC Proteomics Centre, Victoria, Canada*
- MP 401 **Exploring CYP2B4-Cytochrome b5 Interaction by Crosslinking Reaction and Mass Spectrometry**; Miroslav Sulc¹; Katerina Peslova¹; Tomas Jecmen²; Petr Hodek²; Petr Novak¹; *¹Institute of Microbiology, Prague, Prague 4, Czech Republic; ²Charles University, Faculty of Science, Prague 2, Czech Republic*
- MP 402 **Multiplexed MS-MS Methods and Protein Interaction Identification**; Hye In Nam; Gerhard R. Munske; Li Yang; Haizhen Zhang; James E. Bruce; *Washington State University, Pullman, WA*
- MP 403 **Chemical Crosslinking and Chemical Modification Studies of LaSSB and Ro52, Autoantigens Associated with Sjogren's Syndrome**; Leesa Deterding; Rachelle Bienstock; Kenneth B. Tomer; *NIEHS, RTP, NC*
- MP 404 **Analysis of Protein Cross-Linking by LC-MS-MS and a Simple Database Search Method**; Caifeng Zhao¹; Daniel Henriquez²; Monica Roth³; Oscar Leon²; Haiyan Zheng¹; *¹CABM, UMDNJ-RWJMS, Piscataway, NJ; ²Programa de Virologia, ICBM, University of Chile., Santiago, Chile; ³Department of Biochemistry, UMDNJ-RWJMS, Piscataway, NJ*
- MP 405 **Design and Evaluation of a Novel Homobifunctional Cross-Linker with Selective Metal Dioxide-Based Enrichment Potential**; Bo Wang; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*
- MP 406 **Mining Protein-Protein Interactions of Proteins in Synechocystis sp. PCC 6803: Novel Chemical Cross-Linking and Mass Spectrometry**; Chunxiang Zheng; Haizhen Zhang; Gerhard R. Munske; Xiaoting Tang; James E. Bruce; *Washington State University, Pullman, WA*
- MP 407 **Proteomics Analysis of Mammalian Cell Cultures for Biopharmaceutical Manufacturing**; Tyler Carlage¹; Li Zang¹; Yelena Lyubarskaya¹; Marina Hincapie²; Rohin Mhatre¹; William Hancock²; *¹Biogen Idec, Cambridge, MA; ²Northeastern University, Boston, MA*
- MP 408 **Specific, Quantitative Enrichment of Cross-Linked Peptides from Complex Mixtures**; Lau Sennels¹; Adam Belsom²; Mark Bradley²; Juri Rappsilber¹; *¹Wellcome Trust Centre for Cell Biology, Edinburgh, UK; ²School of Chemistry, University of Edinburgh, Edinburgh, UK*
- MP 409 **A New Cross-Linking Strategy for Exploring Protein-Protein Interactions**; Christian Tagwerker; Danielle Vellucci; Ryan Benz; Pierre Baldi; Scott Rychnovsky; Lan Huang; *University of California, Irvine, CA*
- MP 410 **Studying the Stepwise Progression of Formaldehyde Mediated Protein Crosslinking with Mass Spectrometry**; Judy Toews³; Jason Rogalski¹; Juergen Kast²; *¹Biomedical Research Centr, Vancouver, Canada; ²University of British Columb, Vancouver, BC; ³Biomedical Research Centre, Vancouver, BC*
- MP 411 **Annexin A2/P11 Interaction: New Insights into Annexin A2 Tetramer Structure by Chemical Crosslinking, High-Resolution Mass Spectrometry, and Computational Modeling**; Daniela M. Schulz¹; Stefan Kalkhof²; Andreas Schmidt²; Christian H. Ihling²; Christoph Stingl⁶; Karl Mechtler³; Olaf Zschörnig⁴; Andrea Sinz²; *¹Biotechnological-Biomedical Center, Leipzig, Germany; ²Institute of Pharmacy, Halle,*

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- Germany; ³Imp Research Institute of Mo, Vienna, Austria; ⁴Institute for Medical Physics & Biophysics, Leipzig, Germany; ⁵Cd Laboratory / Vienna, Vienna, Austria; ⁶Institute of Moleculare Biotechnology, Vienna, Austria
- MP 412 **Characterizing the 26S Proteasome Network in Yeast using a Quantitative *in-vivo* Crosslinking Strategy and PPI Network Analysis;** Cortnie Guerrero¹; Tijana Milenkovic¹; Jeffrey J. Jones²; Natasa Przulj¹; Peter Kaiser¹; Lan Huang¹; ¹UC Irvine, Santa Ana, CA; ²Applied Proteomics, Glendale, CA
- MP 413 **Cross-Linking Analysis of Affinity-Purified Multi-Protein Complexes;** Zhuo Chen; Morten Rasmussen; Salman Tahir; Sjaak van der Sar; Kevin G. Hardwick; Juri Rappsilber; Wellcome Trust Centre for Cell Biology, Edinburgh, UK
- MP 414 **Novel Techniques for Affinity Enrichment of Crosslinked Peptides for Studying Multi-Component Protein Complex Structures by Crosslinking Combined with Mass Spectrometry;** Evgeniy Petrotchenko; Christoph Borchers; UVic-GBC Proteomics Centre, Victoria, Canada
- MP 415 **Application of Reductive Amination to Protein Crosslinking;** Nagarajan Chandramouli; Joseph P Fernandez; Haiteng Deng; Proteomics Resource Center, Rockefeller University, New York, NY
- MP 416 **Identification of a Helicase/Single-Stranded DNA Binding Protein Interaction Site by Mass Spectrometric Analysis;** Lauren P. Blair; Kevin D. Raney; Alan J. Tackett; UAMS Biochemistry & Molecular Biology, Little Rock, AR
- MP 417 **Exploring Conformational Changes of Akt Altered by Inhibitors using Chemical Cross-Linking and Mass Spectrometry;** Bill Huang; Hee-Yong Kim; NIAAA/NIH, Rockville, MD
- MP 418 **Identifying Interactions between Small Heat Shock Proteins and Substrate by Site Directed Incorporation of a Photoactivatable Cross-Linker and Mass Spectrometry;** Nomalie N Jaya; Victor Garcia; Elizabeth Vierling; University of Arizona, Tucson, AZ
- MP 419 **A Novel Photo-Cleavable Protein Interaction Reporter (pcPIR) Cross-Linking Strategy to Study Protein-Protein Interactions;** Li Yang; Nathan K. Kaiser; Hye In Nam; Haizhen Zhang; Gerhard R. Munske; James E. Bruce; Washington State University, Pullman, WA
- MP 420 **Investigating the Detailed Chemistry of Chemical Cross-linking: Reactivities of Different Amino Acids;** Stefanie Mädler; Claudia Bich; David Touboul; Renato Zenobi; Eth Zurich, Zurich, Switzerland
- MP 421 **Laser Induced Selective Retrieval of Cross-linked Peptides for Mass Spectrometric Analysis of Protein Complexes;** Funing Yan; Fa-yun Che; Dmitry Rykunov; Edward Nieves; Andras Fiser; Louis M. Weiss; Ruth Hogue Angeletti; Albert Einstein College of Medicine, Bronx, NY
- MP 422 **Interactions of the Peroxisome Proliferator-Activated Receptor alpha (PPARα) with Ligands Analyzed by Chemical Cross-Linking and Nano-HPLC/MALDI-TOF/TOF-MS and HPLC/ESI-FTICR-MS;** Mathias Mueller¹; Christian Ihling¹; Leo J. de Koning²; Ronald Aardema²; Henk L. Dekker²; Yvonne Syha³; Manfred Schubert-Zsilavecz³; Chris G. de Koster²; Andrea Sinz¹; ¹Martin Luther University Halle-Wittenberg, Halle, Germany; ²Universiteit van Amsterdam, Amsterdam, The Netherlands; ³Johann-Wolfgang-Goethe University Frankfurt, Frankfurt, Germany
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- MP 423 **Thermodynamic Analysis of Membrane Bound Receptor-Ligand Interactions;** Patrick D. DeArmond¹; Michael J. Campa²; Edward F. Patz, Jr.²; Michael C. Fitzgerald¹; ¹Duke University, Durham, NC; ²Duke University Medical Center, Durham, NC
- MP 424 **Identification of the Mitochondrial ND3 Subunit as a Structural Component Involved in the Active/Deactive Enzyme Transition of Respiratory Complex I;** Bjoern Meyer¹; Alexander Galkin¹; Ilka Wittig¹; Hermann Schaegeger¹; Andrei Vinogradov²; Ulrich Brandt¹; Michael Karas¹; ¹Johann Wolfgang Goethe-University, Frankfurt/Main, Germany; ²Moscow State University, Moscow, Russia
- MP 425 **An Efficient In-Gel Extraction and Fractionation Strategy for the Comprehensive Membrane Proteomic Profiling;** Yi-Chung Chen; Yet-Ran Chen; Academia Sinica, Taipei, Taiwan
- MP 426 **New Methodology for Membrane Protein Identification;** Caroline Tokarski¹; Marianne Fillet²; Christian Rolando¹; ¹Univ. des Science/Tech de Lille, Villeneuve d'Ascq, France; ²Universite de Liège, Liège, Belgium
- MP 427 **Ligand Based Structural Biology: Cannabinoid Receptor Investigation by Covalent Probes;** Martha Malvina Papanastasiou¹; Dennis Szymanski¹; Nikolai Zvonok²; Alex Makriyannis²; ¹northeastern Univer/Sity, Boston, MA; ²Center for Drug Discovery, Boston, MA
- MP 428 **Enhancing Identifications of Lipid-Embedded Proteins by Mass Spectrometry for Improved Mapping of Endothelial Plasma Membranes *in vivo*;** Yan Li; Jingyi Yu; Yipeng Wang; Fred Long; Sabrina Shore; Phil Oh; Jan Schnitzer; Sidney Kimmel Cancer Center, San Diego, CA
- MP 429 **Toward the Development of a "Tagless" Method for the Isolation and Identification of Membrane Complexes in *Desulfovibrio vulgaris* Hildenborough;** Simon Allen¹; Peter J. Walian²; Evelin Szakal¹; Haichuan Liu¹; Ming Dong²; Eric Johansen¹; Lee L. Yang²; Steven C. Hall¹; Susan J. Fisher¹; Terry C. Hazen²; Jil T. Geller²; Mary E. Singer²; Jian Jin²; Mark D. Biggin²; Bing Jap²; H. Ewa Witkowska¹; ¹UCSF, San Francisco, CA; ²Lawrence Berkeley National Laboratory, Berkeley, CA
- MP 430 **Cell Wall (Surface) Proteome of Pathogenic Yeast *Candida albicans* Profiled by Chemical Labeling and LC-MS;** Jiang Qian¹; Jim E. Cutler¹; Richard B. Cole²; Yang Cai¹; ¹The Research Institute for Children, New Orleans, New Orleans, LA; ²Department of Chemistry, University of New Orleans, New Orleans, LA
- MP 431 **Mass Spectrometric Analysis of Thioicrulline Bound Proteins Extracted from Human Keratinocyte Cells;** Mulu Gebremedhin¹; Dave Mah¹; Peggy Nelson²; Thomas Sawyer²; Nora Chan²; ¹canada west biosciences Inc, Medicine hat, AB, CANADA; ²Defense R & D Suffield, Medicine hat, AB, canada
- MP 432 **Shotgun Proteomic Analysis of the Human Monocyte Membrane Subproteome using Alternative Solubilization Techniques;** Xiaoying Ye¹; Ramin M. Hakami²; Bradley Hollinger¹; Robert G. Ulrich²; Haleem J. Issaq¹; Timothy D. Veenstra¹; Josip Blonder¹; ¹SAIC-Frederick Inc., Frederick, MD; ²US Army Medical Research, Frederick, MD

