WEDNESDAY POSTERS

WP 563 **A Comparison of Matrix Effects with Standard and Modified ESI Probes**; Steve Bajic; Gareth Hammond; *Waters Corporation, Manchester, United Kingdom*

WP 564 **Quantitative Assay of Sudan azo-dyes in Food matrixes by Liquid Chromatography Tandem Mass Spectrometry and Isotope Dilution**; Fabio Mazzotti; Leonardo Di Donna; Loredana Maiuolo; Anna Napoli; Raffaele Salerno; Giovanni Sindona; *Università della Calabria Dipartimento di Chimica, Rende, Italy*

WP 565 **The Case for a Gain-Calibrated Detection System**; Jeff Kernan; Jim Foote; Tom Doherty; *Agilent Technologies, Santa Clara, CA*

WP 566 **Exploiting Analyte-Induced Ion Suppression of a Co-eluting Internal Standard to Enhance Calibration Curve linearity**; Garnet McRae; Miles Webb; Nishi Gill; Rahul Vohra; *Painceptor Pharma Corp., Ottawa, Canada*

WP 567 **Measurement of Water Soluble B Vitamins in Infant Formula by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)**; Min Huang; Doug Winters; *Covance Laboratories, Inc, Madison, WI*

WP 568 **MALDI-TOF Quantitative Analysis on Binary Mixtures of Fullerenes and Polycyclic Aromatic Hydrocarbons**; Anna Cristadoro; Hans Joachim Räder; Klaus Müllen; *Max PLanck Institute for Polymer Research, Mainz, Germany*

WP 569 **A Novel Quantitation Method for Increasing the Sensitivity and Robustness of an LC/MS/MS Bioanalytical Assay**; Eryn K. Snowden-Rawley[1]; Mauro Aiello, Ph.D. [2]; *[1]Applied Biosystems, Framingham, MA; [2]Applied Biosystems/MDS Sciex, Concord, Ontario, Canada*

WP 570 **Rapid Full-scan TOF Quantitation Methods Utilizing the Improved Dynamic Range of a Qtof Mass Spectrometer**; April L. Smith; Jeffrey D. Miller; Anthony J. Romanelli; *Applied Biosystems, Framingham, MA*

WP 571 **Matrix Effects in the Analysis of Basic Compounds in Biomatrices by ES+ LC/MS/MS as a Function of Mobile Phase pH**; Liming Peng; Tivadar Farkas; Lawrence Loo; *Phenomenex Inc., Torrance, CA*

WP 572 **Simultaneous Quantitation of Carotenoids by LC-MS/MS in Foods and Supplements**; Miwako Kondo[1]; Li Yang[2]; Zijia Zhang[2]; Zhengtao Wang[2]; Xianguo Zhao[1]; *[1]Brunswick Laboratories, Norton, MA; [2]R&D Centre for Standardization of Chinese Medicine, Shanghai, P.R. China*

THURSDAY POSTERS

APPI

ThP 004 **Role of Non-Ionizing Photon Absorption in the Observed Mass Spectra Produced by an Atmospheric Pressure Photoionization – LCMS Source;** Rob O'Brien[1]; Amanda Furgeson[1]; David Arkinstall[1]; *[1]UBC Okanagan, Kelowna, Canada; [2]Okanagan Regional Chemical Analysis Centre, Kelowna, Canada*

ThP 005 **Electron Capture-Atmospheric Pressure Photoionization Mass Spectrometry: Analysis of Fullerenes, Perfluorinated Compounds, and Pentafluorobenzyl Derivatives**; Liguo Song; Amber D Wellman; Huifang Yao; Jamie Adcock; *University of Tennessee, Knoxville, TN*

ThP 006 **Cluster Size-Distributions at Liquid Surface and In Vapor Observed for Pure Alcohols and Alkanes by Liquid Ionization Mass Spectrometry**; Masahiko Tsuchiya[1]; Yasuo Shida[2]; Haruhiko Fukaya[2]; Masaki Shinoyama[3]; Shoichi Okouchi[3]; *[1]Yokohama National University, Yokohama, Japan; [2]Toyaku University, Tokyo, Japan; [3]Hosei Univesity, Tokyo, Japan*

ThP 007 **Collisionally-Induced Dissociation of Propionitrile under APPI Mass Spectrometry: Evidence of an Intramolecular 1,3-Hydrogen Shift and Hydrogen Migration**; Patrick Jeanville[2]; Lauren Elizabeth J-Rivera[2]; Colizza Kevin[1]; Amin Kamel[1]; *[1]Pfizer, Inc., Groton, CT; [2]Thermo Electron Corporation, West Palm Beach, FL*

ThP 008 **Determination of the Distribution of Ion Acceptance (DIA) of Atmospheric Pressure Ionization Sources**; Walter Wissdorf; Matthias Lorenz; Klaus J Brockmann; Oliver J Schmitz; Sigmar Gaeb; Thorsten Benter; *University of Wuppertal, Wuppertal, Germany*

ThP 009 **Quantitation of 8-Hydroxydeoxyguanosine in DNA by Liquid Chromatography-Positive Atmospheric Pressure Photoionization Tandem Mass Spectrometry**; Fagen Zhang; William T. Stott; Amy J. Clark; Joy J. Grundy; Melissa R. Schisler; B. Bhaskar Gollapudi; Michael J. Bartels; *The Dow Chemical Company, Midland, MI*

ThP 010 **Atmospheric Pressure Photoionization of Peptides**; Alexandre J. Giuliani[1]; Aicha Bagag[2]; Olivier Laprevote[2]; *[1]Synchrotron Soleil, Gif-sur-Yvette, France; [2]CNRS-ICSN, Gif-sur-Yvette, France*

ThP 011 **Comparison of Atmospheric Pressure Ionization (API) Techniques for the Analysis of Organophosphorus Compounds**; Peter L Kelsey; Bart A O'Brien; *Midwest Research Institute, Kansas City, MO*

INSTRUMENTATION: ION SOURCES II

ThP 012 **Calibrant and Reagent Ion Introduction for Mass Spectrometry**; Bradley B. Schneider; Thomas R. Covey; *MDS Sciex, Concord, CANADA*

ThP 013 **Detecting Compounds of Dissimilar Ionization Using Dual Source Ionization for Increased Throughput**; Holly Shackman; *Shimadzu Scientific, Columbia, MD*

ThP 014 **Electrospray Ionization Hybridized with Laser Desorption, Pyrolysis, Thermal Evaporation, and Pneumatic Nebulization for Gaseous, Microdroplet, Liquid, and Solid Sample Analyses;** Lian-Chun Chen; Cha-Chun Liou; Min-Zong Huang; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

ThP 015 **Asymmetric Steady-State Dual Nanospray Ion Source: A New Method to Introduce a Second Nanospray Ion Beam without Signal Loss**; Nicolas L. Young[1]; Micheal C. Sisto[2]; Meggie N. Young[3]; Patrick G. Grant[1]; David W. Killilea[4]; LaTasha LaMotte[2]; Kuang Jen J. Wu[1]; Carlito B. Lebrilla[1]; *[1]Lawrence Livermore National Laboratory, Livermore, CA; [2]University of California, Davis, Davis, CA; [3]Drexel University, College of Medicine, Philadelphia, PA; [4]Children's Hospital Oakland Research Institute, Oakland, CA*

ThP 016 **Complementing Novel Ionization Techniques with Voltage-Assisted Hydrodynamic Devices by Optimizing Physiochemical Parameters to Efficiently Sample Biological Specimens**; Robert B. Dixon; Xudong Xiao; Jack R. Edwards; Adam M. Hawkridge; David C. Muddiman; *North Carolina State University, Raleigh NC, NC*

ThP 017 **Evaluation of Taylor-Cone Stability and Spray-Mode Dynamics using Fused-Silica Nanospray Emitters with Hydrophobic Coatings**; Jeffrey Wynn; Christopher J. Toher; Gary A. Valaskovic; *New Objective Inc, Woburn, MA*

ThP 018 **Unique Fragmentation Pathways Observed in Corona Discharge Electrochemical/Electrospary Ionization (ECI/ESI) MS**; John Lloyd[1]; Sonja Hess[2]; *[1]NIH, Bethesda, MD; [2]California Institute of Technology, Pasadena, CA*

THURSDAY POSTERS

ThP 019 **Infrared Particle Ablation/Ultraviolet Matrix-assisted LaAer Desorption Ionization Mass Spectrometry**; Fan Huang; Xing Fan; Kermit K. Murray; *LSU, Baton Rouge, LA*

ThP 020 **Selective Self-Generating Novel Ion ProductionTechniques for Atomspheric Pressure Mass Spectrometry**; Paul C. Goodley; *GRE, Santa Rosa, CA*

ThP 021 **Digitized Nanobore LC-MS: An Automated Control System with Emitter Divert for Column-Switching**; Mike S. Lee[1]; Gary A. Valaskovic[2]; *[1]Milestone Development Services, Newtown, PA; [2]New Objective, Inc., Woburn, MA*

ThP 022 **Symmetric and Asymmetric Fission of Electrosprayed Water Droplets**; Lloyd Zilch; Josh T. Maze; Martin F. Jarrold; *Indiana Univeristy, Bloomington, IN*

ThP 023 **Automation and Optimization of a Dual Stage Ion Funnel Electrospray Ionization Source for Whole Protein Identification**; Michael L. Easterling[1]; Jennifer S. Cobb[2]; Christian B. Berg[1]; Christopher J. Thompson[1]; Jeffrey N. Agar[2]; *[1]Bruker Daltonics, Inc., Billerica, MA; [2]Brandeis University, Waltham, MA*

ThP 024 **Demonstration of a Dual ESI/APPI Ion Source for Simultaneous Analysis of Drug, Substrate and Their Bound Complexes**; Luke C. Short; Sheng-Suan Cai; Jack A. Syage; *Syagen Technology, Inc., Tustin, CA*

ThP 025 **Controlling Charge on Trapped Drops**; Ryan T. Hilger; Michael S. Westphall; Lloyd M. Smith; *University of Wisconsin-Madison, Madison, WI*

ThP 026 **CE-ESI/MS with Miniaturized and Functionalized Nanoelectrospray Emitters**; Petr Kusý; Jana Krenková; Jakub Grym; Karel Klepárník; František Foret; *Institute of Analytical Chemistry, Academy of Scie, Brno, Czech Republic*

ThP 027 **Application of a Laser Diode Thermal Desorption (LDTD) Ion Source for Mass Spectrometry in a Drug Discovery Environment**; Kevin P. Bateman[1]; Jin Wu[1]; Sebastien Gagne[1]; Pierre Picard[2]; Sylvain Letarte[2]; *[1]Merck Frosst Canada, Montreal, CANADA; [2]Phytronix, Quebec, Canada*

ThP 028 **Using Electrospray-assisted Laser Desorption Ionization Mass Spectrometry to Detect Proteins and Biochemical Compounds Separated on Microchip and Two-Dimensional TLC Plate**; Shu-Yao Lin; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

MALDI SAMPLE PREPARATION II

ThP 029 **Improving Intensity and Sensitivity of MALDI Signals by using Nanoliter Volume Spots**; Tingting Tu[1]; Andrew D. Sauter[2]; Michael L. Gross[1]; *[1]Washington University in St. Louis, Saint Louis, MO; [2]Nanoliter,LLC, Henderson, NV*

ThP 030 **Sample Preparation: Making, Directing Nanoliters to Targets from Dispensers, Syringes and LC Columns using Electric Fields - Induction Based Fluidics;** Andrew D. Sauter III; Andrew D. Sauter, Jr; *Nanoliter, LLC, Henderson, NV*

ThP 031 **Improving Monoclonal Antibody and SCFv Protein Characterization by Obtaining Complementary MALDI-TOF-MS Spectra from a Single Tryptic Digest**; Adam W. Lucka[12]; Rekha Patel[12]; Bruce A. Andrien[12]; *[1]Alexion Pharmaceuticals, Cheshire, CT; [2]Alexion Pharmaceuticals, Cheshire, CT*

ThP 032 **Ablation of Chrysene from Different Matrix Systems using 266nm UV-MALDI**; Dirk Walbrodt; Tassilo Muskat; Juergen Grotemeyer; *Inst. f. Phys. Chem der CAU zu Kiel, Kiel, Germany*

ThP 033 **Simple and Effective Methods to Increase the Surface Sapacity for On- Probe Affinity Capture MALDI-MS**; Zaneer, M Segu; Joseph, C Mathai; Gary, R Kinsel; *Southern Illinois University, Carbondale, IL*

ThP 034 **EC-Affinity™ MALDI Biochips for Immunoaffinity Mass Spectrometry by MALDI-TOF-MS**; Mark Stolowitz[1]; Paul Lampe[2]; *[1]Stratos Biosystems LLC, Seattle, WA; [2]Fred Hutchinson Cancer Research Center, Seattle, WA*

ThP 035 **Optimized Enrichment and Detection Methodologies for the Study of Phosphopeptides of the Epidermal Growth Factor Receptor**; Amanuel Y Kehasse[1]; David H. Perlman[2]; Mark E. McComb[2]; Ilene Boucher[3]; Vickery T Randall[3]; Catherine E. Costello[1]; *[1]BUSM, Center for Biological Mass Spectrometry, Boston, MA; [2]BUSM, Cardiovascular Proteomics Center, Boston, MA; [3]BUSM, Department of Biochemistry, Boston, MA*

ThP 036 **A New Desalting Approach for MALDI MS Analysis of Oligonucleotides**; Wei-Yu Chen; Yu-Chie Chen; *Dept Applied Chemistry, National Chiao Tung Univ., Hsinchu, Taiwan*

ThP 037 **Functionalized MALDI Surface for Specific Detection of Glycopeptides**; Mohammed Kajjout; Caroline Tokarski; Séverine Le Gac; Christian Rolando; *Univ. des Science/Tech de Lille, Villeneuve d'Ascq, France*

ThP 038 **Use of High-Capacity Polymer Brushes Immobilized on MALDI Plates and Magnetic Beads for the Analysis of Phosphopeptides by MS**; Jamie D. Dunn; Fei Xu; Gavin E. Reid; Merlin L. Bruening; *Michigan State University, East Lansing, MI*

ThP 039 **Serine Enhances and Improves Peptide Ion Signals in MALDI MS**; Mitsuo Takayama; Takashi Nishikaze; *Yokohama City University, Yokohama, JAPAN*

ThP 040 **Investigation of Liquid MALDI and Optimization for Instrument Tuning and Quantitative Measurements**; Magnus Palmblad; Mark Towers; Rainer Cramer; *The University of Reading, Reading, UK*

ThP 041 **Nanoprobe-Based Affinity Mass Spectrometry for Multiplexed Immunoassay in Human Plasma**; Kai-Yi Wang[1]; Li-Shing Huang[1]; Po-Chiao Lin[2]; Shu-Hua Chen[1]; Hsin-Kai Liao[1]; Chun-Cheng Lin[3]; Yu-Ju Chen[1]; *[1]Institute of Chemistry, Academia Sinica, Taipei, Taiwan; [2]CBMB, TIGP, Academia Sinica, Taipei, Taiwan; [3]National Tsing-Hua University, Hsinchu, Taiwan*

ThP 042 **Functionalized Magnetic Nanoparticles for Small Molecule Isolation, Identification and Quantification using MALDI-TOF Mass Spectrometry**; Mei-chun Tseng[1]; Po-Chiao Lin[2]; An-Kai Su[1]; Yu-Ju Chen[1]; Chun-Cheng Lin[2]; *[1]Insititue of Chemistry, Academia Sinica, Taipei, Taiwan; [2]Insititue of Chemistry, Tsing Hua University, Hsinchu, Taiwan*

ThP 043 **Plastic MALDI chips (pMALDI): Enhancing Protein Analysis using High-Density Polymer Micro Array in Combination with MALDI-TOF/MS**; Alfredo J. Ibáñez; Vincentius A. Halim; Rohit Shroff; Alexander Muck; Aleš Svatoš; *Max Planck Institute for Chemical Ecology, Jena, Germany*

ThP 044 **Application of Non-Fouling Surfaces in MALDI Mass Spectrometry**; Lijuan Peng; Gary R. Kinsel; *Southern Illinois University, Carbondale, IL*

INSTRUMENTATION: QUADRUPOLES & ION TRAPS II

ThP 045 **Simulations of the Field Distributions and the Performance of Printed Circuit Board Ion Trap Mass Spectrometer (PCB IT-MS)**; Chuan-Fan Ding; Gongyu Jiang; Igor Filippov; Chan Luo; Peng Yang; Xiaoxu Li; *Fudan University, Shanghai, CHINA*

ThP 046 **Ion-Ion Reactions using a Home-Built, Research-Grade Linear Ion Trap Mass Spectrometer**; Matthew W. Soyk[1]; Qin Zhao[1]; Gregg M. Schieffer[1]; R.S. Houk[1]; Ethan R. Badman[2]; *[1]Iowa State University, Ames, IA; [2]Hoffmann-La Roche Inc., Nutley, NJ*