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- MP 433 **Stable Isotope -Based Quantitative Organelle Proteomics: Improving Resolution and Protein Coverage;** Pawel Grzegorz Sadowski; Kathryn S Lilley; *University of Cambridge, Cambridge, UK*
- MP 434 **The Mechanism and Target of Aliphatic Azides as Novel Protein Photo-Labeling Reagents;** Dennis Szymanski¹; Lakshmiipathi Pandarinathan²; Alexander Makriyannis²; ¹ *Boston, MA*; ² *Center for Drug Discovery, Boston, MA*
- MP 435 **Proteomic Analysis of Photosynthetic Membranes Isolated From Rhodobacter Sphaeroides;** Hilary Lewis; Jaimey Tucker; Mark Dickman; C. Neil Hunter; *University of Sheffield, Sheffield, UK*
- MP 436 **Blue Native Electrophoresis combined with Stable Isotope Labeling Shows that Saccharomyces Cerevisiae Mitochondrial Respiratory Supercomplexes Are Still Present under Anaerobiosis;** Andreas Helbig²; Marco J.L. de Groot¹; Renske A. van Gestel²; Shabaz Mohammed²; Jack Pronk¹; Jack T. Pronk¹; Pascal Daran Lapujade¹; Albert J.r. Heck²; Slijper Monique²; ¹ *Delft University of Technology, Delft, Netherlands*; ² *Utrecht University, Utrecht, Netherlands*
- MP 437 **Optimizing uLC-MS-MS Analysis of Hydrophobic Peptides;** Anna Speers; Christine Wu; *Univ of CO School of Med, Aurora, CO*
- MP 438 **Shaving off the Biological Membranes with a Protease and Mass Spectrometry Identification of Membrane Interacting Peptides;** Natalia Mast¹; Wei-Li Liao²; Irina A. Pikuleva¹; Illarion V. Turko²; ¹ *University of Texas Medical Branch, Galveston, TX*; ² *Center for Advanced Research in Biotechnology/NIST, Rockville, MD*
- MP 439 **Analysis of the Membrane Protein Fraction of Halobacterium salinarum by Comparative CID and ETD Fragmentation of Highly Enriched Hydrophobic Peptides;** Christian Klein¹; Frank Siedler²; Beatrix Scheffer²; Andrea Schneider³; Friedhelm Pfeiffer²; Marcus Macht³; Ali Kettani¹; Dieter Oesterhel²; ¹ *Bruker Daltonics Inc., Fremont, CA*; ² *Max-Planck Institute for Biochemistry, Martinsried, Germany*; ³ *Bruker Daltonics GmbH, Bremen, Germany*
- MP 440 **Microfluidic Electrocapture Assisted Mass Spectrometry of Membrane-Associated Polypeptides;** Mohammadreza Shariatgorji¹; Juan Astorga-wells²; Hans Jornvall²; Leopold L. Ilag¹; ¹ *stockholm university, stockholm, Sweden*; ² *Karolinska Institutet, Stockholm, Sweden*
- MP 441 **Functional Genomic Approaches to Study Adenovirus Species B Receptors;** Hung Viet Trinh¹; Markus Eisenhut²; Urs Greber²; Silvio Hemmil¹; ¹ *University of Zurich, Zurich, Switzerland*; ² *Institute of Zoology, Univ of Zurich, Zurich, Switzerland*
- MP 442 **Comprehensive Proteomic Analysis of Membrane Proteins in Toxoplasma.gondii;** Fa-yun Che; Berta Burd; Hongshan Zhang; Carlos Madrid-Aliste; Edward Nieves; Kami Kim; Andras Fiser; Louis M. Weiss; Ruth Hogue Angeletti; *Albert Einstein College of Medicine, Bronx, NY*
- MP 443 **Intact Analysis of Membrane Proteins from Acetylcholine Receptor and Bovine Mitochondria;** Mahbod R. Hajivandi; Xiquan Liang; R. Marshall Pope; *Invitrogen, Carlsbad, CA*
- MP 444 **Identification of Surface Membrane Immunogenic Proteins of Actinobacillus Pleuropneumoniae as Potential Candidates for Vaccine Therapy;** Jacqueline W. Chung; Chris Ng-Thow-Hing; Lorne I. Budman; James W. Coulton; Bernard Gibbs; *McGill University, Montreal, Canada*
- MP 445 **An Alternative Method for Investigation of Whole Membrane Samples using Elastase as Digestive Protease;** Benjamin Rietschel¹; Tabiwang Ndipanquang Arrey¹; Bjoern Meyer¹; Michael Karas¹; Ansgar Poetsch²; ¹ *Johann Wolfgang Goethe-University, Frankfurt/Main, Germany*; ² *Ruhr University, Bochum, Germany*
- MP 446 **Deciphering the Plasma Membrane Proteome of the Mouse Olfactory Epithelium;** Bettina Warscheid²; Jenny Adler²; Silke Oeljeklaus²; Jon Barbour¹; Hanns Hatt¹; Eva M. Neuhaus¹; Helmut E. Meyer²; ¹ *Ruhr-University Bochum, Bochum, Germany*; ² *Medical Proteom Center, Bochum, Germany*
- MP 447 **Membrane Proteomic Analysis of the Protozoan Parasite Trypanosoma cruzi;** Xiang Zhu; James A Atwood III; Brent Weatherly; Todd A Minning; Rick L Tarleton; Ron Orlando; *University of Georgia, Athens, GA*
- MP 448 **Overcoming Hurdles in Membrane Proteomics by the Implementation of Complementary Approaches;** Dörte Becher; Susanne Wolff; Hannes Hahne; Michael Hecker; *University Greifswald, Greifswald, Germany*
- MP 449 **Identifying Induced Non-Gal Antibody Response Proteins following Pig-to-Primate Cardiac Xenotransplantation;** Carrie J. Heppelmann¹; Paul G. Stalboerger³; Guerard W. Byrne³; Christopher G. A. McGregor³; H. Robert Bergen, III²; ¹ *Mayo Clinic, Rochester, MN*; ² *Mayo Clinic College of Medicine, Rochester, MN*; ³ *Mayo Clinic Department of Surgery, Rochester, MN*
- MP 450 **Characterization of the Liver Membrane Proteome using Peptide Immobilized pH Gradient Isoelectric Focusing (IPG IEF);** Joel M Chick¹; Paul A Haynes¹; Bengt Bjellqvist²; Mark S Baker¹; ¹ *Macquarie University, Sydney, Australia*; ² *GE Healthcare, Uppsala, Sweden*
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- PROTEIN CONFORMATION, 451 - 462**
- MP 451 **Using Charge State Distributions ESI MS to Investigate Conformational Integrity of PEGylated Proteins;** Agya Frimpong¹; Igor A. Kaltashov²; ¹ *University of Massachusetts, Amherst, MA*; ² *University of Massachusetts, Amherst, MA*
- MP 452 **Microwave-Assisted Acid and Base Hydrolysis Combined with MALDI-MS for Structural Studies of the Prion Protein;** Bela Reiz; David Wishart; Adina Bujold; Liang Li; *University of Alberta, Edmonton, Canada*
- MP 453 **Analysis of Disulfide Bond Folding in Recombinant Human Resistin Protein;** Eric Beil; Thomas Malia; Tatiana Ort; Jill Carton; Ashok Mathur; Jennifer Nemeth; *Centocor R&D, Radnor, PA*
- MP 454 **Mass Spectrometry Driven Characterization of Early Aggresome-Like Structures;** Anders Dahl Knudsen¹; Poul H Jensen²; Allan Stensballe¹; ¹ *Aalborg University, Aalborg, Denmark*; ² *Aarhus University, Aarhus, Denmark*
- MP 455 **Quadrupole Ion Trap Bath Gas Pressure and Protein Conformation;** Brittany Butler; Gary L. Glish; *University of North Carolina, Chapel Hill, NC*
- MP 456 **Probing Conformational Changes in Peptide Hormones Complexed with Transition Metal Cations using Electron Capture Dissociation;** Yuri E.M. Van Der Burgt; Magnus Palmblad; Hans C. Dalebout; André

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- M. Deelder; *Leiden University Medical Center, Leiden, Netherlands*
- MP 457 **Travelling Wave Ion Mobility Mass Spectrometry-Based Conformational Studies of Prion Protein – Effects of Metal Cation Binding and Buffer Gas;** Susan E. Slade¹; Konstantinos Thalassinos¹; Gillian R. Hilton¹; Teresa Pinheiro¹; Claudia A Blindauer¹; Michael T. Bowers²; James Scrivens³; ¹*University of Warwick, Coventry, UK*; ²*University of California, Santa Barbara, CA*; ³*Univ of Warwick, Coventry, UK*
- MP 458 **Irreversible Thermal Unfolding of Cytochrome c Studied by ESI-MS;** Jenna-Jiangjiang Liu; Lars Konermann; *University of Western Ontario, London, Canada*
- MP 459 **Conformational Effects of Small Molecule Binding to Parkinson's Protein α -Synuclein and its Disease-Related A30P and A53T Mutants;** Megan Grabenauer¹; Thomas Wytenbach¹; Nicholas F. Dupuis¹; Jay R. Winkler²; Harry B. Gray²; Michael T. Bowers¹; ¹*University of California, Santa Barbara, CA*; ²*California Institute of Technology, Pasadena, CA*
- MP 460 **Structural Characterization and Antibody- Epitope Identification of Parkinson's Disease Target Protein α -Synuclein using Epitope- Mass Spectrometry;** Camelia Vlad¹; Karin Danzer²; Bastian Hengerer²; Michael Przybylski¹; ¹*Laboratory of Analytical Chemistry and Biopolymer, Konstanz, Germany*; ²*Boehringer Ingelheim Pharma GmbH & Co. KG, ZNS Res, Biberach, Germany*
- MP 461 **What Is the Smallest Protein whose Native Fold Can Be Preserved in a Mass Spectrometer?;** Jason Kalapothakis; Andrew Stopford; Perdita Barran; *The University of Edinburgh, Edinburgh, UK*
- MP 462 **Optical Characteristics of the Enhanced Green Fluorescent Protein (EGFP) in the Gas Phase;** Matthew W. Forbes; Abbas Kassam; Qunzhou Bian; Francis Talbot; Rebecca A. Jockusch; *University of Toronto, Toronto, Canada*
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- PROTEIN QUANTITATION 1, 463 - 503**
- MP 463 **Absolute Quantification of Protein Phosphorylation by Liquid Chromatography Mass Spectrometry;** Michael J. Previs; Peter Van Buren; Kelly J. Begin; Jim O. Vigoreaux; Martin M. Lewinter; Dwight E. Matthews; *University of Vermont, Burlington, VT*
- MP 464 **Differentiation of Specific and Non-Specific Protein Interactions in Bacteria by Isotopic Labeling and Mass Spectrometry;** W. Judson Hervey, IV¹; Gurusahai Khalasa-Moyers¹; Patricia K. Lankford²; Linda J. Foote²; Elizabeth T. Owens²; Tse-Yuan Lu²; Jennifer L. Morrell-Falvey²; W. Hayes McDonald²; Dale A. Pelletier²; Greg Hurst²; ¹*UT-ORNL Graduate School of Genome Science, Oak Ridge, TN*; ²*Oak Ridge National Laboratory, Oak Ridge, TN*
- MP 465 **Protein Identification of Desalted iTRAQ-Labeled Nasal Lavage Samples using On-Line 2-D LC-MS-MS;** Marina C Jeppsson; Monica H Kristiansson; Christian Lindh; *Lund University, Lund, Sweden*
- MP 466 **Targeted Detection and Quantification of Adenylyl Cyclase 7 Protein in Mouse Whole Brain using MRM;** Kathleen Grant; Christine Wu; *Univ. of Colorado at Denver, Denver, CO*
- MP 467 **Robust and Sensitive iTRAQ Quantification on an LTQ-Orbitrap Mass Spectrometer using PQD and HCD Fragmentation;** Marcus Bantscheff; Markus Hermann Boesche; Dirk Eberhard; Gavain Sweetman; Bernhard Kuster; *Cellzome AG, Heidelberg, Germany*
- MP 468 **Identification of Proteins Essential for Muscle Development using SILAC;** Michael Rosenblatt^{1,2,4,5}; Yair Argon³; David Sarracino^{1,2,4,5}; Mary F Lopez^{1,2,4,5}; John C. Rogers^{1,2,4,5}; ¹*Thermo Scientific, Rockford, IL*; ²*Thermo Scientific, Rockford, IL*; ³*Children's Hospital of Philadelphia, Philadelphia, PA*; ⁴*Thermo Scientific, Cambridge, MA*; ⁵*Thermo Scientific, Cambridge, MA*
- MP 469 **Characterization and Absolute Quantitation of Intact Proteins by Liquid Chromatography Time-of-Flight or Ion-Trap Mass Spectrometry;** Manuela Huegel¹; Christian G. Huber²; ¹*Saarland University, Instr. Analysis and Bioanalysis, Saarbruecken, Germany*; ²*Paris-Lodron-University, Dept of Molecular Biology, Salzburg, Austria*
- MP 470 **Targeted Quantitative Mass Spectrometric Identification of Differentially Expressed Proteins between Bax Positive and Bax Deficient Colorectal Cancer Clones;** Andy Lo¹; Peng Wang¹; J. Bryce Young¹; Charlie Hao²; Liang Li¹; ¹*University of Alberta, Edmonton, CANADA*; ²*Emory University, Atlanta, GA*
- MP 471 **Identification of Novel α -Synuclein Post-Translational Modifications Isolated from MAO-B Over-Expressing Models of Parkinson's Disease;** Steven R. Danielson; Jason Held; Jyothi Kumar; Bradford W. Gibson; Julie K. Andersen; *Buck Institute For Age Research, Novato, CA*
- MP 472 **Quantitative Proteomics using Stable Isotope Labeling of Primary Neurons Reveals Diverse Changes in Synaptic Protein Content in *fmr1* Knockout Mice;** Lujian Liao; Sung Kyu Park; Peter Vanderklish; John Yates; *The Scripps Research Institute, La Jolla, CA*
- MP 473 **Accurate Quantitative Determination of Plasma Membrane Protein Concentrations in Intact Arabidopsis thaliana Plants using Metabolic Labeling and Mass Spectrometry;** Katja Bernfur; Olaf Larsson; Christer Larsson; Niklas Gustavsson; *Department of Biochemistry, Lund, Sweden*
- MP 474 **Delineation of a Carcinogenic *Helicobacter pylori* Proteome using Difference Gel Electrophoresis and Mass Spectrometry (DIGE/MS);** David B. Friedman; Aime T. Franco; Corbin W. Whitwell; Dawn A. Israel; Richard M. Peek, Jr; *Vanderbilt University School of Medicine, Nashville, TN*
- MP 475 **Utility and Limitations of Measuring Protein Expression Levels in Complex Mixtures using iTRAQ;** Sara P. Gaucher; Michele Fleck; Kirsten Benjamin; Tahera Iqbal; Michael Leavell; *Amyris Biotechnologies, Emeryville, CA*
- MP 476 **Label-Free LC-MS Quantification of Modified Peptides by Pseudo-MRM Analysis using Ion-trap Mass Spectrometers;** Amy-Joan L. Ham; Jeremy S Myers; Ying Xiong; Daniel C. Liebler; *Vanderbilt University School of Medicine, Nashville, TN*
- MP 477 **Absolute Protein Quantification for Pre-Clinical Drug Safety Evaluation;** Ben Collins¹; Ning Tang²; Peter Stone³; Thomas Lau¹; Albrecht Gruhler⁴; Jean-Charles Gautier⁵; William Gallagher¹; Stephen Pennington¹; ¹*UCD Conway Institute, University College Dublin, Dublin, Ireland*; ²*Agilent Technologies US, Santa Clara, CA*; ³*Agilent Technologies UK Ltd, Manchester, UK*; ⁴*Novonordisk, Maaloev, Denmark*; ⁵*Sanofi-Aventis, Vitry sur Seine, France*
- MP 478 **DIGE Analysis Reveals that Bicyclomycin Evokes a Distinct Fingerprint of Protein Expression in *E. coli*;** Lewis M. Brown¹; Christopher J. Cardinale²; Robert S.

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- Washburn³; Vasisht R. Tadigotla⁴; Max E. Gottesman³; Evgeny Nudler²; ¹*Columbia University, New York, NY*; ²*New York University School of Medicine, New York, NY*; ³*Columbia University Medical Center, New York, NY*; ⁴*Rutgers, The State University of New Jersey, Piscataway, NJ*
- MP 479 **Data Quality Assurance of Label-Free LC-MS Differential Proteome Analysis**; Daniel C. Chamrad¹; Wolfgang Jabs²; Klaus Marquart¹; Barbara Sitek³; Kai Stühler³; Helmut E. Meyer³; Carsten Baessmann²; Martin Blueggel¹; ¹*Protagen AG, Dortmund, Germany*; ²*Bruker Daltonik GmbH, Bremen, Germany*; ³*Medizinisches Proteom-Center, Bochum, Germany*
- MP 480 **Protein Profiling of *Escherichia coli* Wild-Type Strain and Reduced-Genome Strain by Label-Free Quantitative Proteomics**; Hanako Ataku¹; Miyako Mise¹; Keiko Nishijima¹; Jun Yamazaki¹; Kazumi Sasaki¹; Syuji Yamazaki¹; Hideo Mori²; Hiroshi Mizoguchi²; Nobuyuki Fujita¹; ¹*National Institute of Technology and Evaluation, Tokyo, Japan*; ²*Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan*
- MP 481 **Analysis of Activity-Dependent Changes in the Post Synaptic Density by Primary Neuronal SILAC and Mass Spectrometry**; Helene Cardasis¹; Bryen Jordan²; Daniel Spellman¹; Edward Ziff²; Thomas Neubert¹; ¹*Skirball Institute, NYU SoM, New York, NY*; ²*Department of Biochemistry, NYU SoM, New York, NY*
- MP 482 **Quantitation of Reversible Cysteine Oxidation Levels in Endogenous Proteins using MRM on a Hybrid Linear Ion Trap/Triple Quadrupole Mass Spectrometer**; Jason M. Held; Steven R. Danielson; Christian Atsriku; David J Britton; Judy Campisi; Julie Andersen; Chris Benz; Bradford W. Gibson; *Buck Institute for Age Research, Novato, CA*
- MP 483 **A Nano LC-MALD-Based Shotgun Quantitative Proteomic Approach to Investigate Virulence Factors of *Pseudomonas syringae* and its Proteome**; Yong Yang; Dave Schneider; Philip Bronstein; Sam Cartinhour; Theodore Thannhauser; *US R.W.H Center for Agriculture and Health, Ithaca, NY*
- MP 484 **Quantitative Analysis of Redox-Sensitive Proteome with DIGE and ICAT**; Cexiong Fu; Hong Li; *UMDNJ, Newark, NJ*
- MP 485 **Analysis of iTRAQ Data using Mascot and Peaks Quantification Algorithms**; Carla M R Lacerda; Kenneth Reardon; *Colorado State University, Fort Collins, CO*
- MP 486 **Investigation of Iron-Limitation Inducible Proteins of *Neisseria Meningitidis* using the Isobaric Labelling Approach Tandem Mass Tags (TMT)**; Thorsten Prinz¹; Karsten Kuhn¹; Harald Legner¹; Peter Schmid¹; Christian Baumann¹; Peter van Ulsen²; Jan Tommassen²; ¹*Proteome Sciences, Frankfurt am Main, Germany*; ²*Utrecht University, Utrecht, The Netherlands*
- MP 487 **Absolute Quantification of C-Reactive Protein in Plasma Utilizing Isotope Dilution Mass Spectrometry**; Dennis Keith Williams, Jr.; Robert Dixon; Adam Hawkrigde; David C. Muddiman; *North Carolina State University, Raleigh, NC*
- MP 488 **Comparative Analysis of Surface Plasma Membrane Proteins of Primary and Metastatic Melanoma Cells**; Haibo Qiu; Yinsheng Wang; *Dept. of Chem, UC Riverside, Riverside, CA*
- MP 489 **Expediting the Development of Targeted SRM Assays: Combining *in silico* Modeling with Data from Shotgun Proteomics to Automate Method**
- MP 490 **Proteome-Scale Measurement of Protein Turnover by Quantitative Mass Spectrometry**; Joshua E. Elias¹; Corey E Bakalarski²; Steven Gygi²; ¹*Boston, MA*; ²*Harvard Medical School, Boston, MA*
- MP 491 **Application of a New Q-TOF Mass Spectrometer to Monitor Differential Expression of histone Modifications in Response to HDACi Treatment**; Paul Drogaris¹; Anda Vintiloiu¹; Christelle Pomies¹; Eric Bonnel¹; Christine Miller²; Georges Gauthier²; Pierre Thibault¹; ¹*Université de Montréal, Montréal, Canada*; ²*Agilent Technologies, Santa Clara, CA*
- MP 492 **Label-Free Quantification of Hormone-Induced Membrane Protein Abundance Changes in *Arabidopsis thaliana***; Uma Kota; Kevin Blackburn; Srijeet Mitra; Benjamin T. Walters; Steven D. Clouse; Michael B. Goshe; *NC State University, Raleigh, NC*
- MP 493 **Strategies for Stringent Cataloguing of Methylophaga Thiooxidans using an Alternative Scanning LC-MS Approach**; Joanne B. Connolly¹; Nick Tomczyk¹; Susan E. Slade²; Vibhuti Patel²; Rich Boden²; Konstantinos Thalassinou²; Hendrik Shaefer²; James Scrivens²; ¹*Waters, Manchester, UK*; ²*University of Warwick, Coventry, UK*
- MP 494 **Global Analysis of Pathogen-Induced Plant Protein Secretion Responses using Label-Free Quantification**; Fang-yi Cheng; Kevin Blackburn; John Williamson; Michael B. Goshe; *NC State University, Raleigh, NC*
- MP 495 **Optimized Platform for iTRAQ-Based Quantitative Proteomics**; Scott Ficarro¹; Feng Zhou¹; Guillaume Adelmant¹; Job Cardoza¹; Rositsa Koleva¹; Manor Askenazi²; Yi Zhang¹; Jarrod Marto¹; ¹*Dana-Farber Cancer Institute, Boston, MA*; ²*Dana-farber Cancer Institute And Hebrew University, Boston, MA*
- MP 496 **Absolute Quantification of Potential Cancer Markers using Targeted Mass Spectrometric Analysis of Isotope Labeled Clinical Samples**; Leroi V. DeSouza¹; Adrian M. Taylor²; Marjorie Minkoff²; Christie L Hunter³; Mark M. Garner³; K W Michael Siu¹; ¹*York University, Toronto, Canada*; ²*Mds Analytical Technologies, Concord, ON*; ³*Applied Biosystems, Framingham, MA*
- MP 497 **Identification and Quantification of Intact Proteins from *A. flavus* using SILAC and Nano-Flow LC-LTQ-FT-ICR-MS**; Timothy S Collier; Adam M. Hawkrigde; David R. Georgianna; Gary A Payne; David C. Muddiman; *North Carolina State University, Raleigh, NC*
- MP 498 **Impact of Na⁺/K⁺ Transporting ATPase Silencing on the Mitochondrial Proteome of SY5Y Neuroblastoma Cells: A Study Combining siRNA and SILAC**; You-Jun Fu; Shu-Ling Xiong; Mark A Lovell; Bert C Lynn; *University of Kentucky, Lexington, KY*