THURSDAY POSTERS

ThP 047 **On Line Aerosol MALDI Mass Spectrometer using Digital Quadrupole Ion Trap**; Hideya Koizumi; Peter T. A. Reilly; William A. Harris; William B. Whitten; *Oak Ridge National Laboratory, Oak Ridge, TN*

ThP 048 **Microscopy-Based Mass Measurement of a Single Whole Virus in a Cylindrical Ion Trap**; Huan-cheng Chang; *Institute of Atomic & Molecular Sciences, Taipei, TAIWAN*

ThP 049 **A Faster Method of Tandem Mass Spectrometry for Forensic, Clinical and Biological Applications;** Glen Jackson; Unige A. Laskay; Carolyn M. Zimmermann; Olivier L. Collin; *Ohio University, Athens, OH*

ThP 050 **Multi-Source Linear Ion Trap for Ion/Ion Reactions and Multiple Activation Methods**; David E. Erickson[1]; Jason M. Hogan[2]; Chris Doerge[1]; Min He[3]; Scott A. McLuckey[1]; *[1]Purdue University, West Lafayette, IN; [2]Fred Hutchinson Cancer Research Center, Seattle, WA ; [3]Thermo Electron, San Jose, CA*

ThP 051 **Characterisation of Mass Selective Axial Ejection from a Linear Ion Trap with Superimposed Axial Quadratic DC Potential;** Martin Green; Garry Scott; Robert Bateman; *Waters Corporation, Manchester, United Kingdom*

ThP 052 **Mass Selective Axial Ejection by Controllable DC Field for Effective Extraction;** Masuyuki Sugiyama; Hideki Hasegawa; Yuichiro Hashimoto; *Hitachi, Ltd.,Central Research Laboratory, tokyo, JAPAN*

ThP 053 **Ion Guide and Quadrupole Mass Filters Employing a Digitally Controlled Waveform**; David J Rousell; Roger Giles; *Shimadzu Research Laboratory (Europe), Manchester, United Kingdom*

ThP 054 **Miniature Cylindrical Ion Trap with Transparent Endcap Electrodes for Single Nanoparticle Mass Measurement**; Zongxiu Nie; *Institute of Atomic & Molecular Sciences, Taipei, TAIWAN*

ThP 055 **Fragmentation Efficiency and Ion Excitation Frequencies in a Linear Quadrupole Ion Trap with an 8% Added Hexapole Field;** Ori Granot; D. J. Douglas; *The University of British Columbia, Vancouver, BC, Canada*

ThP 056 **Development of Proton Transfer Reaction - Linear Ion Trap (PTR-LIT) Mass Spectrometry for the Quantification Of Isobaric Volatile Organic Compounds;** Levi H Mielke[1]; David E Erickson[1]; Scott A McLuckey[1]; Armin Wisthaler[2]; Armin Hansel[2]; Chritopher H Doerge[1]; Paul B Shepson[1]; *[1]Purdue University, West Lafayette , IN; [2]Universität Innsbruck, Innsbruck, Austria*

ThP 057 **Mass Analysis with Linear Quadrupole with Added Hexapole Fields: Experiments and Simulations**; Zilan Xiao[1]; XianZhen Zhao[1]; D. J. Douglas[1]; N. V. Konenkov[2]; *[1]University of British Columbia, Vancouver, CANADA; [2]Ryazan State Pedagogical University, Ryazan, Russia*

ThP 058 **An Ion Guide Study: Quadrupoles, Hexapoles, Octopoles and Rectilinear Quadrupoles**; Randy Pedder; Ted Novak; Samantha Kunkle; *Ardara Technologies L.P., Ardara, PA*

ThP 059 **Experimental Investigation of Mass Analysis with Linear Quadrupoles with Added Multipole Fields Operated in Islands of Stability**; XianZhen Zhao[1]; Zilan Xiao[1]; Annie Moradian[1]; Donald J. Douglas[1]; Nikolai V. Konenkov[2]; *[1]University of British Columbia, Vancouver, CANADA; [2]Ryazan pedagogical University, Ryazan, Russia*

ThP 060 **Characterisation of a Novel Axially Focusing Miniature Linear Ion Trap for Mass Spectrometry**; Gareth S. Dobson; Christie G. Enke; *University of New Mexico, Albuquerque, NM*

ThP 062 **Investigations of the Mechanism of the "Proline Effect" in Mass Spectrometry Peptide Fragmentation Experiments;** Mary Disa Raulfs[1]; Linda Breci[2]; John C. Poutsma[1]; Vicki Wysocki[2]; *[1]College of William & Mary, Williamsburg, VA; [2]University of Arizona, Tucson, Az*

ThP 063 **ESI/CID Studies of Enterobactin and Enterobactin/Metal Ion Complexes**; Fatma Tuba Gozet; Diethard Kurt Bohme; *Department of Chemistry, York University, Toronto, ON*

ThP 064 **Reaction of Organosilicon on a Tungsten Surface at Elevated Temperature**; Masato Kiuchi[1]; Takae Takeuchi[2]; Satoru Yoshimura[3]; Akinori Toh[3]; Takahiro Toyoshima[3]; Satoshi Hamaguchi[3]; *[1]AIST, Osaka, JAPAN; [2]Nara Women's University, Nara, Japan; [3]Osaka University, Suita, Japan*

ThP 065 **Evaluation of Sulphonication as a Sequence-Tag Stratagem of Protein Identification on a Novel, "Zoom Optics", MALDI-ToF-ToF Instrument;** D J Evason; M D Mills; V C Parr; S P Thompson; *SAI, Manchester, United Kingdom*

ThP 066 **Investigation of the complexes of chromium with acidic peptides**; Dan Pu; *University of Alabama, Tuscaloosa, Tuscaloosa, AL*

ThP 067 **Comparison of CAD, IRMPD, and EID for identification and structural characterization of phosphate metabolites**; Hyun Ju Yoo; Haichuan Liu; Kristina Hakansson; *University of Michigan, Ann Arbor, MI*

ThP 068 **Investigating the Effects of the HIV-1 Nucleocapsid Protein on RNA Isomerization by Tandem Mass Spectrometry**; Kevin B. Turner[1]; Nathan A. Hagan[2]; Daniele Fabris[1]; *[1]University of Maryland Baltimore County, Baltimore, MD; [2]Johns Hopkins University, APL, Laurel, MD*

ThP 069 **A New MALDI Matrix for Studying Copper Binding Peptides**; Zhaoxiang Wu; David H Russell; *TAMU, College Station, TX*

ThP 070 **Rapid Identification and Characterisation of Tryptic Peptides using High Linear Velocity Nanobore UPLC MALDI MS/MS and ion mobility separation**; Marten Snel; Emmanuelle Claude; Iain Campuzano; Therese McKenna; James Langridge; *Waters Corp, Manchester, United Kingdom*

ThP 071 **Super-Critical Fluid Chromatography (SFC) with Tandem Mass Spectrometry (MS/MS) to Evaluate the Absorption and Delivery of Individual Stereoisomers**; QingPing Han; Xu Zhang; David P. Budac; Mark J. Hayward; *Lundbeck Research US, Paramus, NJ*

ThP 072 **Mechanisms of Cross-linking Reactions of Genipin with β-Lactoglobulin and Related Peptides by MALDI-TOF/TOF Mass spectrometry**; Alberto Nunez; Phoebe Qi; *USDA-ARS-ERRC, Wyndmoor, PA*

ThP 073 **CID of Metal-Ion Adducts of Protected Amino Acids Coupled to Crown Ethers**; Ryan Dain; Maryna Popp; Chris Leavitt; Michael Kullman; Michael J. Van stipdonk; *Witchita State University, Wichita, KS*

ThP 074 **Comparison of Peptide Quantitation with NanoLC/ESI and MALDI MRM**; Bradley B. Schneider[2]; Christie L. Hunter[1]; Matthew Champion[1]; Tina Settineri[1]; Thomas R. Covey[2]; *[1]Applied Biosystems, Foster City, CA; [2]MDS SCIEX, Concord, Ontario, Canada*

ThP 075 **Fragmentation of Acidic Ru(II) and Os(II) Complexes in the Gas-Phase**; Janne Janis; Minna Jakonen; Larisa Oresmaa; Matti Haukka; Pirjo Vainiotalo; *University of Joensuu, Joensuu, FINLAND*

ION ACTIVATION DISSOCIATION: APPLICATIONS

ThP 061 **Enhanced CID Efficiency of Brevetoxins and Unraveling of Novel Fragmentation Pathways in Negative Ion Electrospray Mass Spectrometry**; Weiqun Wang; Richard B. Cole; *University of New Orleans, New Orleans, LA*

PEPTIDES: FRAGMENTATION & SEQUENCING

ThP 076 **Characterization and Sequencing of Histone Proteins by Ion Mobility Tandem Mass Spectrometry**; Hye Ryung Jung[1]; James Langridge[2]; Chris Hughes[2]; Ole Nørregaard

THURSDAY POSTERS

Jensen[1]; *[1]University of Southern Denmark, Odense, Denmark; [2]Waters corporation, Manchester, UK*

ThP 077 **Observing Immonium and Related Mass Ions using Thermally-Assisted Infrared Multiphoton Photodissociation in a Quadrupole Ion Trap Mass Spectrometer**; G. Asher Newsome; Gary L. Glish; *Univeristy of North Carolina, Chapel Hill, NC*

ThP 078 **Impact of Pro and Asp Residues on the Dissociation of Intermolecularly Crosslinked Peptides**; Myles W. Gardner; Jennifer S. Brodbelt; *The University of Texas at Austin, Austin, TX*

ThP 079 **Investigating the Sequence of a Novel Cyclic Lantibiotic Peptide, Paenibacillin, with Mass Spectrometry and Nuclear Magnetic Resonance (NMR)**; Liwen Zhang[1]; Zengguo He[2]; Chunhua Yuan[3]; Kari B. Green-Church[1]; Ahmed E. Yousef[2]; *[1]MS&P Facility, the Ohio State University, Columbus, OH; [2]Department of Food Science & Technology, OSU, Columbus, OH; [3]NMR Laboratory, the Ohio State University, Columbus, OH*

ThP 080 **Oxidation vs Carboxymethylation of S-S Bond in Frog Peptides: Pro and Contra for de novo MALDI-MS Sequencing**; Tatiana Yu. Samgina; Konstantin A. Artemenko; Vladimir A. Gorshkov; Albert T. Lebedev; *Department of Chemistry, Moscow State University, Moscow, Russian Federation*

ThP 081 **Structure Elucidation of Natural Glycosylated Cyclic Peptides by CID, IRMPD, and ECD using a 9.4 Tesla FTMS**; Xidong Feng; Haiyin He; Melissa Wagenaar; *Wyeth Research, Pearl River, NY*

ThP 082 **Metal Ion Complexes of Diasteroisomeric Cyclic Peptides c-(Lys-D/L-His-ß-Ala-His) with Copper, Zinc and Nickel**; Gianluca Giorgi[1]; Luigi Messori[2]; Mauro Ginanneschi[3]; *[1]University of Siena, Department of Chemistry, Siena, ITALY; [2]University of Florence, Department of Chemistry, Florence, Italy; [3]University of Florence, Dept. of Organic Chemistry, Florence, Italy*

ThP 083 **LTQ-FT and LTQ-ORBItrap: A Comparison of the Accurate Mass MS/MS Capabilities;** Matthew T. Mazur; Fanyu Meng; Robert E. Settlage; Kai Zhou; Yi Du; Ekaterina G. Deyanova; Nathan A. Yates; Ronald C. Hendrickson; *Merck Research Labs, Rahway, NJ*

ThP 084 **M/z 58 – A Marker Ion for Di- and Trimethylated Lysine Residues in High-Energy CID Spectra of Protonated Peptides**; Dieter R Mueller; Debora Bonenfant; Bruno Inverardi; Patrick Schindler; Annick Waldt; Urs Wirth; Jan van Oostrum; *Novartis, Basel, Switzerland*

ThP 085 **MALDI-TOF-MS Investigation of Pyrolyzed polypeptide and Protein Residues; can we obtain sequence information of the protein?** Mohammed A. Meetani[1]; Kent J. Voorhees[2]; *[1]United Arab Emirates University, Al-Ain, UAE; [2]Colorado School of Mines, Golden, CO*

ThP 086 **Undesired Products Formed During Iodoacetamide Derivatization of Sulfhydryl Groups of Peptides**; Athula B. Attygalle; Zhihua Yang; *Stevens Institute of Technology, Hoboken, NJ*

ThP 087 **De novo Protein Sequencing via Assembly of High Resolution MS/MS Spectra from Overlapping Peptides**; Nuno Bandeira[1]; Karl Clauser[2]; Pavel Pevzner[1]; *[1]University of California, San Diego, La Jolla, CA; [2]Broad Institute, Cambridge, MA*

ThP 088 **Improving Proteomics by Increasing the Accuracy of Peptide Fragmentation Spectrum Prediction**; Predrag Radivojac; Pedro Alves; Kang Peng; Haixu Tang; Randy J. Arnold; *Indiana University, Bloomington, IN*

ThP 089 **Optimizing Data Acquisition for Automated de novo Sequencing**; Iain Rogers[1]; Gary Woffendin[2]; Michaela Scigelova[2]; *[1]Bioinformatics Solutions, Waterloo, Canada; [2]Thermo Fisher Scientific, Hemel Hempstead, United Kingdom*

ThP 090 **Sequence Analysis of Endogenous Peptides Found In Human Plasma**; Ekaterina G. Deyanova; Nathan A. Yates; Ronald C. Hendrickson; *Merck Research Laboratories, Rahway, NJ*

ThP 091 **Top-down Insect Neuropeptide Analysis with nano-LC and a 14.5 T FT-ICR Mass Spectrometer**; Peter D. Verhaert[1]; Mark R. Emmett[2]; Tanner M. Schaub[2]; Martijn W. Pinkse[1]; Carol L. Nilsson[2]; *[1]Delft University of Technology, Delft, Netherlands; [2]NHMFL, Tallahassee, Florida*

IMAGING: SMALL MOLECULES

ThP 092 **Ceramide-bones of Brain Gangliosides Visualized by Mass Microscopy**; Shuichi Shimma; Mitsutoshi Setou; *Okazaki institute for integrative bioscience, Okazaki, Japan*

ThP 093 **Imaging Mass Spectrometry Revealed the Distinct Distribution and Developmental Change of Ganglioside Molecular Species in the Mouse Hippocampus**; Yuki Sugiura[1]; Shuichi Shimma[2]; Yoshiyuki Konishi[3]; Hiroshi Ageta[3]; Takashi Nirasawa[4]; Mitsutoshi Setou[2]; *[1]Department of Bioscience and Biotechnology, Tokyo, Yokohama, JAPAN; [2]Okazaki Institute for Integrative Bioscience, Okazaki, JAPAN; [3]MITILS, Tokyo, Japan; [4]Bluker Daltonics, Kanagawa, Japan*

ThP 094 **Mass Spectrometric Imaging of Cultured Neurons from *Aplysia californica***; Michael P. Napolitano; Peter Lovell; Leonid L. Moroz; Richard A. Yost; *University of Florida, Gainesville, FL*

ThP 095 **Imaging of Small Molecules in Tissue Sections using MALDI MS**; Anna Nilsson[1]; Sören-Oliver Deininger[2]; György Marko-Varga[3]; Thomas Fehniger[3]; Stefan Eirefelt[3]; Kerstin Kenne[3]; Lena Gustavsson[3]; Per E. Andren[1]; *[1]Uppsala University, Uppsala, Sweden; [2]Bruker Daltonics, Bremen, Germany; [3]Astrazeneca, Lund and Sodertalje, Sweden*

ThP 096 **Multilevel MALDI MS Tissue Imaging of Pharmaceuticals**; Fangbiao Li; Lee Crossman; Xiaoming Cui; Ian Knemeyer; Morrison Richard; Yunsheng Hsieh; Walter Korfmacher; *Schering-Plough Research Institute, Kenilworth, NJ*

ThP 097 **MALDI-TOF-MS Imaging of Lipids in Rat Brain Tissue with Integrated Unsupervised and Supervised Multivariant Statistical Analysis;** Paul J Trim[1]; Sally J Atkinson[1]; Peter S Marshall[2]; Andrew West[2]; Malcolm R Clench[1]; *[1]Sheffield Hallam University, Sheffield, United Kingdom; [2]GlaxoSmithKline, Stevenage, United Kingdom*

ThP 098 **Imaging of Drugs, Metabolites and Proteins in Tissue via MALDI, SIMS and LA-ICP Mass Spectrometry**; Josephine Bunch[1]; Hazel Dickson[1]; Jaume Seuma[1]; Cameron McLeod[1]; Julia E. Wingate[2]; Tony Carado[3]; Joseph Kozole[3]; Nicholas Winograd[3]; *[1]The University of Sheffield, Sheffield, United Kingdom; [2]Applied Biosystems/MDS Sciex, Concord, Canada; [3]Penn State University, State College, Pa*

ThP 099 **Clozapine Distribution in Rat Brain and Lung: A Comparison of Imaging by DESI-MS vs LC MS/MS Analysis of Brain Homogenates**; Justin M. Wiseman[1]; Candice Kissinger[2]; Demian R. Ifa[3]; Candace Rohde[2]; James Burleigh[2]; Simon Katner[2]; Bruce Solomon[2]; Yongxin Zhu[2]; R. Graham Cooks[3]; *[1]Prosolia, Inc., Indianapolis, IN; [2]Bioanalytical Systems Inc., West Lafayette, IN; [3]Purdue University, West Lafayette, IN*

ThP 100 **Use of Imaging Tandem Mass Spectrometry for the Elucidation of Chemical Species Related to Age-related Macular Degeneration (AMD)**; Timothy J Garrett; William W Dawson; Richard A Yost; *University of Florida, Gainesville, FL*

THURSDAY POSTERS

ThP 101 **TOF-SIMS Imaging Allows Lipid Mapping of Human Dystrophic and Control Muscle Sections**; Nora Tahallah[1]; Alain Brunelle[1]; Sabine De La Porte[2]; Olivier Laprévote[1]; *[1]Lab. de Spectrométrie de Masse - ICSN-CNRS, Gif sur Yvette, FRANCE; [2]Lab. Neurobiol. Cell. et Mol. - INAF-CNRS, Gif sur Yvette, France*

ThP 102 **MALDI MS Imaging to Reveal Distribution of Benzodiazepine Drug and Metabolite Molecules in Rat Brain**; Tomoyuki Ohkawa; Josephine Bunch; *The University of Sheffield, Sheffield, United Kingdom*

ThP 103 **The Distribution of Metabolites of Di-(2-ethylhexyl) Phthalate on a Whole Rat by Imaging MS using a MALDI Ion Trap**; Timothy A. Snow[1]; Mari Prieto Conaway[2]; H. Bui[2]; William J. Fasano[1]; LaRue Manning[1]; *[1]DuPont Haskell Laboratory, Newark, DE; [2]Thermo Fisher Scientific, San Jose, CA*

ThP 104 **Applying Imaging ToF-SIMS and PCA in differentiation of mouse embryo tissue types**; Ligang Wu[1]; Elena S.F Berman[1]; Kris S. Kulp[1]; James S. Felton[1]; Kuang Jen J. Wu[1]; *[1]Lawrence Livermore National Lab, Livermore, CA; [2]UC Davis, Davis, CA*

ThP 105 **Phospholipid Imaging by MALDI Mass Spectrometry – Application to Renal Cell Carcinoma**; Satu M. Puolitaival; Stephen B. Milne; H. Alex Brown; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

ThP 106 **Dynamic Pharmaco Metabolome of Mouse Brain with Precise Bio-Molecule Identification by MALDI QIT-TOF Based High Resolution MS Microscopy**; Kiyoshi Ogawa[1]; Hideaki Izumi[1]; Takahiro Harada[1]; Sadao Takeuchi[1]; Yoshikazu Yoshida[1]; Yuki Sugiura[2]; Mitsutoshi Setou[2]; *[1]Shimadzu Corporation, Kyoto, JAPAN; [2]National Institute of Physiological Sciences, Okazaki, JAPAN*

ThP 107 **Imaging Lipid Bilayers using MALDI-TOF Mass Spectrometry**; Stacy D. Sherrod; Susan Daniel; Arnaldo Diaz; Edward T. Castellana; David H. Russell; *Texas A&M University, College Station, TX*

AGRICULTURE

ThP 108 **Sample Preparation and Quantification of Tetracycline Antibiotic Residues in Royal Jelly by LC/MS**; Xiaofeng Xue[1]; Jing Zhao[1]; Jingquan Dai[23]; Ray Chen[23]; *[1]Bee Product Test Center, Ministry of Agriculture, Beijing, P.R. of China; [2]Thermo Fisher Scientific, Beijing, P.R. of China; [3]Thermo Fisher Scientific, San Jose, CA*

ThP 109 **Development and Validation of a Liquid Chromatography / Tandem Mass Spectrometric Method for Determination of Phytoestrogens in Dairy Milk**; Jens Hansen-Møller[1]; Håvard Steinshamn[2]; Erling Thuen[3]; Stig Purup[1]; *[1]University of Aarhus, Tjele, DENMARK; [2]Bioforsk Organic Food and Farming, Tingvoll, Norway; [3]Norwegian University of Life Sciences, Ås, Norway*

ThP 110 **Simple and Rapid Analysis of Chloramphenicol in Milk with LC-MS-MS**; Ting Liu[12]; Peter Wang[12]; Kefei Wang[12]; *[1]Thermo Fisher Scientific, Shanghai, China; [2]Thermo Fisher Scientific, San Jose, CA*

ThP 111 **When You Do Want Keratin in Your Samples - Identification of Proteins in the Wool Keratin Family**; Stefan Clerens; Jeffrey E. Plowman; *AgResearch, Lincoln, New Zealand*

ThP 112 **Determination of Sulfamerazine, Sulfamethoxazole, Sulfadimethoxine and Sulfamethazine residues in milk using LDTD-MS/MS Detection**; Patrice Tremblay[1]; Pierre Picard[1]; Luc Gagnon[2]; Serge Fortier[2]; *[1]Phytronix Technologies, Quebec, CANADA; [2]MAPAQ, Quebec, Canada*

ThP 113 **On-line HPLC-HRGC Coupling: a New Fully Automated Method for the Determination of Pesticides in Vegetable Samples;** Josep Maria Gibert[2]; Ariadna Galve[1]; Roger Gibert[1]; Nieves Sarrion[1]; *[1]KONIK-Tech, Sant cugat del Vallès, Spain; [2]KONIK Instruments, Miami, Florida*

ThP 114 **Rapid Multi-Residue Screening for the Veterinary Drugs in Meat by Supercritical Fluid Extract Combined With Liquid Chromatography-Tandem Mass Spectrometry**; Masahiko Takino[1]; Jerry Zweigenbaum[2]; Yukiko Ono[3]; Masahiro Yuki[3]; *[1]Agilent Technologies Japan, LTD., Tokyo, JAPAN; [2]Agilent Technologies, wilmington, DE; [3]Nishikawa keisoku Co., LTD, Yokohama, Japan*

ThP 115 **Quick Screening and Quantification of Water-Soluble Vitamins using Rapid Resolution LC/MS/MS**; Sheher Mohsin; *Agilent Technologies, Schaumburg, IL*

ThP 116 **Hydroponic Isotope Labelling of Entire Plants (HILEP) for Quantitative Plant Proteomics**; Laurence V. Bindschedler; Magnus Palmblad; Rainer Cramer; *The University of Reading, Reading, UK*

ThP 117 **Multiplexed Quantitative Proteomics using Differential Metabolic ^{15}N-Labeling**; Magnus Palmblad; Laurence V. Bindschedler; Rainer Cramer; *The University of Reading, Reading, United Kingdom*

ThP 118 **Separation and Quantitation of Ergot Alkaloids in Forage Animal Vein Tissue**; Wilson D. Shafer[1]; Darrin Smith[1]; Lori L. Smith[2]; James L. Klotz[2]; James L. Strickland[2]; *[1]Eastern Kentucky University, Richmond, KY; [2]USDA-ARS, Forage Animal Production Research Unit, Lexington, KY*

ThP 119 **Examination of Cadmium Tolerance in the Heavy-Metal Accumulator *Brassica juncea* via a Proteomics Approach;** Jeanne Sheffield; Rebecca E. Cahoon; Joseph M. Jez; Leslie M. Hicks; *Donald Danforth Plant Science Center, St. Louis, MO*

ThP 120 **Proteomic Study of Arabidopsis Guard Cells: One Cell Type Essential for Higher Plants**; Zhixin Zhao[1]; Bruce Stanley[2]; Sarah M Assmann[1]; *[1]Plant Biology Program, Biology Department,, State College, PSU, PA; [2]Section of Research Resources, Penn State College of Med, Hershey, PA*

ThP 121 **Quantitative Analysis on Beer Proteins using Isotopically-Coded Labeling coupled with HPLC and Mass Spectrometry**; Yuwei Qian[1]; Marta Izydorczyk[2]; Werner Ens[1]; Sharon Bazin[2]; Oleg Krokhin[1]; Vic Spicer[1]; Kenneth Standing[1]; *[1]University of Manitoba, Winnipeg, MB, CANADA; [2]Canadian Grain Commission, Winnipeg, MB, Canada*

ThP 122 **Reliable Multi-Target Analysis of Pesticides by HPLC-ESI-TOF**; David Arraez-Ramon[1]; Petra Decker[2]; Ilmari Krebs[2]; Gabriela Zurek[2]; Carsten Baessmann[2]; Antonio Segura-Carretero[1]; Alberto Fernandez-Gutierrez[1]; *[1]University of Granada, Granada, Spain; [2]Bruker Daltonik GmbH, Bremen, GERMANY*

ThP 123 **Proteomics of Medicago Truncatula Vacuoles using 2D LC-MS/MS**; Zhentian Lei; Bonnie S. Watson; Mohamed Bedair; Lloyd W. Sumner; *The Samuel Roberts Noble Foundation, Ardmore, OK*

ThP 124 **Application of a Multi-Residue LC-MS-MS Method for Evaluating Potato Pesticide Impacts in Atlantic Canada**; Mark Hewitt[1]; Suzanne Batchelor[1]; Herb Rees[2]; Lien Chow[2]; Linnell Edwards[3]; Alan Macrae[3]; *[1]Environment Canada, Burlington, Canada; [2]Potato Research Centre, Fredericton, Canada; [3]Crops and Livestock Research Centre, Charlottetown, Canada*

ENVIRONMENTAL ANALYSIS

ThP 125 **Electrospray Tandem Mass Spectrometry of the Dimethylimidazolesulfonyl Derivatives of Phenols, Polycylic Aromatic Hydrocarbon Metabolites, and Estrogens**; Li Xu[2]; David C. Spink[1]; *[1]Wadsworth center, Albany, NY; [2]University at Albany, SUNY, Albany, NY*

THURSDAY POSTERS

ThP 126 **Mass Spectrometric Characterization of Toxic Components in Aircraft Deicer Fluids**; Carin A. Huset; Katherine C. Hyland; P. Lee Ferguson; *University of South Carolina, Columbia, SC*

ThP 127 **Elemental Analysis of Fulvic Acids of Shilajit using Ultra High Resolution Mass Spectrometry**; Khalid Anwer[1]; Matthias Witt[2]; Boris Koch[3]; Suraj Agarwal[1]; Asgar Ali[1]; Jasmin Sultana[1]; Rajesh Khanna[1]; *[1]Jamia Hamdard University, New Delhi, India; [2]Bruker Daltonik GmbH, Bremen, Germany; [3]Alfred-Wegener-Institute for Marine Research, Bremerhaven, Germany*

ThP 128 **Determination of Pyrethroid Pesticide Residues from Rat Tissue using Two-Dimensional LC/MS**; Edward J. Scollon[1]; James M. Starr[2]; Michael F. Hughes[1]; Michael J. DeVito[1]; Witold M. Winnik[3]; *[1]US EPA/ORD/NHEERL/ETD, Research Triangle Park, NC; [2]US EPA/ORD/NERL/HEASD, Research Triangle Park, NC; [3]US EPA/ORD/NHEERL/ECD, Research Triangle Park, NC*

ThP 129 **Wide spectrum UV/Vis/IR emission from plants for use as an indicator for Mass Spectrometric analysis of environmental toxins;** Ronny C. Robbins; William M. Lagna; *US Army, Gunpowder, MD*

ThP 130 **Determination of Novel Environmental Contaminants in Effluents from Municipal Sewage Treatment Plants using LC/MS and Principal Component Analysis**; Mehran Alaee[1]; Shirley Anne Smyth[1]; Elliot Jones[2]; Christopher Borton[2]; Mark Kuracina[2]; *[1]Environment Canada, Burlington, CANADA; [2]Applied Biosystems, Foster City, CA*

ThP 131 **Characterization of Dissolved Organic Matter in Coastal Areas Outside of the Chesapeake Bay**; Zhanfei Liu; Rachel Sleighter; Susan A. Hatcher; Patrick G. Hatcher; *Old Dominion University, Norfolk, VA*

ThP 132 **Characterization of Glutathione Conjugates of Chlortetracyclines and Chloroacetanilides using Ion-Trap Mass Spectrometry**; Diana Aga; Michael Farkas; *University at Buffalo, Buffalo, NY*

ThP 133 **A single LC/MS/MS Analytical Method for the Quantitation of Fluorotelomer Alcohols, Perfluorinated Carboxylic Acids, and Polyfluorinated Acids in Biological Matrices**; Michael P. Mawn[1]; Bogdan Szostek[1]; Stephen George[1]; Richard Rossi[1]; Keith B. Prickett[1]; Charles R. Powley[1]; Robert C. Buck[2]; *[1]E. I. duPont de Nemours & Co., Inc., Newark, DE; [2]E. I. duPont de Nemours & Co., Inc., Wilmington, DE*

ThP 134 **The Characterization of Environmentally Significant Oxidic and Sulfidic Metal Clusters using ESI FT-ICR MS**; Jeffrey Spraggins[1]; Katherine Mullaugh[1]; Julia Laskin[2]; Murray Johnston[1]; George Luther[1]; Douglas Ridge[1]; *[1]The University of Delaware, Newark, DE; [2]Pacific Northwest National Laboratory, Richland, WA*

ThP 135 **Identification, Characterization, and Quantification of Lead-Binding Proteins in a Hyperaccumulator using HPLC-ES-MS**; Stephan Bach; Syam S. Andra; Rupali Datta; Dibyendu Sarkar; Conor P. Mullens; *University of Texas at San Antonio, San Antonio, TX*

ThP 136 **Characterization of Fulvic and Humic Acids from Different Locations by Ultrahigh Resolution Mass Spectrometry**; Matthias Witt[1]; Boris Koch[2]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]Alfred-Wegener-Institure for Marine Research, Bremerhaven, Germany*

ThP 137 **Identification of Novel Plant Metabolites using Accurate Mass, MS/MS Data, Nanospray Technology, and Unique Isotope Pattern Recognition;** Jesse L. Balcer; Jeffrey R. Gilbert; Sara J. Linder; John D. Magnussen; Pete L. Johnson; Mark S. Krieger; *Dow AgroSciences, Indianapolis, IN*

ThP 138 **Determination of Off-Odors and Volatile Organic Compounds from Starch-Derived Biodegradable Polymers;** Enrico Davoli[1]; Giancarlo Bianchi[1]; Ettore Zuccato[1]; Fernanda Farachi [2]; Roberto Fanelli[1]; *[1]Mario Negri Institute, Milano, ITALY; [2]Novamont S.p.A., Novara, Italy*

ThP 139 **Sulfur Kinetic Isotope Effects Accompanying Decomposition of Sulfuryl Chloride During Chlorination of Organic Compounds**; Ian H. Krouse[1]; Brian Moore[2]; H. Roy Krouse[3]; *[1]Denison University, Granville, OH; [2]Wittenberg University, Springfield, OH; [3]The University of Calgary, Calgary, Alberta, Canada*

ThP 140 **Determination of Metabolites from Azo Dyes in Fungal Degradation by Capillary Electrophoresis/Electrospray Mass Spectrometry**; Xueheng Zhao; Huey-Min Hwang; *Jackson State University, Jackson, MS*

ThP 141 **Detection of Persistent Biocides in Sewage Sludge and Human Blood using LC-ESI-MS and LC-ESI-MS/MS**; Jochen Heidler; Rolf U. Halden; *Johns Hopkins Bloomberg School of Public Health, Baltimore, MD*

HOMELAND SECURITY

ThP 142 **Detection of Explosives on Clothing Material by Direct and Air Sampling Thermal Desorption GC/MS**; Ronald E. Shomo, II; Rob Frey; John J. Manura; *Scientific Instrument Services, Ringoes, NJ*

ThP 143 **Attribution of Explosive Origin from Natural Isobaric Ion Profiles Determined by FT/MS Analysis**; Jean-claude Tabet; Sigrid Baumgarten; Denis Lesage; Martine Barbe-Leborgne; *University P. and M. Curie, Paris Cedex O5 , FRANCE*

ThP 144 **Direct Laser Desorption of Low Vapor Pressure Chemical Warfare Agent Simulants in both Laboratory and Field-Portable Time-of-flight (TOF) Mass Spectrometers**; Timothy J. Cornish; Nathan A. Hagan; Alan F. Becknell; Timothy P. Lippa; Jonathan W. Boyd; Plamen A. Demirev; *Applied Physics Lab, MS:2-217, Laurel, MD*