- MP 499 **Stable Isotopic Labeling Studies to Determine the Protein Turnover within the Nuclear Pore Nup107-160 Subcomplex**; Joseph Glavy¹; Ileana M. Cristea²; David Fenyo³; Brian Chait³; ¹*Stevens Institute of Tech., Hoboken, NJ*; ²*Rockefeller University, New York, NY*; ³*The Rockefeller University, New York, NY*
- MP 500 **Comparative Analysis of Different Peptide and Protein Fractionation Approaches for Use in Label-**

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- Free Quantitative Shotgun Proteomics; Paul A. Haynes;** Joel Chick; Gayani Gammulla; Thi Huynh; Karlie A. Neilson; *Macquarie University, North Ryde, Sydney, Australia* MP 511
- MP 501 **Investigation of the Antibiotic Detoxification Response of Escherichia coli cells Toward Fosmidomycin via Differential Proteomics;** Suraj Dhungana²; Charles A. Testa³; David T. Fox¹; Timothy Sanchez¹; Kenneth B. Tomer²; Srinivas Iyer¹; **Andy Koppisch¹**; ¹Los Alamos National Laboratory, Los Alamos, NM; ²Niehs, Durham, NC; ³Echelon Biosciences, Salt Lake City, UT
- MP 502 **The APEX Quantitative Proteomics Tool: A Free Analysis Tool for Deriving Large Scale Protein Expression Estimates using the APEX Technology;** John C. Braisted¹; Srilatha Kuntumalla¹; Alan R. Rodrigues¹; Rong Wang¹; Shih-Ting Huang¹; Christine Vogel²; Edward M. Marcotte²; Erik S. Ferlanti¹; Alexander I. Saeed¹; Robert D. Fleischmann¹; Scott N. Peterson¹; Rembert Pieper¹; ¹J. Craig Venter Institute, Rockville, MD; ²University of Texas, Austin, TX
- MP 503 **APEX-Based Differential Protein Abundance Analysis of Shigella Dysenteriae Type I Comparing in vitro and in vivo Proteomes;** Srilatha Kuntumalla¹; David J. Clark¹; Alan R. Rodrigues¹; John C. Braisted¹; Shih-Ting Huang¹; Quanshun Zhang²; Arthur Donohue-Rolfe²; Saul Tzipori²; Scott N. Peterson¹; Rembert Pieper¹; ¹J Craig Venter Institute, Rockville, MD; ²Tufts University, North Grafton, MA
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- PROTEIN SEQUENCING, 504 - 521**
- MP 504 **De novo Sequencing of TBD-1, the First Beta-Defensin Isolated from Reptiles;** Christin Stegemann¹; Alexander Kolobov²; Olga Shamova³; Vladimir Kokryakov²; Ralf Hoffmann¹; ¹University of Leipzig, Leipzig, Germany; ²St. Petersburg State University, St. Petersburg, Russia; ³Institute for Experimental Medicine RAMS, St. Petersburg, Russia
- MP 505 **Top-Down Study of Major Urinary Proteins by in-source Decay;** Stephen C.C. Wong¹; Duncan H.L. Robertson²; Sarah R Hart¹; Marcus Macht³; Jane L. Hurst²; Robert L. Beynon²; Simon J. Gaskell¹; ¹The University of Manchester, Manchester, UK; ²University of Liverpool, Liverpool, UK; ³Bruker Daltonics GmbH, Bremen, Germany
- MP 506 **A Combination of Mass Spectrometry Techniques to Prove the Formation of a Covalent Thiosulfinate Intermediate between Peroxiredoxin and Sulfiredoxin;** Guillaume Béchade¹; Xavier Roussel²; Alain Van Dorsselaer¹; Sarah Sanglier¹; Guy Branlant²; Sophie Rahuel-Clermont²; ¹Université Louis Pasteur, IPHC-DSA, ULP-CNRS, Strasbourg, France; ²Nancy Université, MAEM, UHP-CNRS, Vandoeuvre-lès-Nancy, France
- MP 507 **Combining the Features of ETD and CID: Increased Peptide Identification;** Chris Adams; Allis S. Chien; *Stanford University, Stanford, CA*
- MP 508 **Identification of Sequencing Errors in the Genome of B. subtilis;** Matthew Lauber; James P. Reilly; *Indiana University, Bloomington, IN*
- MP 509 **Common Types of False-Positives Identified in Shotgun Proteomics;** Gang Xing; Yue Chen; Yingming Zhao; *UT Southwestern Medical Center at Dallas, Dallas, TX*
- MP 510 **Large-Scale de novo Sequencing of Ion Channel Modulators from Predatory Venomous Species;** Beatrix Ueberheide¹; David Fenyo¹; Paul F Alewood²; Brian Chait¹; ¹The Rockefeller University, New York, NY; ²The University of Queensland, Brisbane, Australia
- A Use of HPLC Data for Filtering and Validation of MS Based Peptide Identifications;** Irina A. Tarasova¹; Anton A. Goloborodko²; Roman A. Zubarev³; Mikhail V. Gorshkov¹; ¹Institute for Energy Problems of Chemical Physics, Moscow, Russian Federation; ²Moscow Institute of Physics and Technology, Dolgoprudny, Russia; ³Uppsala University, Uppsala, Sweden
- MP 512 **Dynamic Study of Tryptic Digestion Processes of Proteins by Ambient Liquid Mass Spectrometry (ALMS);** Cheng-Hui Yuan; Chih-Yuan Cheng; Li-Hua Lo; Jentaie Shiae; *National Sun Yat-Sen Univ., Kaohsiung, Taiwan*
- MP 513 **Improved Prediction of Peptide Fragmentation Spectra using a Machine Learning Approach;** Arunima Ram; Randy J. Arnold; Haixu Tang; Predrag Radivojac; *Indiana University, Bloomington, IN*
- MP 514 **De novo Sequencing of an Antibody using an Ion-Trap Mass Spectrometer;** Jane Nagel; Rita Steeves; Mark Mellman; Kathryn Underwood; Jas Seehra; *Acceleron Pharma, Cambridge, MA*
- MP 515 **Comparative Analysis of Cysteine Alkylation and the Effects on Tandem Mass Spectra and Protein Identification;** Mark J. Raftery; *Bioanalytical Mass Spect, Kensington, Australia*
- MP 516 **Isolation and Identification of Low Molecular Weight Proteins from the American Alligator (Alligator mississippiensis) using Gel Separation with Nano ESI-Q-TOF;** Lancia N.F. Darville¹; Mark E. Merchant²; Kermit K. Murray¹; ¹Louisiana State University, Baton Rouge, LA; ²McNesse State University, Lake Charles, LA
- MP 517 **Improved Coverage in Global Proteomics Survey Experiments by Decreasing Cycle Time on a Linear Ion Trap Mass Spectrometer;** Barbora Brazdova; Julie A. Horner; Julian J Phillips; *Thermo Fisher Scientific, San Jose, CA*
- MP 518 **Hidden Gems in Unassigned MS-MS Spectra Reveal a Higher Order Code for Translating mRNA into Protein;** Rachel O. Loo¹; Yanan Yang³; Juni Samos¹; Housna Mouttaki²; Michael McInerney²; Robert P. Gunsalus¹; Joseph A. Loo¹; ¹UCLA, Los Angeles, CA; ²University of Oklahoma, Norman, OK; ³Agilent Technologies, Inc, Santa Clara, CA
- MP 519 **Large-Scale Sequencing of Charge-Enhanced Peptide Ions using Electron Transfer Dissociation and Collision-Activated Dissociation;** Frank Kjeldsen; Anders B. M. Giessing; Christian Ravnsgborg; Thomas A. Hansen; Ole N. Jensen; *Univ. of Southern Denmark, Odense, Denmark*
- MP 520 **Large Peptide Sequencing - Experimental Strategies using Electron Transfer Dissociation;** Zhiqi Hao; Terry Zhang; Andreas Huhmer; *Thermo Fisher Scientific, San Jose, CA*
- MP 521 **Isolation of C-Terminal Peptides of Proteins by Exhaustive Amidation Followed by Proteolytic Digestion for Mass Spectrometric Sequencing;** Mariko Nakagawa¹; Minoru Yamaguchi²; Hiroki Kuyama³; Eiji Ando²; Osamu Nishimura³; Susumu Tsunasawa³; Takashi Nakazawa¹; ¹Nara Women's University, Nara, JAPAN; ²Shimadzu Corp, Kyoto, Japan; ³Institute for Protein Research, Osaka, Japan

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- MP 522 **Replacing HPLC Separation with Gas Phase Separation: Ion Mobility Enables Simplified Workflow for Low Abundance Protein Quantification in Human Plasma;** Weixun Wang; Jun Man; Nathan Yates; Ronald Hendrickson; *Merck Research Laboratories, Rahway, NJ*
- MP 523 **A quantitatively Optimized and Improved Digestion Protocol for Human Plasma;** Michael A Kuzyk¹; Roarke Copeland¹; Juncong Yang¹; Monica H Elliott¹; Leigh Anderson²; Christoph H Borchers¹; ¹*University of Victoria-Genome BC Proteomics Centre, Victoria, Canada*; ²*Plasma Proteome Institute, Washington, DC*
- MP 524 **Biodiversity Exploration using MS-Based Proteomics for the Improved Understanding of extreme Physiopathological Situation Adaptations;** Laetitia Fouillen¹; Thierry Raclot²; Alain Van Dorsselaer¹; Fabrice Bertile¹; ¹*IPHC-DSA, ULP, CNRS, Strasbourg, France*; ²*IPHC-DEPE, ULP, CNRS, Strasbourg, France*
- MP 525 **Plasma Proteome Analysis of The Effect of NO Synthase Inhibition on SJL Mice Bearing RcsX Lymphoma;** I. Ramesh Babu¹; YingWu Wang²; John S. Wishnok¹; Steven R. Tannenbaum¹; ¹*Massachusetts Institute of Technology, Cambridge, MA*; ²*Jilin University, Changchun, P.R. China*
- MP 526 **Proteomic Analysis of Rat and Human Plasma in search of Potential Biomarkers for Type 2 Diabetes;** Mike Galligan¹; Mike Kimzey¹; Timothy R. Radabaugh¹; George Tsapraillis¹; Daniel C Link¹; Chad R. Borges²; Hussein Yassine¹; Erik J Henriksen¹; Randall Nelson²; Craig S Stump¹; Serrine S Lau¹; ¹*University of Arizona, Tucson, AZ*; ²*Arizona State University, Tempe, AZ*
- MP 527 **Comparison of Approaches for Enrichment of Low Abundant Serum Proteins;** Ravi Chandra Dwivedi¹; Oleg V. Krokhin²; John A. Wilkins²; ¹*Manitoba Centre for Proteomics and Systems Biology, Winnipeg, Canada*; ²*University of Manitoba, Winnipeg, Canada*
- MP 528 **Extension of the Human Plasma Proteome using Electron Transfer Dissociation and Proton Transfer Reaction;** Sarah R Hart¹; Carsten Baessmann²; Laura Main³; Simon J. Gaskell¹; ¹*University of Manchester, Manchester, UK*; ²*Bruker Daltonik GmbH, 28359 Bremen, Germany*; ³*Bruker Daltonics, Coventry, UK*
- MP 529 **Optimisation of On-Line NanoLC, FT-ICR ECD-MS-MS Hyphenation for Top Down Oxidized Protein Identification;** Pauline Le Faouder¹; Iman Emami²; Christian Rolando¹; Caroline Tokarski¹; ¹*Univ. des Science/Tech de Lille, Villeneuve d'Ascq, France*; ²*Biosyntheac, Paris, France*
- MP 530 **Identification of Type II Diabetes Mellitus Associated Oxidized Proteins in Rat Plasma using Affinity Purification and Tandem Mass Spectrometry;** Ashraf G. Madian¹; Angela Myracle²; Fred E. Regnier¹; ¹*Chemistry Department, Purdue University, West Lafayette, IN*; ²*Foods and Nutrition Department, Purdue University, West Lafayette, IN*
- MP 531 **Optimization of Nanoelectrospray with Plasma Derived Samples for Qualitative and Quantitative Biomarker Analysis;** Jeff Wynn¹; Amanda Berg²; Gary Valaskovic²; ¹*New Objective Inc, Woburn, MA*; ²*New Objective, Inc., Woburn, MA*

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- MP 549 **Mass Spectrometry-Compatible Surfactant for Enhanced Proteolysis and Peptide Recovery;** Daniel

- Simpson¹; Sergei Saveliev¹; William Daily²; Carolyn Woodrooffe²; Dieter Klaubert²; Grzegorz Sabat³; Keith Wood¹; Robert Bulleit¹; ¹*Promega Corp., Madison, WI*; ²*Promega Biosciences Inc., San Luis Obispo, CA*; ³*University of Wisconsin, Madison, WI*
- MP 550 **A Novel Proteolytic Treatment Capable of Digesting Transmembrane Proteins in Presence of Strong Anionic Detergent;** Malte Schürken; Michael Karas; *Jw Goethe Univ. of Frankf, Frankfurt Am Main, Germany*
- MP 551 **Microwave-Assisted Enzymatic Digestion of Proteins as a Rapid and Efficient Digestion Approach in Proteomics;** Iveta Klouckova¹; Yuening Zhang¹; Milan Madera²; Yehia Mechref²; Milos Novotny²; ¹*Indiana University, Bloomington, IN*; ²*National Center of Glycomics and Glycoproteomics, Bloomington, IN*
- MP 552 **Application of Iodoacetamide Derivatives Utilized to Increase Ion Abundance through the ALiPHAT Strategy;** David C. Muddiman¹; Dennis Keith Williams, Jr.³; Corey W Meadows²; Daniel L Comins¹; Adam Hawkridge⁴; ¹*North Carolina State University, Raleigh, NC*; ²*Concord University, Concord, WV*; ³*North Carolina State Univers, Raleigh, NC*; ⁴*Ne State University, Raleigh, NC*
- MP 553 **Isoelectric Point Dependent Fractionation and Detection of Protein Digests using Polymeric Nanoassemblies and MALDI-MS Analysis;** Marianny Y. Combariza²; Elamprakash Savariar¹; Sankaran Thayumanavan¹; Richard W. Vachet¹; ¹*University of Massachusetts, Amherst, MA*; ²*Universidad Industrial de Santander, Bucaramanga, Colombia*
- MP 554 **Integrating Mass Spectrometry with Sucrose Gradient Ultracentrifugation and Blue-Native PAGE for the Isolation of Intact Endogenous Protein Complexes;** Jianhong Zhou; Yu-Chun Du; *University of Arkansas, Fayetteville, AR*
- MP 555 **An IPG MudPit Workflow for MS Analysis of Protein Complexes Purified by Blue Native Gels;** Mahbod R. Hajivandi¹; Thomas Beardslee²; Xiquan Liang¹; Paul Predki¹; R. Marshall Pope¹; ¹*Invitrogen, Carlsbad, CA*; ²*Invitrogen Corporation, Carlsbad, CA*
- MP 556 **Reduction of Dynamic Concentration Range Allows Detecting Low-Abundance Proteins: RBC Lysate and CSF Cases;** Egisto Boschetti; *Bio-Rad Laboratories, Gif-sur-Yvette, France*
- MP 557 **A Novel and Versatile Chemo-Proteomics Technique for Drug Target Deconvolution;** Chaitanya Saxena¹; Yuejun Zhen¹; John Hale²; ¹*Eli Lilly & Company, Greenfield, IN*; ²*Lilly Research Labs, Greenfield, IN*
- MP 558 **Quantitation of Serum and Plasma Proteins after Depletion of Abundant Proteins with a Combinatorial Bead Library;** Vanitha Thulasiraman; Katrina Academia; Steve Freeby; Steve Roth; Hongmin Zhang; Steven Gu; Mariana Rusa; Tim Wehr; Ning Liu; Kate Smith; Aran Paulus; Fiona Plows; *Bio-rad Laboratories, Inc., Fremont, CA*
- MP 559 **iTRAQ[®]; Reagent-Based "Tagless" Strategy of Identification and Purification of Soluble Protein Complexes in Bacteria: Development of High-Throughput Protocols;** Haichuan Liu¹; Ming Dong²; Lee L. Yang²; Simon Allen¹; Eric Johansen¹; Steven C. Hall¹; Susan J. Fisher¹; Terry C. Hazen²; Jil T. Geller²; Mary E. Singer²; Jian Jin²; Mark D. Biggin¹; H. Ewa Witkowska¹; ¹*UCSF Core Mass Spectrometry Facility, San Francisco, CA*; ²*Lawrence Berkeley National Laboratory, Berkeley, CA*

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- MP 560 **Performance Evaluation of Endoproteinase Lys-C Spin-Column Rapid Digestion Compared to Traditional in-Solution Endoproteinase Lys-C Digestion;** Aaron Aslanian¹; Xuemei Han²; John Yates²; ¹Salk Institute, La Jolla, CA; ²The Scripps Research Institute, La Jolla, CA
- MP 561 **Online Microwave Digestion LC-MS-MS of Proteins;** Nicolas Hauser¹; Hongling Han²; Scott A. McLuckey²; Franco Basile¹; ¹University of Wyoming, Laramie, WY; ²Purdue University, West Lafayette, IN
- MP 562 **Selective Affinity Purification of RNA and DNA Binding Proteins using Immobilised Anilide Compounds;** Chris Sutton¹; Martyn W. Inman²; Jason Gill¹; Colin W. G. Fishwick²; Ron Grigg²; ¹Institute of Cancer Therapeutics, Bradford, UK; ²University of Leeds, Leeds, UK
- MP 563 **Protein Immobilization via Cysteine Residues for Enzymatic Digestion of Samples Containing Detergent;** Jennifer J. Hill; Cody J. Dey; Maria J. Moreno; John F. Kelly; *National Research Council Canada, Ottawa, Canada*
- MP 564 **On-Probe Fractionation and High Confidence Protein Identification of Complex Protein Mixtures using RF Plasma Modified MALDI Targets;** Ganga Fernando; Rebecca Hopkins; Gary R Kinsel; *Southern Illinois University at Carbondale, Carbondale, IL*
- MP 565 **Assessing the Binding Selectivity of Molecularly Imprinted Polymer Artificial Antibodies by Mass Spectrometry-Based Profiling System;** Yu-Chang Tyan¹; Chung-Yao Wang²; Tse-Chuan Chou²; Jing-Fang Hsu²; Pao-Chi Liao²; ¹Kaohsiung Medical University, Kaohsiung, Taiwan; ²National Cheng Kung University, Tainan, Taiwan
- MP 566 **Metalloenes as Selective Labeling Reagents in Bioanalysis;** Susanne Bomke¹; Andy Scheffer¹; Björn Meermann¹; Bettina Seiwert²; Uwe Karst¹; ¹Institute of Inorganic and Analytical Chemistry, Münster, Germany; ²MP Golm, Potsdam, Germany
- MP 567 **Microwave Enhanced Proteolysis: Mechanism and Optimization for Difficult Proteins;** Brian Imai¹; Peter Yau¹; Grace S Vanier²; Mike Collins, Jr²; Jonathan Collins²; ¹University of Illinois, Urbana Champaign, IL; ²CEM Corporation, Matthews, NC
- MP 568 **A Proteomics Approach for Identifying Phosphoinositides (PtdInsPn) Interacting Proteins;** Steve Nguyen; Michel Vermeulen; Michael Lund Nielsen; Matthias Mann; *Max Planck Institute, Martinsried, Germany*
- MP 569 **Use of Off-Gel Electrophoresis as the First Dimension Separation in Shotgun Proteomic Analysis;** Lashanda Waller¹; Kevin S. Shores²; Daniel R. Knapp¹; ¹Medical University of SC, Charleston, SC; ²University of Texas, Austin, TX
- MP 570 **Application of Pressurized Solvents for Ultra Fast Proteolysis: Proteomics on the fly;** Daniel Lopez Ferrer; Konstantinos Petritis; Natacha M Lourette; Brian H. Clowers; Kim K. Hixson; Tyler H Heibeck; Eric A. Livesay; Ryan Kelly; David Prior; Ljiljana Pasa-tolic; David G. Camp; Mikhail Belov; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- MP 571 **Characterizing Chemical Ligands by Heat Map Analysis of Binding Proteins and Enrichment of Kinases by Selected Chemical Ligands;** Yoshiya Oda; Yasutaka Takase; Ken Aoshima; Hiroyuki Katayama; Tsuyoshi Tabata; Takashi Owa; Junro Kuromitsu; *Eisai, Tsukuba, Japan*
- MP 572 **Magnetic Nanoparticle-Based Microwave-Assisted Phosphoproteomic Analysis;** Wei-Yu Chen; Yu-Chie Chen; *National Chiao Tung Univ., Hsinchu, Taiwan*
- MP 573 **Equalisation of Protein Amounts for Overcoming the High Dynamic Protein Expression Range in the Analysis of Plant Proteomes;** Laurence V. Bindschedler; Rainer Cramer; *The University of Reading, Reading, UK*
- MP 574 **A High-Throughput Method for Phosphopeptide Enrichment of Spliceosomal Proteins;** He-Hsuan Hsiao¹; Mads Gronborg²; Reinhard Luehrmann³; Henning Urlaub¹; ¹Bioanalytical Mass Spectrometry Group, MPIIbpc, Goettingen, Germany; ²Department of Neurobiology, MPIIbpc, Goettingen, Germany; ³Department of Cellular Biochemistry, MPIIbpc, Goettingen, Germany
- MP 575 **Identification of Sulfenated Proteome using a Biotin-Tagged Sulfenic Acid Specific Reagent (DCP-bio1);** Revati Wani; Allen W. Tsang; Chananat Klomsiri; Bruce S. King; Leslie Poole; Cristina M. Furdui; *Wake Forest University School of Medicine, Winston Salem, NC*
- MP 576 **Application of Carrier-Free Enzyme Immobilization to Proteomics: On-plate Proteolysis using Cross-linked Trypsin Aggregate;** Chenxi Jia¹; Zhimin He²; Lingjun Li¹; ¹University of Wisconsin, Madison, WI; ²Tianjin University, Tianjin, China
- MP 577 **Effect of pH on Immobilized Trypsin Microreactors for Protein Digestion and Identification;** Ying Long¹; Cheng Zhao³; Troy D. Wood²; ¹Univeristy at Buffalo, Buffalo, NY; ²University at Buffalo/nanogenesys. Inc., Buffalo, NY; ³Abbott Laboratories, Abbott Park, IL
- MP 578 **A Comparison of Poly Co-(N-Isopropylacrylamide-Methacrylic Acid) (NIPAAAM-MAA) Polymer Brush Surfaces and Plasma Polymer Surfaces for On-Target Peptide Fractionation;** Venney Wong; Gary R. Kinsel; Daniel Dyer; Ganga Fernando; Zaneer Segu; *Southern Illinois University Carbondale, Carbondale, IL*
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- PROTEOMICS: BIOMARKER DISCOVERY 1, 579 - 604**
- MP 579 **Determination of Potential Amyotrophic Lateral Sclerosis Biomarkers in Cortex Samples by MALDI-TOF MS, MALDI Imaging MS, and MALDI-Q-FT-ICR MS;** Kristin J. Boggio¹; Long Li¹; Michael L. Easterling²; Christopher J. Thompson²; Nathalie YR Agar³; Jeffrey N. Agar¹; ¹Brandeis University, Waltham, MA; ²Bruker Daltonics Inc., Billerica, MA; ³Harvard Medical School, Neurosurgery, Boston, MA