ThP 145 **Rapid Analysis of Intact Viruses using Residue Specific Chemical Cleavage Combined with MALDI TOF MS**; Stephen Swatkoski; Nathan Edwards; Catherine Fenselau; *University of Maryland, College Park, Maryland*

ThP 146 **Combined Rapid Quantitative LC-MS/MS Method to Determine Exposure to Selected Carbamate Pesticides and Tetranitromethane**; Huijuan Zhang; Patrick Dhooge; *New Mexico Department of Health SLD, Albuquerque, NM*

ThP 147 **Rapid Detection of a Plasmid-Encoded Protein in E.coli**; Scott Russell; Nathan Edwards; Catherine Fenselau; *University of Maryland, College Park, MD*

ThP 148 **Monitoring of Gaseous Toxic Compounds in Air using a Handheld Rectilinear Ion Trap Mass Spectrometer**; Heriberto Hernandez[1]; Adam D. Keil[2]; Miriam Fico[1]; Qingyu Song[1]; Robert J. Noll[1]; Zheng Ouyang[1]; R. Graham Cooks[1]; *[1]Purdue University, West Lafayette, IN; [2]Griffin Analytical Technologies, LLC, West Lafayette, IN*

ThP 149 **Detection of Chemical Warfare Agent Degradation Products in Foods using HPLC-ICP-MS and ESI-MS**; Kevin M Kubachka[1]; Douglas T Heitkemper[2]; Joseph A Caruso[1]; *[1]University of Cincinnati, Cincinnati, OH; [2]FDA: Forensic Chemistry Center, Cincinnati, OH*

ThP 150 **High-Throughput Biological Point Detection by Portable Pyrolysis/GC/QitT-MS**; Jianwei Li; Sheng-Suan Cai; Matt Evans; Jack Syage; *Syagen Technology, Tustin, CA*

ThP 151 **Forensic Identification of Ricin by MALDI-TOF/TOF Analysis**; Frederick J. Cox[1]; E. Alex Jestel[1]; Joy M. Ginter[2]; *[1]Battelle East. Science and Tech Center, Aberdeen, MD; [2]Shimadzu Scientific Instruments, Inc., Columbia, MD*

ThP 152 **Analysis of Chemical Warfare Agents in Consumer Products by Desorption Electrospray Tandem Mass**

Spectrometry (DESI-MS/MS); Paul A. D'Agostino; Claude L. Chenier; Carmela R. Jackson Lepage; James R. Hancock; *DRDC Suffield, Medicine Hat, Canada*

ThP 153 **Identification and Discrimination of *Legionella pneumophila* Serological Groups using MALDI-TOF Mass Spectrometry**; Michal Drevinek[1]; Vladimir Drasar[2]; *[1]Natl. Inst. for NBC Protection, Milin, CZECH REPUBLIC; [2]National Legionella Reference Laboratory, Vyskov, CZECH REPUBLIC*

ThP 154 **Fast and Accurate Detection of Hydrazines in Urine by a SPME / Gas Chromatography / Mass Spectrometry Method**; Nick Beninato; Patrick Dhooge; *Scientific Lab Division, New Mexico Dept of Health, Albuquerque, NM*

ThP 155 **Mass Spectral Dependence on Particle Size in Bio-Aerosol Mass Spectrometry**; Erica McJimpsey[1]; Paul Steele[2]; Michael Bogan[2]; Paul Steele[2]; Herbert Tobias[2]; Eric Gard[2]; Matthias Frank[2]; Kuang Jen Wu[2]; Carlito Lebrilla[1]; *[1]University of California, Davis, Davis, CA; [2]Lawrence Livermore National Laboratory, Livermore, CA*

ThP 156 **Rapid Confirmation of Initial Bio-Agent Detection and Identification by Tandem MS-Based Proteomics**; Nathan A. Hagan; Miquel D. Antoine; Timothy Cornish; Jeffrey Lin; Andrew B. Feldman; Plamen A. Demirev; *Johns Hopkins Univ., Laurel, MD*

ThP 157 **High Throughput Sample Preparation for Atmospheric Pressure MALDI-MS for Rapid Detection and Identification of Microorganisms**; Berk Oktem; Appavu K. Sundaram; Sudeepta Shanbhag; Constance M. Murphy; Vladimir M. Doroshenko; *Science and Engineering Services Inc., Columbia, MD*

ThP 158 **Sensitivity Enhancement in the Analysis of Acidic Metabolites of Chemical Warfare Agents by Electrospray Ionization LC/MS/MS**; Doug Mawhinney; Rayman Stanelle; Elizabeth Hamelin; Robert Kobelski; *Centers for Disease Control & Prevention, Doraville, GA*

ThP 159 **Microorganism Identification by MS/MS Typing using Spectral Correlation Methods**; Jane Razumovskaya; Sergey Kurnosenko; Appravu K. Sundaram; Constance Murphy; Berk Oktem; Sue Shanbhag; Vladimir M. Doroshenko; *MassTech, Columbia, MD*

COMPUTER APPLICATIONS

ThP 160 **Operator-Independent Workflow Enhancements to an LC/MS/MS High-Throughput Microsomal Stability Screening Assay**; Rongda Xu; Melinda Manuel; Joshua Cramlett; Kheng Lim; Shaokun Pang; Dan Hascall; Daniel B. Kassel; *Takeda San Diego, Inc., San Diego, CA*

ThP 161 **Mass Spectrometry on Wikipedia: Open Source and Peer Review**; Kermit K. Murray; *Louisiana State Univ., Baton Rouge, LA*

ThP 162 **MS-Expedite: A Universal Spectrum Viewer and *de novo* Tool**; Angela K. Walker; Panagiotis G. Papoulias; Philip C. Andrews; *Univ. of Michigan, Ann Arbor, MI*

ThP 163 **Data Dependent Peak Selection in the Chromatographic Frequency Domain**; Michael W. Senko; Vlad Zabrouskov; *Thermo Fisher Scientific, San Jose, CA*

ThP 164 **Small Molecules as Mathematical Partitions: Chemical-Spatial Rules**; Daniel L. Sweeney; *MathSpec, Inc., Arlington Heights, IL*

ThP 165 **Global Mass Spectral Database for Metabolomics**; Zenzaburo Tozuka[1]; Tomonori Takami[1]; Shohei Shioyama[1]; Takaaki Nishioka[2]; Masanori Arita[3]; Ryo Taguchi[3]; Masaru Tomita[4]; *[1]JCL Bioassay Co., Nishiwaki, Japan; [2]University of Kyoto, Kyoto, Japan; [3]University of Tokyo, Tokyo, Japan; [4]University of Keio, Turuoka, Japan*

ThP 166 **Tool for Multiple Neutral Loss Monitoring, Correlation and Convolution Analysis of Accurate Mass Spectrometry Data**; Eva Duchoslav; J.C.Yves Le Blanc; *MDS Sciex, Concord, Canada*

ThP 167 **Mass Spectral Database for Metabolome Analysis**; Hisayuki Horai[1]; Kazuhiro Suwa[2]; Masanori Arita[2]; Yoshito Nihei[1]; Takaaki Nishioka[3]; *[1]Keio University, Tsuruoka, JAPAN; [2]University of Tokyo, Kashiwa, JAPAN; [3]Kyoto University, Kyoto, JAPAN*

ThP 168 **Development and Validation of a Novel LC/MS/MS Data Review and *in-vivo* PK Processing Software**; Daniel K Jansson[1]; Larry E Elvebak[2]; *[1]Novartis Institutes for BioMedical Research Inc, Cambridge, MA; [2]Gubbs Inc, Alpharetta, GA*

ThP 169 **FAME Analysis of Hesperis Matrinalis: GCxGC-TOFMS Better Resolution**; Ashli E. Brown[1]; William E. Holmes[1]; Elizabeth C. Rogers[1]; Tincuta Verioti[2]; Brian Baldwin[1]; *[1]Mississippi State University, Mississippi State, MS; [2]Leco Corporation, St. Joseph, MI*

ThP 170 **Peak Deconvolution Algorithm to Improve Mass Accuracy of TOF-MS Data**; Gordana Ivosev; Eva Duchoslav; Alina DinDyal-Popescu; J.C.Yves Le Blanc; Ron Bonner; *MDS Sciex, Concord, CANADA*

ThP 171 **Automatic MS/MS Methods Development using an Information Dependent Scanning Protocol to Enhance Sensitivity for High-Throughput ADME Screening and Drug Discovery;** Kevin Whalen[1]; John S. Janiszewski[1]; S.A. Ainley[2]; Wayne Lootsma[2]; E.B. Jones[3]; L.Y. Olsen[3]; Eva Duchoslav[3]; Lyle Burton[3]; *[1]Pfizer Inc, Groton, CT; [2]Sound Analytics, East Lyme, CT; [3]Applied Biosystems/Sciex, Foster City, CA*

ThP 172 **Development of the Real-Time Quantitative Analysis System**; Toshiyuki Yokosuka[1]; Kiyomi Yoshinari[1]; Atsumu Hirabayashi[2]; Naomi Manri[2]; Kinya Kobayashi[1]; *[1]Hitachi, Ltd. Hitachi Research Laboratory, Hitachi, JAPAN; [2]Hitachi, Ltd. Central Research Laboratory, Kokubunji, Japan*

ThP 173 **Comprehensive Two-dimensional Gas Chromatography/Time-of-flight Mass Spectrometry (GCxGC/TOF-MS) Data Alignment for Metabolomics**; Cheolhwan Oh[1]; Xiaodong Huang[2]; Charles Buck[1]; Xiang Zhang[1]; *[1]Bindley Bioscience Center, Purdue University, West Lafayette, IN; [2]Department of Chemistry, Purdue University, West Lafayette, IN*

LC/MS: NANO

ThP 174 **Assessment of Intact Phospholipids in Outer Membrane Vesicles of *Neisseria meningitidis* serogroup B Bacteria with Nanoscale LC-MS;** Hugo D. Meiring; Martin R.J. Hamzink; Bert Zomer; Ad P.J.M. de Jong; *Netherlands Vaccine Institute, Bilthoven, NETHERLANDS*

ThP 175 **High Performance Fused Silica Capillary Columns for High Sensitivity LC/ESI/MS: Application to Proteomics**; Scott B Ficarro[1]; Ahmadali R Moghimi[1]; Yi Zhang[1]; Manor Askenazi[1]; Eric D Smith[1]; Jarrod A Marto[2]; *[1]Dana-Farber Cancer Institute, Boston, MA; [2]Harvard Medical School, Boston, MA*

ThP 176 **Elevating Capillary Column Temperature Improves Proteomic Performance**; Andrew W. Guzzetta; *Stanford University, Stanford, CA*

ThP 177 **Quantification of Free and Total ON 01910.Na in Plasma in Phase I Clinical Trial using Nanospray Ionization;** Sool Yeon Cho[1]; John Roboz[1]; Takao Ohnuma[1]; Stanley C. Bell[2]; Premkumar Reddy[3]; James F. Holland[1]; *[1]Mount Sinai School of Medicine, New York, NY; [2]Onconova Therapeutics Inc., Lawrenceville, NJ; [3]Temple University, Philadelphia, PA*

ThP 178 **Automation of RP/RP 2D nanoLC/MS Analysis with a Novel Online Organic Dilution Method**; Hongji Liu; Guo-

zhong Li; Jeffrey W. Finch; Scott J. Geromanos; John C. Gebler; *Waters Corporation, Milford, MA*

ThP 179 **Highsensitive Proteomics of Limited Number of Cells using LC-MS with Ultranarrow Porous Layer Open Tubular (PLOT) Columns**; Barry L. Karger; Quanzhou Luo; Guihua Yue; Ye Gu; Tomas Rejtar; Shiaw-Lin Wu; *Barnett Institute, Northeastern University, Boston, MA*

ThP 180 **Improving the Detection of Hydrophilic Peptides for Increased Protein Sequence Coverage and Enhanced Proteomic Analyses;** Brian Hampton[1]; Amos Heckendorf[2]; *[1]University of Maryland, School of Medicine, Baltimore, MD; [2]The Nest Group, Inc., Southborough, MA*

ThP 181 **Optimization of the Nanospray Interface for Applications in Metabolomics;** Agnieszka Kraj[1]; Theo Reijmers[1]; Rob van der Heijden[2]; Ubbo Tjaden[1]; Jan van der Greef[1]; Thomas Hankemeier[1]; *[1]Leiden University, Leiden, Netherlands; [2]Leiden/Amsterdam Center for Drug Research, Leiden, Netherlands; [3]Centre for Medical Systems Biology, Leiden, Netherlands*

ThP 182 **Online 1D and 2D nanoLC-ESI-MS using 10-µm-i.d. Porous Layer Open Tubular Polystyrene-Divinylbenzene Columns for Ultrasensitive Proteomic Analysis**; Quanzhou Luo[1]; Guihua Yue[1]; Gary A. Valaskovic[2]; Ye Gu[1]; Dongdong Wang[1]; Shiaw-Lin Wu[1]; Barry L. Karger[1]; *[1]The Barnett Institute, Northeastern University, Boston, MA; [2]New Objective, Inc., Woburn, MA*

ThP 183 **Optimization of Peak Capacity and Separation Efficiency in HPLC-Chip/MS by Applying Selectively on Chip Temperature Control**; Martin Vollmer; Hans-Georg Weissgerber; Karsten Kraiczek; Martin Baeuerle; Thomas Reinhardt; *Agilent Technologies, Waldbronn, GERMANY*

ThP 184 **A Silicon Microfluidic Chip Including a Chromatographic Micro-Column and a Nanoelectrospray Emitter For Mass Spectrometry Based Proteomics Analysis**; Florence Ricoul[1]; Nicolas Sarrut[1]; Frédérique Mittler[1]; Olivier Constantin[1]; Régis Blanc[1]; Françoise Vinet[1]; Jérôme Garin[2]; Claude Vauchier[1]; *[1]CEA-LETI MINATEC DRT/DTBS, Grenoble, France; [2]CEA/INSERM/UJF (ERM201) DSV/DRDC, Grenoble, France*

ThP 185 **Increasing Throughput in nanoLC-MS for Proteomics**; David W. Neyer; Jia Eng Siow; Remco van Soest; Kenneth R. Hencken; Jason E. Rehm; *Eksigent Technologies, Dublin, CA*

ThP 186 **Rapid Peptide Analysis via Nanobore LC-ESI-MS with Sub-2 µm Particles**; John Neveu[1]; Adam Perala[2]; Christopher Toher[2]; William Lane[1]; Gary Valaskovi[2]; *[1]Harvard University, Cambridge, MA; [2]New Objective Inc., Woburn, MA*

ThP 187 **NanoLC/MS Separation and Automated Tandem Mass Spectrometric Analysis for Structural Determination of Oligosaccharides**; Latasha Lamotte[1]; Patrick D. Perkins[2]; Milady R. Ninonuevo[1]; Rudolf Grimm[1]; Carlito B. Lebrilla[1]; *[1]UC Davis, Davis, CA; [2]Agilent Technologies, Santa Clara, Ca*

LC/MS: SAMPLE PREPARATION: BIOLOGICAL MATRIX

ThP 188 **Developing a Turbulent-Flow LC-MS Method to Measure Methylmalonic Acid in Biological Fluids**; James Byrd[1]; Halil Erol[2]; Hidehiko Azumaya[2]; Joseph M. Di Bussolo[1]; *[1]Thermo Fisher Scientific, Franklin, MA; [2]West Chester University of Pennsylvania, West Chester, PA*

ThP 189 **Application of a New SPE Polymer, EVOLUTE ABN™, for the Extraction of Diuretics from Urine and Analysis by LC-MS/MS;** Steve Jordan; Lee Williams; Matthew Cleeve; Scott Merriman; Helen Lodder; Richard Calverley; Joanna Smith; *Biotage, Hengoed, United Kingdom*

ThP 190 **The Stability of Penicillins in LC-MS/MS Assays for Equine Plasma Samples**; Jeffrey Rudy[1]; Rongfang Xu[1]; Joseph M. Di Bussolo[2]; *[1]Pennsylvania Equine Toxicology & Research Lab, West Chester, PA; [2]Thermo Fisher Scientific, Franklin, MA*

ThP 191 **A Sensitive LC-MS/MS Assay for the Determination of Phentermine in Human Plasma using SPE and a Monolithic LC Column**; John W. Richard; Yong Q. Tang; *Covance Bioanalytical Services, LLC, Indianapolis, IN*

ThP 192 **Impact on Ion Suppression by Eliminating Phospholipid Interferences using a Generic TurboFlow Method**; Francois A. Espourteille; Catherine LaFontaine; *Thermo Fisher Scientific, Franklin, MA*

ThP 193 **Evaporation-Free Extraction and Application in Bioanalysis**; Aimin Tan[1]; Saleh Hussain[1]; Francois Vallee[2]; *[1]Anapharm Inc. (Richmond Hill), Toronto, Canada; [2]Anapharm Inc. (Quebec), Quebec, Canada*