- MP 580 **Phosphoproteomics as a Platform for Biomarker Discovery in Lung Cancer;** Rui Xi Xie¹; Haochen Li¹; Arminja Kettenbach¹; Brendan Faherty^{2,3}; Scott A. Gerber¹; ¹Dartmouth Medical School, Lebanon, NH; ²Dartmouth College, Lebanon, NH; ³Dartmouth College, Lebanon, NH
- MP 581 **Improvement of Subcellular Fractionation and Novel 2-D Separation Method for the Identification of Phospho-Biomarkers for Cancer;** Karin Grosstessner-Hain¹; Björn Hegemann¹; Jan-Michael Peters¹; Karl Mechtler²; ¹Research Institute of Molecular Pathology (IMP), Vienna, Austria; ²Institute of Molecular Biotechnology (IMBA), Vienna, Austria
- MP 582 **Can Quantitative, Label-Free Methods Be Extended to Top-Down Strategies? A Proof of Principle Experiment for Analyzing Human HDL;** Matthew T. Mazur; Kai Zhou; Nathan A. Yates; Ronald C. Hendrickson; *Merck Research Laboratories, Rahway, NJ*

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- MP 583 **Identification of Differentially Expressed Proteins in Neurotensin Receptor Wild Type vs Knockout Mice using PF 2D and Mass Spectrometry;** Katrina Williams; Mona Boules; Bernadette Cusack; Elliott Richelson; *Mayo Clinic, Jacksonville, FL*
- MP 584 **Orbitrap and FTICR: Figures of Merit and Methodology for Comparing Unbiased Biomarker Discovery Platforms;** YI DU; Matthew Mazur; Fanyu Meng; Ronald Hendrickson; Nathan Yates; *Merck Research Laboratories, Rahway, NJ*
- MP 585 **Proteomic Progression of Human Prostate Cancer using Urogenital Mesenchyme (UGM)/BPH-1 Recombinants, Stimulated by Testosterone (T) and Estradiol 17b (E2);** John D. Lapek; Lauren Jensen; William A. Ricke; Alan E. Friedman; *University of Rochester Medical Center, Palmyra, NY*
- MP 586 **Comparative Investigation of the Chicken and Human Plasma Proteome: Implications for Biomarker Discovery in Epithelial Ovarian Cancer;** Adam Hawkrige¹; Becca Wysocky¹; James N. Petitte¹; Paul E. Mozdziak¹; Kenneth E. Anderson¹; William A. Cliby²; Jonathan M. Horowitz¹; David C. Muddiman¹; ¹North Carolina State University, Raleigh, NC; ²Mayo Clinic College of Medicine, Rochester, MN
- MP 587 **Strategies for Measuring Protein Markers for Pancreatic Cancer from Salivary Fluid;** Pinmanee Boonthueung; Prasanna Ramachandran; James J. Farrell; David T. Wong; Joseph A. Loo; *UCLA, Los Angeles, CA*
- MP 588 **Discovery of Brain Damage-Related Biomarkers in Human Ante-mortem and Post-mortem Cerebrospinal Fluids with Sixplex Isobaric Tandem Mass Tags;** Loïc Dayon¹; Alexandre Hainard¹; Virginie Licker¹; Natacha Turkic¹; Karsten Kuhn²; Denis F. Hochstrasser³; Pierre R. Burkhard⁴; Jean-Charles Sanchez¹; ¹Biomedical Proteomics Group, University of Geneva, Geneva, Switzerland; ²Proteome Sciences R&D GmbH & Co. KG, Frankfurt am Main, Germany; ³Clinical Proteomics Group, Geneva Uni. Hospital, Geneva, Switzerland; ⁴Department of Neurology, Geneva Uni. Hospital, Geneva, Switzerland
- MP 589 **Stercobilin Depletion in Autistics' Urine: Testing Hypotheses to Explain Metabolism using Electropray Ionization Mass Spectrometry;** Nhu Quynh, Thi Nguyen¹; Troy D. Wood²; ¹Chemistry Department, SUNY Buffalo, Buffalo, NY 14, Buffalo, NY; ²University At Buffalo/nanogenesys. Inc., Buffalo, NY
- MP 590 **Identification of Candidate Plasma Biomarkers for Pancreatic Cancer with and without Diabetes: A Case Control Study;** Vikram Palamalai²; David A Ahlquist¹; Olson E Janet²; Jeanette Eckel-passow¹; Ann L Oberg¹; Kenneth L. Johnson¹; Michael W. Holmes²; H. Robert Bergen, Iii²; ¹Mayo Clinic, Rochester, MN; ²Mayo Clinic College of Medicine, Rochester, MN
- MP 591 **Correlation of miRNA and SILAC Protein Expression in a Primary Cancer Cell Line;** Lisa Wenrich; Xiquan Liang; Mahbod R. Hajivandi; Brad Love; Christopher Adams; Paul Predki; R. Marshall Pope; *Invitrogen, Carlsbad, CA*
- MP 592 **High Throughput Analysis of FFPE Tissue Samples Combined with Microelectrophoresis and MALDI MS;** Hans-Rudolf Aerni; M. Reid Groseclose; M. Lisa Manier; Dale S. Cornett; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- MP 593 **MALDI TOF Profiling of Low Molecular Weight Serum Protein Fraction from Breast Cancer sera for Pattern Analysis;** V.S. Kumar Kollu¹; Bernard Seth¹; Brian. J Leech¹; Tapan Maity⁴; David Malehorn²; William Bigbee²; Sun Mai²; Richard Mural¹; Michael Liebman¹; Craig Shriver³; ¹Windber Research Institute, Windber, PA; ²CPF, University of Pittsburgh, Pittsburgh, PA; ³Walter Reed Army Medical Center, Washington DC; ⁴University of Maryland, Baltimore, MD
- MP 594 **Mass Spectrometry Can Show Potential Cancer Biomarkers in Urine;** Maria A Hamilton¹; Clare Kenny Carney¹; Guangyu Zhang¹; Madhuri Mulekar²; Rodney Rocconi¹; Raymond Wynn¹; Rajeev S. Samant¹; Lalita A. Shevde¹; Lewis K. Pannell¹; ¹Mitchell Cancer Institute, Mobile, AL; ²University of South Alabama, Mobile, AL
- MP 595 **Multiple-Reaction-Monitoring of Putative Biomarkers of Hepatocellular Carcinoma Identified by Tissue-to-Plasma Strategy;** Sheeno Thyparambil¹; Richard C Jones²; Ricky D Edmondson³; ¹National Center for Toxicological Research, Jefferson, AR; ²Nextgen Sciences, Ann Arbor, MI; ³Uams, Little Rock, AR
- MP 596 **Proteomic Characterization of Human Cervical Mucous Proteins;** Yiming Ye; Gitika Panicker; Dongxia Wang; Elizabeth Unger; *Centers of Disease Control And Prevention (cdc), Atlanta, GA*
- MP 597 **Characterization of Peptides from Elastin Degradation;** Jiangtao He; Shuren Ma; Gerard M Turino; Yong Lin; *St.Luke/Roosevelt Hospital Center, New York, NY*
- MP 598 **A Quantitative Proteomic Approach for Identification Of Potential Biomarkers in Hepatocellular Carcinoma using 8-Plex iTRAQ Reagents;** Raghothama Chaerkady¹; Paul J Thuluvath²; Marjan Gucek²; Genaro Pimienta²; Anuradha Nalli¹; Perumal Vivekanandan²; Robert N Cole²; Michael A Choti²; Michael Torbenson²; Akhilesh Pandey²; ¹Institute of Bioinformatics, Bangalore, Karnataka, IN; ²Johns Hopkins University, Baltimore, MD
- MP 599 **Proteomic Analysis of Chronic Methamphetamine Treatment in Rat Cortex;** William K. Russell¹; Firas Kobeissy²; Issa Issac³; Kevin S. Wang²; David H. Russell¹; Mark S. Gold²; ¹Texas A&M University, College Station, TX; ²University of Florida, Gainesville, FL; ³Genomic Solutions, Ann Arbor, MI
- MP 600 **Investigation into Biomarkers of Antidepressant Response in a Mouse Model of Depression using Isobaric Labels (Tandem Mass Tags) and 2DE;** Helen L Byers¹; James Campbell¹; Karsten Kuhn³; Richard Joubert³; Elke Binder²; Jose L Paya-Cano²; Malcolm A Ward¹; Peter McGuffin²; Peter Schulz-Knappe³; Katherine J Aitchison²; Leonard C Schalkwyk²; ¹Proteome Sciences plc, London, UK; ²MRC SGDP Centre, Institute of Psychiatry's at KCL, London, UK; ³Proteome Sciences R&D GmbH & Co KG, Frankfurt Am Main, Germany
- MP 601 **Diagnosis of Gastric Cancer by Peptidomic Analysis of Gastric Juice;** Wei-Chao Chang¹; Ping-I Hsu²; Yuan-Yan Chen¹; Michael Hsiao¹; Pei-Jung Lu²; Chung-Hsuan Chen¹; ¹The Genomics Research Center, Academia Sinica., Taipei, TAIWAN; ²Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan
- MP 602 **Novel Sensitive and Specific Method for Search for Serum Biomarkers of Cancer;** Rustam Ziganshin¹; Dmitry Alexeev¹; Georgii Arapidi¹; Vadim Govorun²; ¹Shemyakin and Ovchinnikov Institute of Bioorganic,

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- MP 603 **Combining Exploratory and Targeted Analysis for Identification and Quantitation of Biomarker Candidates in a Single NanoLC-MS Run; Reinaldo Almeida¹; Leonie F. Waanders²; Peter Bandilla²; Gary A. Schultz²; Mark Allen¹; Matthias Mann²; ¹Advion Biosciences Ltd, Norwich, Norfolk, UK; ²Mpi For Biochemistry, Martinsried, Germany; ³Advion Biosystems, Ithaca, NY**
- MP 604 **Quantitative Proteomic Analysis Reveals Redirection of Karyopherin-Mediated Nuclear Transport in Primary CD4 Cells Infected with HIV-1; Eric Y Chan¹; Jon M Jacobs²; Jennifer N Sutton²; Matthew E Monroe³; Andrew Keller⁴; David C Camp II³; Richard D Smith³; Michael G Katze¹; ¹University of Washington, Seattle, WA; ²Thermo Fisher Scientific, Cambridge, MA; ³Pacific Northwest National Lab, Richland, WA; ⁴Rosetta Biosoftware, Seattle, WA**
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- MP 605 **Differential Proteomic Characterization of Multiple Sclerosis-Associated Proteins as Potential Biomarkers in Human Cerebrospinal Fluid (CSF); Dawn Chen; WenXue Li; Noline Schiess; Yan Huang; Benjamin Greenberg; Robert Cotter; Avindra Nath; Johns Hopkins University, Baltimore, MD**
- MP 606 **Proteome Changes Induced by Knock-Out of the Prostaglandin-Degrading Enzyme, 15-PGDH; Chao Yuan; Min Yan; Sanford D. Markowitz; Mark Chance; Jinsook Chang; Case Western Reserve University, Cleveland, OH**
- MP 607 **Quantitative Mass Spectrometry for Analysis of Membrane Expression of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR); Alexis A. Ramos¹; Bonita A. Coutermarsh²; Pamela C. Diego¹; Bruce A. Stanton²; Xudong Yao¹; ¹Department of Chemistry, University of Connecticut, Storrs, CT; ²Department of Physiology, Dartmouth Medical School, Hanover, NH**
- MP 608 **Proteomic Comparison of Ascites from Ovarian Cancer Patients and Ovarian Cancer Cell Lines using HPLC-Orbitrap Mass Spectrometry; Guangyu Zhang¹; Rodney Rocconi¹; Madhuri Mulekar²; Lalita A Shevde¹; Rajeev S Samant¹; Lewis K. Pannell¹; ¹Mitchell Cancer Institute, Mobile, AL; ²University of South Alabama, Mobile, AL**
- MP 609 **Deep Protein Identification Analysis of the Plasma Glycoproteome for Clinical Proteomics; Majlinda Kullolli; William S. Hancock; Marina Hincapie; Northeastern University, Boston, MA**
- MP 610 **Targeted Proteomic Analysis of the Beta-Adrenergic Receptor Signaling Pathway in Human Cardiac Biopsies Collected over the Course of Beta-Blocker Treatment; Kelli Kline; Wayne Minobe; Brian Lowes; J. David Port; Michael Bristow; Christine Wu; University of Colorado, Aurora, CO**
- MP 611 **Proteomics of Neoplastic Stem Cells in Children's Germ Cell Tumors; Sruthi Eedala¹; Elizabeth Perlman²; William Haskins¹; ¹University of Texas at San Antonio, San Antonio, TX; ²Chicago Memorial Hospital, Chicago, IL**
- MP 612 **Investigating the Reproducibility of Proteomic Data across Different Instrument Configurations and Platforms; Keith Fadgen; Martha D. Stapels; Waters Corporation, Milford, MA**
- MP 613 **Absolute Quantification of Targeted Endogenous Salivary Peptides using Heavy Isotope-Labeled Internal Standards and High Resolution Selected Reaction Monitoring Mass Spectrometry; Reiko Kiyonami²; Markus Hardt¹; Rosa Viner²; Vlad Zabrouskov²; H. Ewa Witkowska¹; Steven C. Hall¹; Susan Fisher¹; ¹University of California At San Francisco, San Francisco, CA; ²ThermoFisher Scientific, San Jose, CA**
- MP 614 **Examining the Correlation of Modified Serum Albumin and Disease using Intact Mass Measurements and Multiple Reaction Monitoring; Rebekah L Gundry¹; Christie L Hunter²; Irina Chernysheva¹; Jennifer E Van Eyk¹; ¹The Johns Hopkins University School of Medicine, Baltimore, MD; ²Applied Biosystems, Foster City, CA**
- MP 615 **Phosphoproteome of Human Skeletal Muscle Cells – Insights into Improved Insulin Action Due to Nutritional Intervention; Nagireddy Putluri; Liana Coleman; Ginger Ku; Zhong Wang; Xian Zhang; William Cefalu; Indu Khetarpal; Pennington Biomedical Research Center, Baton Rouge, LA**
- MP 616 **Proteomic Analysis of Oral/Head and Neck Cancer; Shen Hu; Lifeng Zhang; Jiang Jiang; Martha Arellano; David T Wong; UCLA School of Dentistry, Los Angeles, CA**
- MP 617 **Analysis of the Innate Inflammatory Response to Injury by Quantitative Blood Leukocyte Proteomics for Severe Trauma Patients; Weijun Qian¹; Brianne O. Petritis¹; Ronald J. Moore¹; Lyle L. Moldawer²; Ronald V. Maier³; Ronald G. Tompkins⁴; David G. Camp¹; Richard D. Smith¹; ¹Pacific Northwest National Laboratory, Richland, WA; ²University of Florida, Gainesville, FL; ³University of Washington, Seattle, WA; ⁴Massachusetts General Hospital, Boston, MA**
- MP 618 **Profiling Multiple Myeloma: Correlation of Protein and Gene Expression Data; Rick Edmondson; John Shaughnessy Jr; Bart Barlogie; UAMS, Little Rock, AR**
- MP 619 **Identification of F-Box/LLR-Repeated Protein 17 as Potential Useful Biomarker for Breast Cancer Therapy; Gary Guishan Xiao¹; Bing-sen Zhou²; Yun Yen²; ¹Creighton University Medical Center, Omaha, NE; ²City of Hope National Medical Center, Los Angeles, CA**
- MP 620 **Reference Materials for Measurement Quality Assurance in MS-based Clinical Proteomics; David Bunk; Stephen Stein; NIST, Gaithersburg, MD**
- MP 621 **Tandem Affinity Purification and Proteome-Wide Identification of Oncoprotein NPM/ALK Interacting Proteins by Mass Spectrometry; Fang Wu; Peng Wang; Leah C. Young; Raymond Lai; Liang Li; University of Alberta, Edmonton, Alberta, Canada**
- MP 622 **Diagnostics for Clinical Proteomics: Immuno Matrix Assisted Laser/Desorption Ionization (iMALDI) for the Detection of Epidermal Growth Factor Receptor (EGFR); Brinda Shah¹; Jian Jiang²; Carol E. Parker²; Jennifer Reid¹; Christoph H. Borchers¹; ¹University of Victoria-Genome BC Proteomics Centre, Victoria, BC; ²University of North Carolina, Chapel Hill, NC**
- MP 623 **Clinical Proteomic Technologies for Cancer; Christopher R. Kinsinger; Mehdi Mesri; Henry Rodriguez; NIH/NCI, Bethesda, MD**
- MP 624 **A Robust and Sensitive Automated Method for MS-Based Serum Pattern Diagnostics using Well-Established ZipTip Technology and Ultrafiltration; Ali Tiss¹; Celia Smith¹; John Timms²; Zhiyuan Luo³;**

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- MP 625 **A Multiplexed Quantitative Strategy for Membrane Proteomics: Opportunities for Mining Therapeutic Targets in Human Colorectal Cancer;** Chia-Li Han; Chih-Wei Chien; Chien-Peng Wu; Yu-Ju Chen; *Institute of Chemistry, Academia Sinica, Taipei, TAIWAN*
- MP 626 **Computational Detection and Experimental Verification of Ionization Noise versus Molecular Signals in MALDI-TOF of Protein Mixtures;** Dariya Malyarenko¹; Christine Bunai¹; Maureen Tracy¹; Julius Nyalwidhe²; Lisa Cazares²; Dennis Manos¹; Karl Kuschner¹; Eugene Tracy¹; William Cooke¹; ¹College of William and Mary, Williamsburg, VA; ²Eastern Virginia Medical School, Norfolk, VA
- MP 627 **Proteomic Analysis of the Cytoskeleton Regulation in Chronic Myelogenous Leukemia Cells JURL-MK1: Effect of Imatinib Mesylate Treatment;** Petr Halada¹; Katerina Peslova¹; Dana Grebenova²; Zbynek Hrkal²; ¹Institute of Microbiology v.v.i., Prague 4, Czech Republic; ²Institute of Hematology and Blood Transfusion, Prague 2, Czech Republic
- MP 628 **SELDI Array-Based Amyloid β Assays;** Quan Gu; Fiona Plows; Steve Roth; Vanitha T; Hongmin zhang; Mariana Rusa; *bio-rad laboratories, fremont, CA*
- MP 629 **An Online Nano LC Tandem Mass Spectrometric Approach for Identification of Specific MS-MS Signature Ions from Peptides Related to Glycation Pathologies;** Jessica Z. Bereszczak¹; Roberta Seraglia²; Annunziata Lapolla³; Pietro Traldi²; Francesco L. Brancia¹; ¹Shimadzu Research Laboratory, Manchester, UK; ²CNR-ISTM, Padova, Italy; ³University of Padova, Padova, Italy
- MP 630 **Myocardial Proteomic Profiling Helps Identify Different Forms of Heart Disease;** Gökhan Baykut¹; Matthias Witt¹; Maria Bergquist²; Franz Mayer-Posner¹; Per Hakansson¹; Hans-Reinhard Zerkowski²; Doan Baykut³; Jonas Bergquist²; ¹Bruker Daltonik GmbH, Bremen, Germany; ²Biomedical Centre, Uppsala University, Uppsala, Sweden; ³University Hospital Basel, Basel, Switzerland; ⁴Uppsala University, Uppsala, Sweden
- MP 631 **Back to the Future...Direct MALDI MS of a 109 Year Old Formaldehyde Preserved Biopsy;** Erin H. Seeley¹; Mark R. Groseclose¹; Charles L. Murphy²; Per Westermark³; Knut Sletten⁴; Alan Solomon²; Richard M. Caprioli¹; ¹Vanderbilt University Medical Center, Nashville, TN; ²Univ. of Tennessee Graduate School of Medicine, Knoxville, TN; ³Uppsala University, Uppsala, Sweden; ⁴University of Oslo, Oslo, Norway
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- MP 632 **Increasing True Positive Rates in MS-MS Sequence Searching Algorithms by Incorporating Corrections to Precursor Mass Calculations;** Viswanadham Sridhara¹; Lewis Y. Geer¹; Dina L. Bai²; An Chi³; Jeffrey Shabanowitz²; Donald F. Hunt²; Stephen Bryant¹; ¹NCBI/NLM/NIH, Bethesda, MD; ²University of Virginia, Charlottesville, VA; ³Merck Research Laboratories, Boston, MA
- MP 633 **MassSieve v1.0: A Tool for Parsimony Analysis and Multiple Search Engine Comparisons of LC-MS-MS Proteomics Data;** Melinda A. McFarland¹; Douglas J. Slotta²; Sanford P. Markey¹; ¹NIMH, NIH, Bethesda, MD; ²NCBI, NIH, Bethesda, MD
- MP 634 **Comparative Study of Data Imputation Methods for Metabolomics Data from Two Dimensional Gas Chromatography Time-of-Flight Mass Spectrometry;** Hyeyoung Cho¹; Cheolhwan Oh²; Xiaodong Huang²; Charles Buck²; Xiang Zhang³; ¹Korea Advanced Institute of Science and Technology, Daejeon, South Korea; ²Purdue University, West Lafayette, IN; ³University of Louisville, Louisville, KY
- MP 635 **High Confident Protein Identification of ETD and ECD Spectra with a New Mass List Preprocessor;** Martin Zeller; Torsten Ueckert; Bernard Delanghe; *Thermo Fisher Scientific, Bremen, Germany*
- MP 636 **Design and Implementation of a Complete Data Storage, Processing and Management Solution for a Core-Based Mass Spectrometry Laboratory;** James West¹; Weiwei Tong¹; Kip L Bodi²; Mark E. Mccomb¹; Catherine E. Costello¹; ¹Boston University School of Medicine, Boston, MA; ²Amyloid Treatment and Research Program, Boston, MA
- MP 637 **Refining the Spectrum Mill Peptide MS-MS Fragmentation Model for Improved Confidence in Sequence/Spectrum Matching;** Karl R. Clauser; Steven A. Carr; *Broad Institute of MIT and Harvard, Cambridge, MA*
- MP 638 **Identification of Peptide Sequences using Characteristics of MALDI_QIT Mass Spectral Data;** Matthew J Kelly; Jingwen Yao; *Shimadzu Research Laboratory (Europe) Ltd, Manchester, UK*
- MP 639 **Bioinformatic Strategies for More Complete and Accurate Identification of Neuropeptides;** Timothy A. Richmond¹; Geert Baggerman¹; Tom T. M. Vandekerckhove²; Gerben Menschaert²; Steven J. Husson¹; Peter Verleyen¹; Liliane Schoofs¹; Wim Van Criekinge²; ¹K.U.Leuven, Leuven, Belgium; ²U.Gent, Gent, Belgium
- MP 640 **Comprehensive Analysis of a Standard Dataset using Protein Prospector;** Peter R Baker; Robert J Chalkley; Katalin F Medzihradzsky; Alma L Burlingame; *UCSF, San Francisco, CA*
- MP 641 **HeXicon: Fully Automated HX-MS Data Analysis with Complete Deuteration Distribution Estimation;** Xinghua Lou¹; Marc Kirchner¹; Bernhard Y. Renard¹; Ullrich Koethe¹; Bjoern M. Voss¹; Christian Graf¹; Judith A. J. Steen²; Hanno Steen²; Matthias P. Mayer¹; Fred A. Hamprecht¹; ¹University of Heidelberg, Heidelberg, Germany; ²Harvard Medical School/Children's Hospital Boston, Boston, MA