ThP 194 **A Fully Automated Robotic System That Allows Completely Unattended Plasma Sample Preparation Through Protein Precipitation for Rapid LCMS/MS Bioanalysis**; Ji Ma; Jianxia Shi; Hoa Le; Robert Cho; Judy C. Huang; Bradley K. Wong; Shichang Miao; *Amgen, South San Francisco, CA*

ThP 195 **Quantitative Determination of Unchanged Hydralazine in Human Whole Blood using LC/MS/MS**; James Waltrip; William Mylott; Rand Jenkins; *PPD, Richmond, VA*

ThP 196 **Evaluation of Different Sample Preparations and Application of a Novel Surfactant for Peptide Analysis in Biological Matrices using On-Line SPE-LC/MS/MS**; Yan Wang[1]; Isabelle Tcholakov[1]; Michel Koch[2]; Miryam Kadkhodayan*[1]; *[1]Amylin Pharmaceuticals, Inc., San Diego, CA; [2]Spark Holland, Emmen, The Netherlands*

ThP 197 **Simplified Sample Preparation for Pharmaceutical Sample Quantitation using an Ultra-High Sensitivity LC-MS/MS System;** Peter Lodenquai[1]; Renee Huang[1]; Tania Sasaki[1]; Mauro Aiello[2]; *[1]Applied Biosystems, Foster City, CA; [2]Applied Biosystems/MDS Sciex, Concord , Canada*

ThP 198 **Importance of Complete Automated Control of SPE Conditions in Validated LC/MS/MS Assays of GS-9137, Metabolites, and Ritonavir in Human Plasma**; Michelle Brosnan-Cook; Terri S. Cronin; J. Steve Wintermute; John R. Kagel; *Gilead Sciences, Durham, NC*

ThP 199 **LC-MS Analysis of Beta Adrenergic Blocking Agents from Urine using Molecularly Imprinted Solid-Phase Extraction (SPE)**; Carmen T. Santasania; Craig R. Aurand; Olga Shimelis; David S. Bell; Daniel Shollenberger; *Supelco, Bellefonte, PA*

ThP 200 **Comprehensive Profiling of Endogenous Human Plasma Peptides using Restricted Access Material, OFFGEL Electrophoresis and HPLC-Chip MS Analysis**; Tasso Miliotis[1]; Peter Abrahamsson[2]; *[1]AstraZeneca R&D Molndal, Molndal, SWEDEN; [2]Agilent Technologies, Göteborg, Sweden*

ThP 201 **Simultaneous Extraction of Acidic, Basic and Neutral Drugs using 96-well Supported Liquid Extraction (SLE) and LC-MS/MS;** Matthew Cleeve; Lee Williams; Scott Merriman; Helen Lodder; Steve Jordan; Richard Calverley; Joanna Smith; *Biotage, Hengoed, United Kingdom*

ThP 202 **Use of Supported Liquid Extraction for Drug Analysis from Plasma: High Throughput Sample Preparation in a 96 Well Filter Plate**; Vivek Joshi[1]; Jason Blodgett[1]; Gregor Jordan[2]; *[1]Millipore Corp., Danvers, MA; [2]Roche Diagnostics GMBH, Penzberg, Germany*

ThP 203 **Function of Ether-Suspended Silica in a Novel Approach to Quantitate Alendronate in Human Urine with LC-MS/MS**; Jiongwei Pan[1]; Mike Larson[1]; Hike Junga[1]; Christopher J Randlett[1]; Mathew Eckert[1]; Mohammad

Koupaei-Abyazani[1]; Naidong Weng[2]; Xiangyu Jiang[1]; *[1]Covance Laboratories Inc., Madison, WI; [2]Bristol-Myers Squibb, New Brunswick, NJ*

ThP 204 **How to Determine Matrix Effects and Extraction Recovery in Online Solid-Phase Extraction – Liquid Chromatography – Mass Spectrometry**; Alex Berhitu; Emile Koster; *Spark Holland Inc., Plainsboro, NJ*

ThP 205 **Whole Blood Analysis by Online SPE-LC-MS/MS: A New Approach**; Otto Halmingh; Peter Ringeling; Emile Koster; *Spark Holland Inc., Plainsboro, NJ*

ThP 206 **A Complete Automated SPE/LC/MS Method for the Analysis of Cocaine And Metabolites in Urine**; Eshwar Jagerdeo[1]; Martin Sibum[2]; Madeline Montgomery[1]; John Crutchfield[2]; Marc LeBeau[1]; *[1]FBI Laboratory, Quantico, VA; [2]Spark Holland, Emmen, Netherlands*

ThP 207 **Validation of Peptide Profiling for Biomarker Analysis from Human Urine by Multidimensional LC/MS**; Egidijus Machtejevas[2]; Klaus K. Unger[2]; Hartmut Schlüter[3]; Maria Trusch[3]; Ole Schulz-Trieglaff[4]; Knut Reinert[4]; Rob Hendriks[1]; Sven Andrecht[1]; *[1]Merck KGaA, Darmstadt, Germany; [2]Johannes Gutenberg Universität, Mainz, Germany; [3]Charite, Berlin, Germany; [4]Freie Universität, Berlin, Germany*

ThP 208 **Comparison of Solid Phase Extraction Methods for Reduction of Matrix Induced Ion-Suppression of Clenbuterol by Linear Ion Trap;** Craig Aurand; Olga Shimelis; Carmen T. Santasania; Daniel Shollenberger; *Supelco, Bellefonte, PA*

ThP 209 **LC-ESI-MS/MS Quantitation of the Nucleotide Pro-Drug GS-9219 and Metabolites Extracted from Rat Plasma**; Alexandre Pimenov; Jeffry Plomley; Timothy Samuels; *Charles River Laboratories, Senneville (Montréal), CANADA*

ThP 210 **A Generic Approach to the Extraction of Multi-functional Drugs using Resin-Based Mixed-mode SPE with LC-MS/MS Analysis;** Scott Merriman; Lee Williams; Matthew Cleeve; Steve Jordan; Richard Calverley; Joanna Smith; *Biotage, Hengoed, United Kingdom*

ThP 211 **Difficulties in the LC-MS/MS Bioanalysis of Biphosphonates**; Sandrine A.M. Merette; David J. Anderson; Martin P. Smith; Grace van der Gugten; Irene Popov; Bernard P. Nutley; David J. Gray; *CanTest, Ltd., Vancouver, CANADA*

ThP 212 **Ion Suppression Reduction by a Hydrophilic Pore Gradient in SPE**; William Hudson; Arnie Aistars; David Jones; *Varian, Inc., Lake Forest, CA*

HIGH THROUGHPUT ANALYSIS / ROBOTICS II

ThP 213 **Phase Locked Ion Injection into a Quadrupole Mass Analyzer for Ultra Fast Scanning;** Craig Love; Doug McIntyre; Alex Mordehai; *Agilent Technologies, Inc, Santa Clara, CA*

ThP 214 **Quantitative Analysis on a Novel MALDI Triple Quadrupole Platform – What Analysis Speed Can Be Achieved on Large Sample Lots?** Jean-François Alary; George Scott; Feng Zhong; Jay Corr; *Applied Biosystems/MDS Sciex, Concord, Ontario, Canada*

ThP 215 **Strategy to Streamline LC/MS Purification of Compound Libraries on a Waters ZQ Prep System – Part I. Analytical Sample Pooling**; Yinong Zhang; Lu Zeng; Rongda Xu; Daniel B. Kassel; *Takeda San Diego, Inc., San Diego, CA*

ThP 216 **Automated Nanofluidic System for Real-time Monitoring of Enzymatic Assays**; Thomas N. Corso[1]; Reinaldo Almeida[1]; Nicole Dennhart[2]; Thomas Letzel[2]; Jack Henion[1]; Mike Lees[1]; *[1]Advion Biosciences, Inc., Ithaca, NY; [2]Technical University of Munich, Freising–Weihenstep, Germany*

ThP 217 **High Throughput Accurate Mass Measurement using the LDTD Ion Source on the LTQ Orbitrap**; Denis Faubert[1]; Karine Venne[2]; Josee Champagne[1]; Alexandra Furtos[2]; Sylvain Letarte[3]; Pierre Picard[3]; Benoit Coulombe[1]; *[1]Proteomics Discovery Platform of the IRCM, Montreal, Canada; [2]RCMS, University of Montreal, Montreal, Canada; [3]Phytronix Technologies, Quebec, Canada*

ThP 218 **Techniques for MS-Based High Throughput Screening (MS-HTS) in Drug Discovery**; Thomas Roddy; Steven J. Stout; Christopher R. Horvath; Ji-Hu Zhang; W. Adam Hill; Y. Karen Wang; *Novartis Institutes for Biomedical Research, Cambridge, MA*

ThP 219 **Capacity & Quality Based Approach Achieves High Speed, Separation & Human Efficiency for UV/MS Directed Purification in Drug Discovery**; Xu Zhang; David P. Budac; Mark J. Hayward; *Lundbeck Research US, Paramus, NJ*

ThP 220 **Strategy to Streamline LC/MS Purification of Compound Libraries on a Waters ZQ Prep System – Part II. Preparative Sample Pooling**; Lu Zeng; Rongda Xu; Yinong Zhang; Derek Laskar; Daniel B. Kassel; *Takeda SD, Inc., San Diego, CA*

ThP 221 **Direct Scaling from Microbore Column Chromatography to Preparative Column Chromatography to Support Mass-Directed Purification on a Waters ZQ LC/MS System**; Catherine Pham; Lu Zeng; Yinong Zhang; Daniel B. Kassel; *Takeda San Diego, San Diego, CA*

ThP 222 **Towards High-Throughput Shotgun IEF**; Ali R. Vaezzadeh[1]; Jacques Deshusses [1]; Pierre Lescuyer[1]; Catherine G. Zimmermann-Ivol [1]; Alexis Chauvet[1]; Celine Hernandez[2]; Daniel Walther[2]; Ron D. Appel[2]; Denis F. Hochstrasser[1]; *[1]BPRG, Geneva University, Geneva, Switzerland; [2]PIG, Swiss Institute of Bioinformatics, Geneva, Switzerland*

ThP 223 **Development of an Ultrafiltration Mass Spectrometry Based Screening Assay for Ligands of Human RXRa**; Dongting Liu[1]; Guowen Liu[1]; Yan Luo[1]; David J. Broderick[2]; Michael I. Schimerlik[2]; Richard B. van Breemen[1]; *[1]University of Illinois College of Pharmacy, Chicago, IL; [2]Oregon State University, Corvallis, OR*

ThP 224 **Automation of Surface Desorption Ionization Technology for High Throughput Analysis of Chemicals and Biological Samples**; Joseph Tice; Brian D. Musselman; Douglas Simmons; Elizabeth Crawford; *IonSense, Inc., Saugus, MA*

ThP 225 **MALDI-TOF Analysis of Antibody Arrays on Patterned Porous Gold Surfaces**; Kenyon M Evans-Nguyen; Sheng-Ce Tao; Heng Zhu; Robert J Cotter; *Johns Hopkins University, Baltimore, MD*

ThP 226 **Exploiting MALDI-Based Methods for Rapid Enzyme Inhibitor Screening**; Kenneth D. Greis[1]; Gregory F. Davis[2]; Pauline J. Vollmerhaus[3]; Feng Zhong[3]; *[1]University of Cincinnati, Genome Research Inst., Cincinnati, OH; [2]Celsus Laboratories, Cincinnati, OH; [3]MDS Sciex, Concord, Ontario, Canada*

ThP 227 **High-Throughput LDTD-MS/MS Determination of Reserpine : 1000 Samples in 1.5 Hours**; Jean Lacoursière; Patrice Tremblay; Pierre Picard; *Phytronix Technologies, Quebec, CANADA*

ThP 228 **High-throughput Characterization of Proteins Bound to Peptoid Arrays using Mass Spectrometry**; Shama P. Mirza[1]; Daniel Savic[1]; Moola Reddy[2]; Andrew S. Greene[1]; Tom Kodadek[2]; Michael Olivier[1]; *[1]Medical College of Wisconsin, Milwaukee, WI; [2]University of Texas Southwestern Medical Center, Dallas, TX*

THURSDAY POSTERS

GCMS

ThP 229 **Steroid Isotopic Standards for GCC-IRMS**; Ying Zhang; J. Thomas Brenna; *Cornell University, Ithaca, NY*

ThP 230 **Evaluation of Solid-Phase Microextraction/On-Fiber Derivatization/Gas Chromatography/Mass Spectrometry for Profiling Steroids and Their Metabolites in the American Alligator**; John A. Bowden; Dieldrich S. Bermudez; Louis J. Guillette Jr; Richard A. Yost; *University of Florida, Gainesville, FL*

ThP 231 **Analysis of Halogenated Compounds in Sediment and Aquatic Animal Tissues by Ammonia ECNI GC/MS**; Mark R Burkhardt[1]; Steven D Zaugg[1]; Steven G Smith[1]; Thomas P Doherty[2]; Jim Foote[2]; *[1]U S Geological Survey, Denver, CO; [2]Agilent Technologies, Santa Clara, CA*

ThP 232 **Improving Mass Accuracy on a Unit Resolution Quadrupole Mass Spectrometer**; Maria Cristina A. Dancel[1]; David H. Powell[1]; Ming Gu[2]; *[1]University of Florida, Gainesville, FL; [2]Cerno Bioscience, Danbury, CT*

ThP 233 **A Study of Mass Spectra of Organic Acids and Their Analytical Derivatives;** Kirill Tret'yakov; Yufang Zheng; Anzor Mikaia; Stephen Stein; *National Institute of Standards and Technology, Gaithersburg, MD*

ThP 234 **Rapid GC-MS Profiling of Complex Essential Oils Based on 1D Spectral Deconvolution using an Automated Sequential 2D GC-MS Generated Database**; Albert Robbat; Yongli Huang; *Tufts University, Medford, MA*

ThP 235 **Potential of Two-Dimensional Gas Chromatography with Time-of-Flight Mass Spectrometric Detection in Food Analysis**; Radim Stepan; Petr Cuhra; Sona Barsova; *Czech Agriculture and Food Inspection Authority, Prague 5, Czech Republic*

ThP 236 **Application of Different Soft Photo-Ionization Techniques Coupled to Gas Chromatography to Enhance Selectivity (GCxREMPI/SPI-TOFMS) and Separation Power (GCxGCxSPI-TOFMS)**; Thomas M. Gröger; Werner Welthagen; Fabian Mühlberger; Stefan Mitschke; Ralf Zimmermann; *GSF Research Centre, Oberschleissheim, Germany*

ThP 237 **Improved Method for Analysis of Synthetic Pyrethroids and Organophosphate Pesticides in Human Blood Plasma using Gas Chromatography-High Resolution Mass Spectrometry**; Jose J. Perez[1]; Gayanga Weerasekera[1]; Megan H. Williams[2]; Robin M. Whyatt[2]; Larry L. Needham[1]; Dana B. Barr[1]; *[1]Centers for Disease Control and Prevention, Atlanta, GA; [2]Mailman School of Public Health, Columbia Univ., New York City, NY*

ThP 238 **Pulsed Flow Modulation – A Novel Concept for Comprehensive 2D GCxGC-MS with Supersonic Molecular Beams**; Aviv Amirav; Marina Poliak; Alexander Gordin; Maya Kochman; *Tel-Aviv University, Tel-Aviv, Israel*

ThP 239 **Determination of Dioxin-Like PCBs and 62 PCB Congeners in Fish using GC/MS and GC/MSD**; Junghyuck Suh; Geum-soon Oh; Jongok Lee; Gun-Jo Woo; *Korea Food and Drug Administration, Seoul, South Korea*

ThP 240 **Determination of Diisopropylfluorophosphate in Rat Brain Tissue by Headspace Solid Phase Microextraction Gas Chromatography-Mass Spectrometry**; Meng Xu; Alvin V. Terry Jr; Michael G. Bartlett; *UGA, Athens, GA*

ThP 241 **Accurate Mass Measurements and Molecular Ion Detection of Fluorinated Compounds with Gas Chromatography/Field Ionization ToF Mass Spectrometry**; Junichi Osuga[1]; Yoji Nakajima[2]; Masaaki Ubukata[1]; Akihiko Kusai[1]; Jun Tamura[1]; Charles Detmer[3]; *[1]JEOL Ltd., Akishima, Japan; [2]Asahi Glass Co. LTD, Yokohama, Japan; [3]JEOL USA, Inc., Peabody, MA*

ThP 242 **GC/MS Studies on the Pentafluorobenzyl Oxime Derivatives of Long-chain Aliphatic Aldehydes and Ketones**; Viral V Brahmbhatt[1]; Fong-Fu Hsu[2]; David A Ford[1]; *[1]Saint Louis University, Saint louis, MO; [2]Washington University, Saint Louis, MO*

ThP 243 **Simultaneous Determination of Menthol and Methyl Salicylate in Human Plasma using Liquid-Liquid Extraction, Gas Chromatography and Mass Spectrometric Detection**; Mark Leahy; Paul Severin; *Covance, Madison, WI*

ThP 244 **Development and Application of Mass Spectrometric Methods to characterize a Substrate Co-catalyzed Triple Organo-cascade Reaction**; Peni P. Handayani; Wolfgang Schrader; *Max-Planck-Institut für Kohlenforschung, Mülheim / Ruhr, GERMANY*

ThP 245 **Detection of Nepetalactone in the Nepeta Cataria Plant by Direct Thermal Desorption GC/MS;** Ronald E. Shomo, II; Rob Frey; John J. Manura; *Scientific Instrument Services, Ringoes, NJ*

ThP 246 **The Use of a Chromatographic Zone as an Inlet Device for GC-MS;** Harry Prest; Steven M. Fischer; *Agilent Technologies, Santa Clara, CA*

ThP 247 **Fast Gas Chromatography Combustion Isotope Ratio Mass Spectrometry**; Gavin L. Sacks[1]; Ying Zhang[2]; J. Thomas Brenna[2]; *[1]Cornell University, NYSAES, Geneva, NY; [2]Cornell University, Ithaca, NY*

BIOINFORMATICS: MISCELLANEOUS

ThP 248 **Does Trypsin Cut Before Proline?** Jesse M Rodriguez; Nitin Gupta; Pavel A Pevzner; *University of California, San Diego, La Jolla, CA*

ThP 249 **Genomic Tree of Bacteria and Archaea Revealed by Whole Proteome Analysis**; Samir V. Deshpande[1]; Jacek P. Dworzanski[2]; Alan W. Zulich[3]; *[1]Science & Technology Corporation, Edgewood, MD; [2]SAIC, Aberdeen Proving Ground, MD; [3]U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD*

ThP 250 **A Computational Approach to the Identification of Site-specific Protein N-glycosylation using Mass Spectrometry**; Yin Wu; Yehia Mechref ; Iveta Klouckova; Milos V. Novotny; Hai-xu Tang; *Indiana University, Bloomington, IN*

ThP 251 **An Objective Organism-Based Evaluation of Tandem Mass Spectrometric Data Obtained from Proteomic Studies**; Konstantinos Thalassinos; Georgios Efstathiou; Susan E. Slade; James H. Scrivens; *University of Warwick, Coventry, United Kingdom*

ThP 252 **Informatics Issues in Improving Reproducibility in Proteomics Experiments**; Sean L. Seymour; Wilfred H. Tang; Ignat V. Shilov; Alex Loboda; Alpesh A. Patel; Christie L. Hunter; Daniel A. Schaeffer; *Applied Biosystems|MDS Sciex, Foster City, CA*

ThP 253 **E-value Calibration: Unifying the Statistical Significance Assignment for Database Search Methods**; Gelio Alves[1]; Aleksey Ogurtsov[1]; Wells W. Wu[2]; Guanghui Wang[2]; Rong-Fong Shen[2]; Yi-Kuo Yu[1]; *[1]National Center for Biotechnology Information, Bethesda, MD; [2]National Heart Lung and Blood Institute, Bethesda, MD*

ThP 254

ThP 255 **Assessment of Error Rates in Database-Based Identification of MS/MS Spectra**; Olga Vitek[1]; Sandra Loevenich[2]; Ruedi Aebersold[2]; *[1]Purdue University, West Lafayette, IN; [2]IMSB, ETH, Zurich, Switzerland*

ThP 256 **Comparison of Database Search Engine Expectation Values**; Aenoch Lynn; Peter Baker; Robert Chalkley; Alma Burlingame; *University of California, San Francisco, San Francisco, CA*

THURSDAY POSTERS

ThP 257 **Automatic in Silico Interpretation of Native N-Glycopeptide Stopflow MS2 CID Spectra Acquired from a Mixture of Unknown Glycoproteins**; Sakari Joenväärä[1]; Ilja Ritamo[1]; Hannu Peltoniemi[1]; Risto Renkonen[2]; *[1]MediCel Ltd, Helsinki, FINLAND; [2]University of Helsinki, Helsinki, Finland*

ThP 258 **Comparison of Statistical Approaches for Validation of Proteomic Datasets**; D. Brent Weatherly[1]; James A. Atwood[2]; Lin Lin[2]; Fernanda Ludolf[3]; Gretchen M. Cooley[1]; Arthur Nuccio[2]; Rick L. Tarleton[1]; Ron Orlando[2]; *[1]Center for Tropical and Emerging Global Disease, Athens, GA; [2]Complex Carbohydrate Research Center, Athens, GA; [3]Programa de Pós-Graduação e Pesquisa da Santa Casa, Belo Horizonte – MG, Brazil; [4]BioInquire, LLC, Athens, GA*

ThP 259 **The Use of MALDI/MS, LC/MS and Artificial Neural Networks for Detecting Serum Biomarkers of Growth Hormone Administration in Human Subjects**; Joshua Boateng[1]; Richard Kay[2]; Steve Beech[3]; Lee Lancashire[1]; Pamela Brown[2]; Shi Yu Yang[3]; Phil Teale[2]; Jane Roberts[2]; Graham Ball[1]; MC Winslet[3]; Geoffrey Goldspink[3]; Colin Creaser[1]; *[1]Nottingham Trent University, Nottingham, United Kingdom; [2]HFL Ltd, Fordham, United Kingdom; [3]Royal Free and University College Medical School, London, United Kingdom*

ThP 260 **The Effect of Precursor Ion Mass Accuracy and Database Search Tolerance in the Identification of Proteins from Complex Samples**; Ioannis Papayannopoulos; *M.I.T. Center for Cancer Research, Cambridge, MA*

ThP 261 **Alteration of the Amino Acid Sequence Information According to Protein Knowledge**; Harunobu Yunokawa[1]; Junko Ozaki[1]; Shinji Sato[1]; Katsunori Yoda[1]; Takao Kawakami[2]; *[1]Maze, Inc., Tokyo, Japan; [2]Tokyo Medical University, Tokyo, Japan*

ThP 262 **The Identification of Sulphur-containing Peptides in the LCMS Analysis of Protein Digests**; Tony Ferrige[1]; Stuart Ray[1]; Robert Alecio[1]; Lewis Pannell[2]; *[1]Positive Probability Limited, Cambridgeshire, United Kingdom; [2]Mitchell Cancer Institute, U. of S. Alabama, Mobile, AL*

ThP 263 **Investigation of Ty3 Retrotransposon Protein Processing Utilizing Targeted Proteomics Data Acquisition and Mining**; Jeffrey J. Jones; Stuart Arfin; Becky Irwin; Suzanne Sandmeyer; Lan Huang; *University of California Irvine, Irvine, CA*

ThP 264 **Assigning Proteins with Confidence – Applying Peptide Detectability to the Protein Inference Problem**; Pedro Alves; Randy J. Arnold; Milos V. Novotny; James P. Reilly; Predrag Radivojac; Haixu Tang; *Indiana University, Bloomington, IN*

ThP 265 **Single Peptide Protein Characterisation, including Function and Structural Fold Annotation, Based on Highly-Significant Signature Peptides Detected Within Three Million Proteins;** Ian Humphery-smith; Shane Sturrock; Fiona McDonald; *Biosystems Informatics Institute, Newcastle upon Tyne, United Kingdom*

ThP 266 **Rapid Protein Identification & Quantification from FTMS Data**; Rob Grothe; Darren Kessner; Jonathan Katz; David Agus; Parag Mallick; *Cedars-Sinai Medical Center, Los Angeles, CA*

ThP 267 **Systems Biology of Glycolysis Integrated Analysis of Dynamic DNA-Protein and Protein-Protein Complexes, Transcriptomics and Metabolites**; Ville Parviainen[2]; Sakari Joenväärä[1]; Ilja Ritamo[1]; Pirkko Mattila[1]; Juha-Pekka Pitkänen[1]; Jouni Ahtinen[1]; Risto Renkonen[2]; *[1]MediCel Ltd, Helsinki, Finland; [2]University of Helsinki, Helsinki, Finland*

ThP 268 **A Local Interaction/Disruption Network using Histone Deacetylase Complex Based Proteomic Data**; Joshua M. Gilmore[1]; Mihaela E. Sardiu[1]; Laurence Florens[1]; Michael J. Carrozza[2]; Bing Lee[1]; Jerry L. Workman[1]; Michael P. Washburn[1]; *[1]Stowers Institute for Medical Research, Kansas City, MO; [2]National Institute of Environmental Health Science, Research Triangle Park, North Carolina*

ThP 269 **Reconstruction of Peptide Sequences from de novo Sequences and Their Homologues**; Weijie Yang[1]; Denis Yuen[1]; Bin Ma[2]; Iain Rogers[1]; *[1]Bioinformatics Solutions Inc., Waterloo, Canada; [2]University of Western Ontario, London, Canada*

ThP 270 **Effects of Growth Temperature When Discriminating Bacteria using Pyrolysis Gas Chromatography Differential Mobility Spectrometry (Py-GC/DMS) and Principal Component Analysis (PCA)**; Satendra Prasad[1]; Karisa. M Pierce[2]; Hartwig Schmidt[1]; Jaya. V Rao[1]; Robert Gueth[1]; Sabine Bader[3]; Geoffrey. B Smith[1]; Robert. E Synovec[2]; Gary. A Eiceman[1]; *[1]New Mexico State University, Las Cruces, New Mexico; [2]University of Washington, Seattle, Washington; [3]University of Dortmund, Dortmund, Germany*

ThP 271 **GelKeys: A Software Application for 2D Gel Image Storage, Markup, and Sharing**; Kip L Bodi[1]; Francesca Lavatelli[5]; David H Perlman[2]; Mark E McComb[2]; James West[2]; Catherine E Costello[3]; Martha Skinner[1]; David C Seldin[4]; *[1]Amyloid Treatment and Reearch Program, BUSM, Boston, MA; [2]Cardiovascular Proteomics Center, BUSM, Boston, MA; [3]Mass Spectrometry Resource, BUSM, Boston, MA; [4]Department of Medicine, BUSM, Boston, MA; [5]Amyloid Program, University Hospital San Matteo, Pavia, Italy*

ThP 272 **First-Level Substitution-Tolerant Database Searching Accounts for Genomic Variability in the Identification of Proteins from Organisms with Poorly Characterized Genomes**; Jesús Jorrin Novo[1]; Rafael M. Navarro Cerillo[1]; Christof E. Lenz[2]; Sean Seymour[3]; *[1]University of Cordoba, Cordoba, Spain; [2]Applied Biosystems Germany, Darmstadt, Germany; [3]Applied Biosystems, Foster City, CA*

ThP 273 **Elucidation of Reasons for Unexplained Good Quality MS/MS Spectra In Proteome Studies**; Daniel C. Chamrad[1]; Gerhard Koerting[1]; Christian Stephan[2]; Helmut E. Meyer[2]; Katrin Marcus[2]; Martin Blueggel[1]; *[1]Protagen AG, Dortmund, Germany; [2]Medizinisches Proteom-Center, Bochum, Germany; [3]Bruker Daltonik GmbH, Bremen, Germany*

CARBOHYDRATES & OLIGOSACCHARIDES IV

ThP 274 **Novel Glycomic Platform for Biomarker Analysis**; Clementine Klemm; Begona Casado; Bruno Domon; *ETH, Zürich, Switzerland*

ThP 275 **Off-line Capillary LC Coupled to a Glycan Analysis System Utilizing MALDI-QIT-TOF MS and an Observed MS_n Spectral Library**; Hiromi Ito[1]; Masako Sukegawa[1]; Shuuichi Nakaya[2]; Shinji Funatsu[2]; Akihiko Kameyama[1]; Hisashi Narimatsu[1]; *[1]Research Center for Medical Glycoscience, AIST, Tsukuba, Japan; [2]Shimadzu Corp., Nakagyo-ku, Japan*

ThP 276 **Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Long Chain Polysaccharides**; Irina Perdivara[1]; Eugen Sisu[4]; Ioana Sisu[3]; Michael Przybylski[1]; Alina D. Zamfir[2]; *[1]University of Konstanz, Konstanz, Germany; [2]"Aurel Vlaicu" University of Arad, Arad, Romania; [3]Romanian Academy - Institute of Chemistry, Timisoara, Romania; [4]University of Medicine and Pharmacy, Timisoara, Romania*

ThP 277 **FTICR and Ion Trap MS Define the Nature of Chemokine Heparan Sulfate Interactions**; Matthew R. Schenauer; Yonghao Yu; Matthew D. Sweeney; Julie A. Leary; *University of California, Davis, Davis, CA*

THURSDAY POSTERS

ThP 278 **Resolution Of N-Linked Glycans from Ovalbumin using Ion Mobility - Mass Spectrometry (IMS-MS)**; Manolo D. Plasencia; Samuel I. Merenbloom; Stormy L. Koeniger; Dragan Isailovic; Yehia Mechref; David E. Clemmer; *Indiana University, Bloomington, IN*

ThP 279 **Heparin-Protein Binding: An Interaction Model Emerging from a Combinatorial Approach**; Rinat R. Abzalimov; Paul L. Dubin; Igor A. Kaltashov; *University of Massachusetts, Amherst, MA*

ThP 280 **Developing a Strategy for LC-MS Analysis of Glycopeptides using Alpha-1-Acid Glycoprotein (AAG)**; Melanie M. Ivancic[1]; Himanshu S. Gadgil[1]; David M. Hambly[1]; Gary D. Pipes[1]; H. Brian Halsall[2]; Michael J. Treuheit[1]; *[1]Amgen Inc., Thousand Oaks, CA; [2]University of Cincinnati, Cincinnati, OH*

ThP 281 **Profiling Bacterial Fermentation of Fructoligosaccharides (FOS) by MALDI-FTICR MS**; Mariana Barboza; Richard R. Seipert; Riccardo G. LoCascio; David A. Mills; Carlito B. Lebrilla; *University of California Davis, Davis, CA*

ThP 282 **Chip-Based Normal Phase LC/MS for Glycomics of N-Linked Glycans And Glycosaminoglycans**; Alicia M. Hitchcock[1]; Michael J. Bowman[1]; Catherine E. Costello[1]; James Lau[2]; Rudolf Grimm[2]; Joseph Zaia[1]; *[1]Boston University, Boston, MA; [2]Agilent Technologies, Inc., Santa Clara, CA*

ThP 283 **An LC/MS Platform for Glycomics Analysis of *Caenorhabditis elegans* Glycosaminoglycans**; Gregory O Staples; Mike J. Bowman; Nancy Leymarie; Catherine E. Costello; John F. Cipollo; Joseph Zaia; *Boston University School of Medicine, Boston, MA*

ThP 284 **Ion mobility Coupled with TOF MS for the Automated Assignment of Glycoconjugates in the Urine of Patients with Inherited Disorders**; Sergey Y. Vakhrushev[1]; James Langridge[2]; Chris Hughes[2]; Ian Campuzano[2]; Hans Vissers[2]; Therese McKenna[2]; Jasna Peter-Katalinic[1]; *[1]Institute for Medical Physics and Biophysics, Muenster, Germany; [2]Waters Corporation, Manchester, UK*

ThP 285 **Rapid Automated Identification of Urine Glycoconjugates by Ion Mobility Separation MS and MS/MS and Computer Assignment**; Sergey Y. Vakhrushev[1]; Chris Hughes[2]; James Langridge[2]; Ian Campuzano[2]; Hans Vissers[2]; Therese McKenna[2]; Jasna Peter-Katalinic[1]; *[1]Institute for Medical Physics and Biophysics, Muenster, Germany; [2]Waters Corporation, Manchester, UK*

ThP 286 **Analysis of N-linked Glycans from Human Plasma by IMS-MS**; Sarah Trimpin; Manolo Plasencia; Dragan Isailovic; Samuel Merenbloom; Yehia Mechref; Milos Novotny; David Clemmer; *Indiana University, Bloomington, IN*

ThP 287 **Use of Isomeric Butyl Ketoximes in the Identification of Isomeric Fructosylamino Acids by Gas-Liquid Chromatography/Triple Quadrupole Mass Spectrometry;** Thomas P. Mawhinney; Deborah L. Chance; Valeri V. Mossine; Nancy Cassity; James K. Waters; *University of Missouri, Columbia, MO*

ThP 288 **Enhanced Neutral Glycan Separation via Mobile Phase Optimization**; Samantha Phan; Sharon Gao; Alex Buko; *Biogen Idec, San Diego, CA*

DRUG METABOLISM: QUANTITATION

ThP 289 **Application of Column-Switching With Ultra High Performance Liquid Chromatography for the Quantitative Analysis of Pharmaceuticals In Plasma**; Guenter Boehm[1]; Michel Wagner[2]; Emmanuel Varesio[2]; Chantal Grivet[2]; Gerard Hopfgartner[2]; *[1]Thermo Scientific, Basel, Switzerland; [2]University of Geneva, Geneva, Switzerland*