- MP 642 **Peptide Retention Prediction in 2D-HPLC as a Tool for Comparison of MS-MS Search Engines;** Oleg V. Krokhin¹; Ravi Chandra Dwivedi²; Mike Harder¹; Vic Spicer¹; Ron Beavis³; John A. Wilkins¹; ¹University of Manitoba, Winnipeg, Canada; ²Manitoba Centre for Proteomics and Systems Biology, Winnipeg, Canada; ³University of British Columbia, Vancouver, Canada
- MP 643 **The Effect of Peaklist Generation Software on Database Search Results;** Aenoch Lynn; Robert J Chalkley; Peter R Baker; Katalin F. Medzihradzsky; Shenheng Guan; A.L. Burlingame; *University of California San Francisco, San Francisco, CA*
- MP 644 **Interpreting Top-Down Mass Spectra using Spectral Alignment;** Ari Frank¹; Jim Pesavento²; Craig A. Mizzen³; Neil L. Kelleher³; Pavel Pevzner¹; ¹UCSD, La Jolla, CA; ²Uc Berkeley, Berkeley, CA; ³University of Illinois, Urbana, IL

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- MP 646 **Improved Identification of Phospho Peptide Spectra from MSn Data**; Flavio Monigatti; Ozlu Nurhan; Judith Steen; Hanno Steen; Children's Hospital Boston/Harvard Medical School, Boston, MA
- MP 647 **Evaluation of Normalization Approaches for Label-Free Quantification of Endogenous Peptides**; Kim Kultima; Anna Nilsson; Maria Fälth; Birger Scholz; Per E. Andren; Uppsala University, Uppsala, Sweden
- MP 648 **Automation of Extracted Ion Chromatographic Peak Quality Validation to Improve Accuracy of Protein Abundance Calculations in High Throughput Proteomics**; William Nelson; Kert Viele; Bert C. Lynn; University of Kentucky, Lexington, KY
- MP 649 **Optimizing and Adding Advanced Features to the DASER-MMF Processing and Search Scheme to Improve Protein Identification within Mixtures**; Ryan Danell¹; Jun Han²; Derek Smith²; Christoph Borchers²; ¹Danell Consulting, Greenville, NC; ²University of Victoria-Genome BC Proteomics Center, Victoria, BC, Canada
- MP 650 **MaXIC-Q: A Fully Automated Generic Tool using Statistical and Computational Methods for Protein Quantitation Based on Isotope Labeling and LC-MS**; Ethan Y. H. Tsui¹; Yi-Hwa Yian¹; Chih-Chiang Tsou¹; Paul C. Y. Yu¹; Ke-Shiuan Lynn¹; Wen-Chi Chou¹; Yi-Ju Chen²; Yu-Ju Chen²; Ting-Yi Sung¹; Wen-Lian Hsu¹; ¹Institute of Information Science, Academia Sinica, Taipei, Taiwan; ²Institute of Chemistry, Academia Sinica, Taipei, Taiwan
- MP 651 **Protein Biomarker Discovery: Added Value of using 3 Different Search Engines on Proteomic MS-MS Datasets Containing Heavily Modified Peptides**; Dominique Vlieghe; Filip D'hondt; Roos Colman; Katleen Verleysen; Koen Kas; Koen De Cremer; Pronota nv, Zwijnaarde-Ghent, Belgium
- MP 652 **Sum Formula Generation of Chemical Compounds using Isotope Distribution Abundances and Exact Masses- A comparison of Two Instruments**; Matthias C. Letzel¹; Zsuzsanna Lipták¹; Anton Pervukhin²; Sebastian Böcker²; ¹University of Bielfeld, Bielefeld, NRW, Germany; ²Universität Jena, Jena, Germany
- MP 653 **STRAP-Pro: Sparse Profile Reconstruction for LC-MS Peak Identification**; Sebastian Boppel¹; Bernhard Y. Renard¹; Marc Kirchner¹; Judith A.J. Steen²; Hanno Steen²; Ullrich Koethe¹; Fred A. Hamprecht¹; ¹University of Heidelberg, Heidelberg, Germany; ²Harvard Medical School/Children's Hospital Boston, Boston, MA
- MP 654 **Further Improving Elemental Composition Determination with FT ICR MS**; Scott Pennino¹; Fenghe Qiu¹; Yongdong Wang²; ¹Boehringer Ingelheim Pharmaceuticals, Ridgefield, CT; ²Cerno Bioscience, Danbury, CT
- MP 655 **Application of Charge Manipulation Reactions to Improve Deconvolution Algorithm Output**; David E. Erickson; Jian Liu; Scott A. McLuckey; Purdue University, West Lafayette, IN
- MP 656 **Standard Retention Time Scale for Collaborative Generation of Accurate Mass And Time Tag (AMT) Databases**; Marina L. Pridatchenko¹; Irina A. Tarasova¹; Alexey S. Kononikhin¹; Vilem Guryca²; Dmitry A. Tolmachev¹; Alexander Yu. Agapov¹; Christopher Adams³; Igor A. Popov⁵; Alexander V. Gorskho⁴; Christophe D. Masselon²; Roman A. Zubarev³; Eugene N. Nikolaev⁵; Mikhail V. Gorshkov¹; ¹Institute for Energy Problems of Chemical Physics, Moscow, Russia; ²CEA, Université Joseph Fourier, Grenoble, France; ³Uppsala University, Uppsala, Sweden; ⁴Institute of Chemical Physics, Moscow, Russia; ⁵Institute of Biochemical Physics, Moscow, Russia
- MP 657 **A Statistical Machine Learning Model of Peptide Fragmentation in Tandem Mass Spectrometry Data**; Matthew J Sniatynski; Jason C Rogalski; Juergen Kast; The Biomedical Research Centre (UBC), Vancouver, Canada
- MP 658 **Protein Identification and Validation by using Data Independent Scanning and a Protein Identification Repository**; Johannes P.C. Vissers¹⁵; Lennart Martens²; Arthur Moseley³; Will Thompson³; Stefan Tenzer⁴; James I. Langridge¹⁵; Scott J. Geromanos¹⁵; ¹Waters Corporation, Manchester, UK; ²EMBL-European Bioinformatics Institute, Hinxton, UK; ³Duke University, Raleigh, NC; ⁴University of Mainz, Mainz, Germany; ⁵Waters Corporation, Milford, MA
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- MP 659 **Global Proteome and Phosphoproteome Profiling of Human Embryonic Stem Cells**; Zhouxin Shen; Pei-Jen Lee; Steven P. Briggs; UCSD, La Jolla, CA
- MP 660 **Development of a Malignancy-Specific Proteome for Non-Hodgkin's Lymphoma**; Paul Romesser; David H. Perlman; Mark E. McComb; Douglas V Faller; Catherine E. Costello; Gerald V Denis; Boston University School of Medicine, Boston, MA
- MP 661 **Nitrite Systems Biology: Transient Metabonomic Changes and Long-Lasting Cardiac Proteomic, Redox, and Functional Alterations after a Single Spike in Nitrite**; David H. Perlman; Selena Bauer; Giuseppe Infusini; Maria F. Garcia-Saura; Chee C. Lim; Bernadette O. Fernandez; Mark E. McComb; Catherine E. Costello; Martin Feelisch; Boston University School of Medicine, Boston, MA
- MP 662 **Ex vivo Pharmacoproteomic and Toxicoproteomic Study of γ -tocopherol in DU-145 Prostate Cancer Cells using iTRAQ Labeling with 2DLC-nESI-MS-MS**; Theodoros I. Roumeliotis¹; Anastasios Keramidas²; Eugenia G. Giannopoulou³; Sophia Kossida¹; Andreas Constantinou²; Spiros D. Garbis¹; ¹Academy of Athens - Biomedical Foundation, Athens, Greece; ²University of Cyprus, Leukosia, Cyprus; ³University of Peloponnese, Tripoli, Greece
- MP 663 **Brain Injury Proteome Dynamics**; Daniel E. Hillman; Shankar Sadasivan; Andrew K. Ottens; McKnight Brain Institute of the University of Flor, Gainesville, FL
- MP 664 **Quantitative Proteomic Analysis of Bean Plants Infected with Virulent and Avirulent Strains of an Obligate Rust Fungus**; Bret Cooper¹; Joohyun Lee¹; Wesley M. Garrett¹; Jian Feng²; Brian Scheffler¹; Talo Pastor-Corrales¹; Gary Stacey³; Daniel Q. Naiman²; ¹USDA-ARS, Beltsville, MD; ²Johns Hopkins University, Baltimore, MD; ³University of Missouri, Columbia, MO
- MP 665 **Application of Non-Tagged, Global Systems-Based Proteomic Analysis to the Affects of Branched-Chain Fatty Acid Metabolism in Human Prostate Cancer Models**; Colleen Martin¹; Erik Busby¹; Gregory J Bowersock¹; Hector Ramos²; James Mobley¹;

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- MP 666 **Deciphering Deregulated cdc42 Activity by Combining Mass Spectrometry with Enhanced Formaldehyde-Based Affinity-Enrichment and SILAC-Based Proteomic Strategies;** Brent W Sutherland¹; Juergen Kast²; ¹*BioMedical Research Centre, University of British, Vancouver, Canada;* ²*University of British Columb, Vancouver, BC*
- MP 667 **Examination of Cadmium Tolerance in the Heavy-Metal Accumulator Brassica Juncea using Two Quantitative Proteomic Methods: DIGE and iTRAQ;** Bertram M. Berla; Sophie Alvarez; Jeanne Sheffield; Rebecca E. Cahoon; Joseph M. Jez; Leslie M. Hicks; *Donald Danforth Plant Science Center, St Louis, MO*
- MP 668 **A Quantitative Proteomic Investigation of the Cold Adaptation of the Marine Bacterium *Sphingopyxis alaskensis*;** Lily Ting¹; Mark Cowley¹; Mark J. Raftery²; Rick Cavichhio¹; ¹*University of New South Wales, Randwick, Australia;* ²*Bioanalytical Mass Spectrometry Facility, Randwick, Australia*
- MP 669 **Characterization of Stress Hormone-Mediated Drug Resistance to Paclitaxel In Breast Cancer using SILAC Combined with High Resolution Mass Spectrometry;** Melanie Flint¹; Grace Kim¹; Brian Hood¹; Jennifer Sutton²; Thomas P. Conrads¹; ¹*The University of Pittsburgh Cancer Institute, Pittsburgh, PA;* ²*ThermoFisher, Cambridge, MA*
- MP 670 **Complete, Mass Spectrometry-Based Proteome Quantitation of Haploid versus Diploid Yeast;** Jesper V. Olsen; Lyris MF De Godoy; Jürgen Cox; Michael L. Nielsen; Nina C. Hubner; Florian Froehlich; Tobias C. Walther; Matthias Mann; *Max-Planck-Institute for Biochemistry, Martinsried, Germany*
- MP 671 **QconCAT Technology Yielding Molecules per Cell; Accurate Quantification of Absolute Enzyme Concentrations in Yeast by LC-MS;** Kathleen M Carroll¹; Deborah M Simpson²; Claire E Eyers¹; Chris Knight¹; Douglas B Kell¹; Robert Beynon²; Simon J. Gaskell¹; ¹*University of Manchester, Manchester, UK;* ²*University of Liverpool, Liverpool, UK*
- MP 672 **A Time-Course Analysis of 3T3-L1 Adipocyte Differentiation using LC-MS^E Protein Profiling;** Paula Davidson; Sok Kean Khoo; Pam Swiatek; Eric Xu; Gregory Cavey; *Van Andel Research Institute, Grand Rapids, MI*