ThP 290 **Centralized MS Method Development for Discovery *in vivo* Animal Studies**; Michael Logman; Daniel Jansson; Jakal Amin; *Novartis Institutes for Biomedical Research, Cambridge, MA*

ThP 291 **Ambient Temperature Effects on Quantitative Bioanalytical LC-MS/MS Analysis**; John D. Sowell; Michael S. Alexander; *Bioanalytical Systems, Inc., McMinnville, OR*

ThP 292 **Simultaneous Metabolite Identification and Quantitation of Parent Drug using Reverse Energy Ramp Scanning on a Triple Stage Quadrupole Mass Spectrometer**; Qin Yue[1]; Louis Maljers[2]; Yan Chen[2]; YungHsiang Chen[1]; Patrick Rudewicz[1]; *[1]Genentech, Inc, South San Francisco, CA; [2]ThermoFisher, Inc, San Jose, CA*

ThP 293 **Sensitive Assays using SPE and HILIC-LC-MS/MS for Quantification of Oseltamivir and Zanamivir – the Birdflu Drugs**; Niklas Lindegardh[1]; Tran T Hien[3]; Jeremy Farrar[3]; Nicholas P J Day[1]; Nicholas J White[1]; *[1]Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand; [2]Oxford University, Oxford, UK; [3]Hospital for Tropical diseases, Ho Chi Minh City, Vietnam; [4]SEA Influenza Clinical Research Network*

ThP 294 **LC-ES/MS/MS Analysis of Soy Isoflavones in Prostate and Plasma from Men Undergoing Prostate Cancer Surgery**; Mona I. Churchwell[1]; Omer Kucek[2]; Howard Parnes[3]; Fazlul H. Sarkar[2]; Wael Sarkar[2]; Edson Pontes[2]; Michael Cher[2]; Daniel R. Doerge[1]; *[1]National Center for Toxicological Research, Jefferson, AR; [2]Karmanos Cancer Institute, Detroit, MI; [3]National Cancer Institute, Bethesda, MD*

ThP 295 **LC/MS/MS Determination of Tetrahydrobiopterin (BH4) in Human Plasma by Measuring L-Biopterin Concentration upon Oxidation under Basic Condition**; Yuwen Zhao[1]; Yongdong Zhu[1]; Saloumeh Jazayeri[1]; Jerry Cao[1]; Yuan-shek Chen[1]; Jamie Zhao[1]; Benjamin Chien[1]; Erik Foehr[2]; *[1]Quest Pharmaceutical Services, LLC, Newark, DE; [2]BioMarin Pharmaceuticals, Inc., Novato, CA*

ThP 296 **Urea Increases Extraction Recovery and Assay Specificity for Drug Analysis In Human Breast Milk using LC-MS?MS**; Laixin Wang[1]; Min Meng[1]; Scott Merkle[1]; Patrick Bennett[1]; Cheryl Spencer[2]; *[1]Tandem Labs, Salt lake City, UT; [2]Immtech Pharmaceuticals, Inc., Vernon Hills, IL*

ThP 297 **High Speed Analysis of ß- Blockers and Metabolites in Human Plasma by LC/ESI+MS/MS with High pH Mobile Phase**; Liming Peng; Tivadar Farkas; *Phenomenex Inc., Torrance, CA*

ThP 298 **Pharmacokinetic Analysis of Methylphenidate (Ritalin®) and Its Main Metabolite, Ritalinic Acid, in Mice using LC-ES/MS/MS**; Nathan C. Twaddle; Daniel R. Doerge; *Food and Drug Administration, Jefferson, AR*

ThP 299 **Ultra-Sensitive Quantification of Corticosteroids using Selective Solid Phase Extraction And Reversed-Phase Capillary High Performance Liquid Chromatography Tandem Mass**; Jun Qu[1]; Yang Qu[1]; Jin Cao[2]; Robert Straubinger[1]; *[1]University at Buffalo, Amherst, NY; [2]NY Centr of Excellence in bioinformatics & life Sc, Buffalo, NY*

ThP 300 **LC-MS Quantitation with Data Dependent Full Scan Product Ion Confirmation: Increased Confidence via Interference Reducing FAIMS and H-SRM;** James Kapron[12]; Laurance Lee[12]; *[1]Thermo Fisher, Ottawa, Canada; [2]Thermo Fisher, San Jose, CA*

ThP 301 **Characterization of Penicillin-G Instability in Equine Plasma by Negative Ion Electrospray MSn Ion Tree Experiments using a Linear Ion Trap**; Jeffrey Rudy[1];

Rongfang Xu[2]; Cornelius Uboh[2]; Joseph Dibussolo[3]; [1]*PA Equine Toxicology, West Chester, PA;* [2]*University of Pennsylvania New Bolton Vet Center, Kennet Square, PA;* [3]*ThermoFisher, Franklin, MA*

ThP 302 **Development and Validation of a Method for the Enantiomeric Quantitation of Amphetamine in Human Plasma by Chiral LC/MS/MS**; Daniel E Mulvana; Dale A Campbell; Erika Moore; *Advion BioServices, Ithaca, NY*

ThP 303 **Quantification of Humanized Therapeutic Antibodies in Human Serum by Liquid Chromatography/tandem Mass Spectrometry (LC/MS/MS)**; Mathieu Dubois[1]; JEAN-Claude Tabet[2]; Berend Neuteboom[3]; Eric Ezan[1]; Francois Becher[1]; [1]*CEA-Service de Pharmacologie et d'Immunoanalyse, Gif sur Yvette Cedex, France;* [2]*LCSOB Université Pierre et Marie Curie, Paris, France;* [3]*Drug Metabolism and Pharmacokinetics, Merck KGaA, Grafing, Germany*

ThP 304 **Determination of Ziprasidone in Rat Plasma and Brain Tissue by LC-MS/MS**; Guodong Zhang[1]; Alvin V. Terry Jr.[2]; Michael G. Bartlett[1]; [1]*University of Goergia, Athens, GA;* [2]*Medical College of Georgia, Augusta, GA*

ThP 305 **Analysis of Poly-γ-Glutamated Isoforms of Pemetrexed by UPLC and Ion Trap Mass Spectrometry**; David L. Hachey[1]; Victor J. Chen[2]; [1]*Vanderbilt University, Nashville, TN;* [2]*Lilly Research Laboratories, Indianopolis, IN*

ThP 306 **Method Development and Validation for the Determination of Triamcinolone Acetonide in Human Plasma by LC/MS/MS**; Juan Fan; Chrysantha Xavier; Nicola Hughes; *Biovail Contract Research, Toronto, Canada*

LIPIDS: OXIDIZED BIOCHEMISTRY & STEROIDS

ThP 307 **Identification of Oxidized Lipid Mediators in Human Plasma**; Celeste Ptak[1]; Robert C. Block[2]; J. Thomas Brenna[1]; [1]*Cornell University, Ithaca, NY;* [2]*University of Rochester, Rochester, NY*

ThP 308 **A Novel Lipase Activity Assay by Quantitative Analysis of Fatty Acid via LC-MS**; Gang Hao; Lan Yang; Istvan Mazsaroff; Melanie Lin; *Altus Pharmaceuticals, Cambridge, MA*

ThP 309 **Progress Toward Newborn Screening for X-Linked Adrenoleukodystrophy (X-ALD) Via Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)**; Walter C. Hubbard[1]; Ann B. Moser[2]; Anita K. Liu[2]; David S. Jones[2]; [1]*Johns Hopkins Hospital, Osler 505, Baltimore, MD;* [2]*Kennedy-Krieger Institute, 700 North Broadway, Baltimore, MD*

ThP 310 **Correlation of Several Isoprostanes with Human Smoking Behavior;** Weiying Yan[1]; Gary D. Byrd[2]; Michael W. Ogden[2]; [1]*Wake Forest University, Winston Salem, NC;* [2]*R.J.Reynolds Tobacco. Company, Winston Salem, NC*

ThP 311 **LC-MS and LC-MS/MS Analysis of Bile from Mice Infected with *Listeria monocytogenes*;** Karolina M. Krasinska[1]; Jonathan W. Hardy[2]; Lindsay M. Comeaux[1]; Christopher H. Contag[2]; Allis S. Chien[1]; [1]*SU Mass Spectrometry, Stanford University, Stanford, CA;* [2]*Dept. of Pediatrics, Stanford School of Medicine, Stanford, CA*

ThP 312 ***In vitro* study of Glycoxidative Modified Low Density Lipoproteins using a Lipoproteomic Approach**; Alan Barnes[1]; Gerald Stubiger[2]; Grazyna Sobal[2]; Omar Belgacem[1]; [1]*Shimadzu Biotech, Manchester, UK;* [2]*Institute of Chemical Technologies and Analysis, TU Vienna, Austria*

ThP 313 **Direct Identification and Characterization of Oxidized Analogs of Platelet Activating Factor by LC-MS/MS**; Xi Chen[1]; Gopal K Marathe[2]; Wujuan Zhang[1]; Thomas M McIntyre[2]; Stanley L Hazen[2]; Robert G Salomon[1]; [1]*Case Western Reserve University, Cleveland, OH;* [2]*Cleveland Clinic, Cleveland, OH*

ThP 314 **Quantitation of Human Urinary F2-Isoprostanes and their Metabolites by Mixed-Mode SPE and HPLC-MS-MS**; Alan W. Taylor[1]; Richard S. Bruno[2]; Maret G. Traber[1]; [1]*Oregon State University, Corvallis, OR;* [2]*University of Connecticutt, Storrs, CT*

ThP 315 **Bioconjugation of Lipid Peroxidation Products: A New Role for Vitamin C?** Jan F. Stevens; Ralph Reed; Alan W. Taylor; Ruth Gordillo; Cristobal L. Miranda; *Oregon State University, Corvallis, OR*

ThP 316 **Determination of Ergosterol by HPLC-MS from Whole Grain Samples Utilizing a Novel APCI Interface**; Mark Busman; *USDA-ARS, Peoria, IL*

ThP 317 **Quantitative Analysis of Dihydroxyeicosatrienoic Acids by Stable Isotope Dilution Chiral LC-Electron Capture APCI/MS**; Clementina Mesaros; Seon Hwa Lee; Ian Blair; *University of Pennsylvania, Philadelphia, PA*

ThP 318 **Mass Spectrometric Quantification of Long Chain Fatty Acyl-Coenzyme A (LCFA) Compounds in Rodent Diabetic Tissue**; Kathleen R. Noon; Jaeman Byun; Anuradha Vivekanandan-Giri; Subramaniam Pennathur; *University of Michigan, Ann Arbor, MI*

ThP 319 **Characterizing High Molecular Weight Wax Esters by Matrix-Assisted Laser Desorption/Ionization – Time of Flight Mass Spectrometry**; Vladimir Vrkoslav; Miloslav Šanda; Josef Cvacka; *Institute of Organic Chemistry and Biochemistry, Prague 6, Czech Republic*

ThP 320 **Mass Spectrometry of Deuterated and Primary Sterols for Quantitative Analysis by HPLC-ESI-MS**; Jeffrey G. McDonald[1]; Jeff D. Moore[2]; Erin C. McCrum[1]; William V. Caufield[2]; Walter A. Shaw[2]; [1]*UT Southwestern Medical Center, Dallas, TX;* [2]*Avanti Polar Lipids, Alabaster, AL*

ThP 321 **Development of a Simplified LC/MS/MS Method for Quantitation of 2-Arachidonylglycerol (2-AG) and Arachidonoylethanolamide (AEA) in Mouse Tissues and 3T3-L1 Adipocytes**; Kerry A. Pierce[1]; Tara M. D'Eon[2]; Sandra R. Teixeira[1]; Andrew N. Tyler[1]; [1]*Novartis Institutes for Biomedical Research, Cambridge, MA;* [2]*Elixir Pharmaceuticals, Cambrdige, MA*

ThP 322 **Inclusion Complex Based Solid-Phase Extraction of Urinary Steroids with Polymerized ß-cyclodextrin Powder**; Ju-Yeon Moon; Bong Chul Chung; Man-Ho Choi; *Life Sciences Division / KIST, Seoul, South Korea*

ThP 323 **Isolation and Relative Quantification of Phosphatidylserine from Vascular Endothelial Cells**; Julie K Freed[1]; Michael S Shortreed[2]; Brian L Frey[2]; Christopher J Kleefisch[1]; Lloyd M Smith[2]; Andrew S Greene[1]; [1]*Medical College of Wisconsin, Milwaukee, WI;* [2]*University of Wisconsin, Madison, WI*

ThP 324 **Diet-Induced Insulin Resistance and Sphingolipid Profiles in Rats: A 2D Lipidomic Approach**; Todd W Mitchell[1]; Nigel Turner[2]; Kim Ekroos[3]; A. J. Hulbert[1]; Paul L. Else[1]; Stephen J. Blanksby[1]; [1]*University of Wollongong, Wollongong, Australia;* [2]*Garvan Institute of Medical Research, Sydney, Australia;* [3]*Astrazeneca R&D, Molndal, Sweden*

NUCLEIC ACIDS II

ThP 325 **Identification and Deamination of New DNA Photoproducts**; Dian Su; *Washington University, St Louis, MO*

ThP 326 **Structural Characterization of a Short Interfering RNA Duplex by Non-Denaturing Ion-Pair Reversed-Phase HPLC Electrospray Ionization Mass Spectrometry**; Scott A. Young; Marsha Langhorst; Mike Fazio; Krishna Kuppannan; *The Dow Chemical Company, Midland, MI*

ThP 327 **Selective Detection of Sugar-Nucleotides in an Engineered *E. coli* Host by HILIC-MS**; Joseph P. M. Hui[1]; Jie Yang[2]; Jon S. Thorson[2]; Evelyn C. Soo[1]; [1]*NRC* -

Institute for Marine Biosciences, Halifax, Canada; [2]School of Pharmacy, University of Wisconsin, Madison, WI

ThP 328 **Top-Down Analysis of Transfer RNA via Ion Trap Tandem Mass Spectrometry**; Teng-yi Huang; Xiaorong Liang; Jian Liu; Yu Xia; Scott McLuckey; *Purdue University, West Lafayette, IN*

ThP 329 **HPLC-ESI-MS/MS Method for Kinetic Analysis of O^6-Alkylguanine DNA Alkyltransferase Mediated Repair of Carcinogen Induced O^6-alkyldeoxyguanosine Lesions**; Rebecca C. Guza[1]; Qingming Fang[2]; Anthony E. Pegg[2]; Natalia Tretyakova[1]; *[1]University of Minnestoa, Minneapolis, MN; [2]Pennsylvania State University College of Medicine, Hershey, PA*

ThP 330 **Heterocyclic Aromatic Amines and DNA Adducts: Investigation of Reactivity from Model Systems**; Emilien L. Jamin; Delphine Arquier; Jacques Tulliez; Laurent Debrauwer; *UMR1089 Xenobiotiques INRA-ENVT, Toulouse, France*

ThP 331 **Quantitation of Oligonucleotide by isotope Dilution Mass Spectrometry**; Tomoya Kinumi; Akiko Takatsu; *AIST/NMIJ Bio-Medical Standards Section, Tsukuba, Ibaraki, Japan*

ThP 332 **Antisense Oligonucleotide and siRNA Sequencing using Quadrupole Time of Flight (Q-TOF) and Hybrid Linear Ion Trap - FTMS (LTQ-FT) instruments;** Jeffrey Gilbert; Scott Young; Mike Fazio; Larry Nicholson; Marsha Langhorst; *The Dow Chemical Company, Midland, MI*

ThP 333 **Sequence-specific Exonuclease Digestion of Modified Oligonucleotides Investigated by LC/MS**; M. Paul Chiarelli[1]; Lan Gao[1]; Yuyuan Li[2]; Li Zhang[2]; Bongsup Cho[2]; *[1]Loyola University, Chicago, IL; [2]University of Rhode Island, Kingston, RI*

ThP 334 **Sodium Binding Affinity of 3-Methyladenine**; Bethany Subel[1]; Ping Wang[1]; Chrys Wesdemiotis[1]; *[1]University of Akron, Akron, OH; [2]Noveon, Inc., Brecksville, OH*

ThP 335 **Antisense Oligonucleotide Metabolite Identification Utilizing Ion-Pair HPLC-MS/MS**; Hans J Gaus[1]; Len L Cummins[2]; Steven A Hofstadler[2]; *[1]Isis Pharmaceuticals, Inc., Carlsbad, CA; [2]Ibis Biosciences, Carlsbad, CA*

ThP 336 **The Influence of Cytosine Methylation on the Chemoselectivity of Benzo[A]Pyrene Diol Epoxide-Oligonucleotide Adducts Determined using nano LC-MS/MS**; Wennan Xiong[1]; James Glick[1]; Yiqing Lin[1]; Anne M. Noronha[2]; Christopher J. Wilds[2]; Paul Vouros[1]; *[1]northeastern University, Boston, MA; [2]Concordia University, Montreal, Quebec, Canada*

ThP 337 **Gas-Phase Ion-Electron Reactions of Modified Oligonucleotides in a Fourier Transform Ion Cyclotron Resonance Mass Spectrometer**; Jiong Yang; Kristina Håkansson; *University of Michigan, Ann Arbor, MI*

ThP 338 **Analysis of 8-oxoguanine, 8-oxoguanosine and 8-oxo-2'-deoxyguanosine in Human Urine by High Performance Liquid Chromatography-electrospray Tandem Mass Spectrometry;** Bhaskar Malayappan; Timothy Garrett; christiaan Leeuwenburgh; *Univ Of Florida, Gainesville, Florida, FL*

ThP 339 **Base Excision Repair of an Oligonucleotide Containing Deoxyuracil**; Walter E. Rudzinski; Ed Cen; Ronald B. Walter; *Texas State University-San Marcos, San Marcos, TX*

NATURAL PRODUCTS II

ThP 340 **Chiral Recognition of Phthaloylglutamic Acid and its Derivatives by Electro Spray Ionization and Matrix Assisted Laser Desorption Techniques;** Suma Ramagiri; Renuka Gupte; Igor Rakov; Ryan Charles Yates; Duane Miller; *University of Tennessee Health Science, Memphis, TN*

ThP 341 **Improved Ionization Efficiency and Rapid Identification/Quantification of Phenolic Compounds in Food Products by Negative ion ESI Capillary LC/MS/MS**; Carina S. Minardi[1]; Christine A. Hughey[1]; Lilian M. Were[1]; Bruce E. Wilcox[2]; *[1]Chapman University, Orange, CA; [2]Eksigent Technologies, Dublin, CA*

ThP 342 **Fingerprint Analysis of Acylated Flavonol Tetraglycosides in Oolong Teas using SPE-LC/MSn**; Jianpeng Dou; Chiou-Shu Lin; Viola S.Y. Lee; Jason T.C. Tzen; Maw-rong Lee; *National Chung-Hsing University, Taichung, TAiWAN*

ThP 343 **MSn Analysis of Natural Nutraceutical Supplements**; Helen V. Montgomery[1]; Joy M. Ginter[2]; Koichi Tanaka[3]; *[1]Shimadzu, Koichi Tanaka MS Research laboratory, Manchester, United Kingdom; [2]Shimadzu Scientific Instruments, Inc., Columbia, MD; [3]Shimadzu Corporation, Kyoto, Japan*

ThP 344 **A Fast and Accurate LC/MS/MS Method for the Simultaneously Determinations of Two Bioactive Phenolic and Flavonoid Compounds in Chinese Herbal**; Yan Ling Zhang[1]; James Garcia[2]; Richard Staub[2]; Scott Bagett[2]; Isaac Cohen[2]; Uwe Christians[1]; *[1]Univ. of Colorado Health Science Center, Denver, CO; [2]Bionovo, Inc., Emeryville, CA*

ThP 345 **The Analysis of Traditional Herbal Plants from Eritrea, East Africa using GC-MS, HPLC-ESI-MS and HPLC-ESI-MS/MS**; Julie Herniman[1]; G John Langley[1]; John M Mellor[1]; Katerina Klagkou[2]; *[1]University of Southampton, Southampton, United Kingdom; [2]Thermo Fisher Scientific, Hemel Hempstead, United Kingdom*

ThP 346 **Approaches to the Identification of Unknown Anabolic Steroids in Dietary Supplements by Mass Spectrometry**; Martha L. Gay; John A.G. Roach; *FDA, College Park, MD*

ThP 347 **Profiling and Characterization of Polyphenol Polymers from Cinnamon using Ion Trap Mass Spectrometer**; Min He[1]; Peter Wang[2]; Ying Xiang[3]; Ying Qi[3]; Howard Sun[3]; Julian Phillips[1]; *[1]Thermo Fisher Scientific, San Jose, CA; [2]Thermo Fisher China, Shanghai, China; [3]Shanghai R&D, Nu Sin Enterprises, Shanghai, China*

ThP 348 **Simultaneous Determination of Bioactive Components from Angelicae dahuricae Radix by LC-ESI-MS/MS** ; Eun Ha Jung[1]; Ah Yeon Park[1]; Jinwoong Kim[2]; Jeong-Rok Youm[1]; Sang Beom Han[1]; *[1]Chung-Ang University, Seoul, South Korea; [2]Seoul National University, Seoul, South Korea*

ThP 349 **Characterization of Polyphenols of Products Derived from Bees using CE-ESI-TOF**; David Arraez-Ramon[1]; Gabriela Zurek[2]; Carsten Baessmann[1]; Antonio Segura-Carretero[1]; Alberto Fernandez-Gutierrez[1]; *[1]University of Granada, Granada, Spain; [2]Bruker Daltonik GmbH, Bremen, GERMANY*

ThP 350 **Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry Method for Simultaneous Determination of Bioactive Components from Astragali Radix**; Hyon Kyun Lim[1]; Jin Hee Kim[1]; Sam Sik Kang[2]; Sang Beom Han[1]; Jeong-Rok Youm[1]; *[1]Chung-Ang University, Seoul, South Korea; [2]Seoul National University, Seoul, South Korea*

ThP 351 **Simultaneous Quantitation of Twelve Flavonoids by LC-MS/MS in Rooibos Tea Product**; Liliang Zhang[1]; Li Yang[2]; Zijia Zhang[2]; Zhengtao Wang[2]; Xianguo Zhao[1]; *[1]Brunswick Laboratories, Norton, MA; [2]R&D Centre for Standardization of Chinese Medicine, Shanghai, P.R. China*

ThP 352 **Analysis of Saponins from Leaves of Aralia Elate by Liquid Chromatography and Tandem Mass Spectrometry**; Mingquan Guo[1]; Lei Zhang[2]; Zhiqiang Liu[1]; *[1]Changchun Institute of Applied Chemistry, Changchun,, PR China; [2]College of Chemistry of Jilin university, Changchun,, PR China*

ThP 353 **Characterization of the Bioactive Metabolites in Metarhizium Anisopliae by ESI/In-source collision/Ion trap**; Huang-Wei Chian; Kuo-Lung Ku; *National Chiayi University, Chiayi City, Taiwan*

SMALL MOLECULES: GENERAL

ThP 354 **Analytical Strategies for the Rapid Characterization of Diacylglycerol-Lactone Combinatorial Libraries Utilizing Mass Spectrometry**; Christopher C. Lai; Said El Kazzouli; Lawrence R. Phillips; Angelica M. Garcia; Victor E. Marquez; James A. Kelley; *National Cancer Institute, NIH, Frederick, MD*

ThP 355 **Properties-retention Study on Supercritical Fluid Chromatography Coupled to Mass Spectrometry (SFC-MS). Analysis of a Sulfonamide Library;** Amaury Cazenave-gassiot[1]; G. John Langley[1]; Robert Boughtflower[3]; Jeffrey Caldwell[7]; Richard Coxhead[2]; Laure Hitzel[6]; Stephen Lane[4]; Paul Oakley[5]; Clare Paterson[3]; Frank Pullen[6]; *[1]University of Southampton, Southampton, UK; [2]Evotec OAI Ltd., Abingdon, UK; [3]GlaxoSmithKline, CASS, Harlow, UK; [4]GlaxoSmithKline, Stevenage, UK; [5]Mettler-Toledo Autochem, Newark, DE; [6]Pfizer Global Research and Development, Sandwich, UK; [7]Princeton Chromatography Inc., Cranbury, NJ*

ThP 356 **VUV Laser Induced Fragmentation for Structural Characterization of Small Molecule**; J.C. Yves Le Blanc; Sasha Loboda; Bruce Thomson; *MDS Sciex, Concord, Canada*

ThP 357 **Structural Elucidations of Anionic Species by using Ion Chromatography a Hybrid Linear Ion Trap Fourier Transform Mass Spectrometer**; Shigeru Sakamoto[1]; Kai Uchiumi[2]; Yoko Sekiguchi[2]; Masayuki Kubota[1]; *[1]Thermo Fisher Scientific, Yokohama, Japan; [2]Nippon Dionex K.K., Osaka, Japan*

ThP 358 **An Orthogonal Approach to Increasing Assay Ruggedness at Low Limits of Quantitation in LC/MS/MS Assays**; Spencer J Carter; Vladimir Capka; Stephen M Viccarone; *Tandem Labs, Salt Lake City, UT*

ThP 359 **Analysis of Uranium Azide and Nitride Complexes by Atmospheric Pressure Chemical Ionization Mass Spectrometry (APCI-MS)**; John Greaves; William J. Evans; Kevin A. Miller; Joseph W. Ziller; *University of California, Irvine, CA*

ThP 360 **Identification of "Unknowns" - Structural Clues From Advanced Isotope Peak Modeling of MS and Orthogonal MSMS Data**; Robert J Strife[1]; Michele Mangels[1]; Jason Price[1]; Ming Gu[2]; Yongdong Wang[2]; Don Kuehl[2]; *[1]Procter & Gamble, Cincinnati, OH; [2]Cerno Bioscience, Danbury, CT*

ThP 361 **Use of Ion Adducts to Increase Selectivity and Sensitivity in LC-MS/MS**; Marie-Pierre Taillon; Cynthia Côté; Sylvain Latour; Véronique Gauvreau; Josée Michon; Troy Bradley; Fabio Garofolo; *Algorithme Pharma Inc., Laval (Montreal), QC, CANADA*

ThP 362 **Analysis and Quantification of Small Molecule Drugs Utilizing a MALDI-Triple Quadrupole Mass Spectrometer**; Tania A. Sasaki[1]; Yves LeBlanc[2]; *[1]Applied Biosystems, Foster City, CA; [2]MDS Sciex, Concord, Ontario Canada*

ThP 363 **HPLC and LC/MS/MS Detection of Diglucoside Substituted Anthocyanins in Red Wines Produced by Hybrid Grapes**; Fan Ni; *Alcohol & Tobacco Tax & Trade bureau, Beltsville, MD*

ThP 364 **Photoionization Cross-Sections of Volatile Organic Compounds at 10.5 eV**; Nozomu Kanno; Kenichi Tonokura; *The University of Tokyo, Tokyo, Japan*

ThP 365 **Unusual Fragmentation Pathways of Positively Charged Alkali Metal Ion Adducted Carboxylic Acids;** Chang-Ching Chan[1]; Mark S. Bolgar[1]; Athula B. Attygalle[2]; *[1]Bristol-Myers Squibb Co., New Brunswick, NJ; [2]Stevens Institue of Technology, Hoboken, NJ*

ThP 366 **Fragmentation Pathways of Deprotonated Phenanthroperylene Quinones from Fossil Sea Lilies by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Juergen H. Gross[1]; Klaus Wolkenstein[2]; Heinz F. Schöler[2]; *[1]Organisch-Chemisches Institut, Heidelberg, Germany; [2]Institut für Umweltgeochemie, Heidelberg, Germany*

ThP 367 **Dissociation Pathways, Kinetics and Relative Energetics of the Siderophore Enterobactin and its Fe(III) Complex Studied by IRMPD ESI-FT-ICR/MS**; Rambod Daneshfar; Andrew D. Leslie; Dietrich A. Volmer; *NRC, Institute for Marine Biosciences, Halifax, Canada*

ThP 368 **A Machine Learning Pipeline for Substructure Detection in Unknown Mass Spectra**; Tobias Kind; Oliver Fiehn; *UC Davis Genome Center - Metabolomics, Davis, CA*

ThP 369 **Small Molecular Analysis using a TOF/TOF Mass Spectrometer, a Cationizing Matrix and µFocus MALDI Plate**; Fan Xiang[1]; Haiqiang Yu[2]; Andreas H. Franz[2]; *[1]Shimadzu Biotech, Pleasanton, CA; [2]University of the Pacific, Stockton, CA*

ThP 370 **Sensitivity Enhancement in Capillary Electrophoresis Coupled to Mass Spectrometry (CE-MS) for the Detection and Identification of Alkylphosphonic Acids**; Mélanie Lagarrigue[1]; Anne Bossée[1]; Arlette Bégos[1]; Nathalie Delaunay[2]; Anne Varenne[2]; Pierre Gareil[2]; Bruno Bellier[1]; *[1]Centre d'Etudes du Bouchet, Vert-le-Petit, France; [2]Laboratoire Electrochimie et Chimie Analytique, Paris, France*

ThP 371 **Quantitation of Menthol using Liquid Chromatography Atmospheric Pressure Chemical Ionization Tandem Mass Spectrometry**; Jian Jiang; Bernd Bruenner; Christopher James; *Amgen, Thousand Oaks, CA*

ThP 372 **Determination of Ion Structures in Structurally Related Compounds using Precursor Ion Fingerprinting**; Michelle Sheldon[1]; Timothy R. Croley[1]; Robert Mistrik[2]; *[1]Commonwealth of Virginia, Richmond, VA; [2]HighChem, Ltd., Bratislava, SLOVAKIA*

ThP 373 **The MS of Carbonyl Compounds Generated from Titan Atmosphere Simulations Containing Carbon Monoxide;** Michael F Aldersley[1]; Robert Briggs[2]; James P Ferris[1]; Michael Force[2]; Buu N Tran[1]; Dmitri V Zagorevskii[1]; *[1]Rensselaer Polytechnic Institute, Troy, NY; [2]NY State Department of Health, Albany, NY*

ThP 374 **High-throughput Analysis of Thiazide Diuretics by Liquid Chromatography-Tandem Mass Spectrometry in Food Supplements**; Jung Nyun Kim[1]; Seol-a Kim[2]; Hee Duck Lee[1]; Man-Ho Choi[2]; *[1]Harzardous Material Analysis Team / KAFRI, Seoul, South Korea; [2]Life Sciences Division / KIST, Seoul, South Korea*

ThP 375 **Analysis of Endocrine Disrupting Compounds, Pharmaceuticals and Personal Care in Water using Simultaneous ESI and APCI Ionization**; Jim Krol; Andre Schreiber; Hensham Ghobarah; Chrisopher Borton; Loren Y Olson; Mark Kuracina; *Applied Biosystems, Framingham, MA*

ThP 376 **Detection of 3-Methylhistidine and Anserine using Heptafluorobutyric Acid (HFBA) Desalting and Formic Acid Infusion ESI Mass Spectrometry**; Xiang He; Thomas Shaler; Erika Price; Christopher Becker; *PPD Inc., Menlo Park, CA*

ThP 377 **Eliminating the Solvent Evaporation and Reconstitution Steps from the Cocktail CYP Inhibition Assay by On-Line Dilution for LC/MS/MS analysis;** Tao Wang; Ying Jiang; Kelly Jenkins; *Pfizer, San Diego, CA*

THURSDAY POSTERS

ThP 378 **Accurate Mass Measurement using Single Quadrupole GC/MS for Structure Elucidation of Unknowns**; Joseph Mick; Todd Gillespie; *Eli Lilly & Company, Indianapolis, IN*

ThP 379 **Advantages of Molecular Imprinted Polymers LC-ESIMS/MS for Selective Extraction/Quantification of Chloramphenicol in Milk. Comparison to a Classical Sample Preparation**; Rayane Mohamed[1]; Janique Richoz-Payot[1]; Eric Gremaud[1]; Ecevit Yilmaz[2]; Jean Claude Tabet[3]; Philippe Alexandre Guy[1]; *[1]Nestle Research Center, Lausanne, Switzerland; [2]MIP Technologies, Lund, Sweden; [3]University Pierre and Marie Curie, Paris, France*

ThP 380 **Novel Metabolite Labeling Technique for the Quantification of Abscisic Acid via LC-ESI-MS in the Fern Ceratopteris Richardii**; Amber S Hopf; *Purdue University, West Lafayette, IN*

PROTEINS: GLYCOPROTEINS II

ThP 381 **Assessing the False Positive Rates Associated with the Methods Currently Used to Identify Sites of N-linked Glycosylation**; Lin Lin[1]; D. Brent Weatherly[1]; James A. Atwood[2]; Arthur Nuccio[2]; Ron Orlando[2]; *[1]BioInquire, LLC, Athens, GA; [2]University of Georgia, Athens, GA*

ThP 382 **Investigations with O-linked Protein Glycosylations by MALDI-FTICR-MS**; Diana A. Saggese[1]; Taufika Islam Williams[1]; Robert J. Wilcox[1]; James D. Martin[1]; Hyun Joo An[2]; Bensheng Li[2]; Carlito B. Lebrilla[2]; David C. Muddiman[1]; *[1]North Carolina State University, Raleigh, NC; [2]University of California-Davis, Davis, CA*

ThP 383 **Selective Enrichment of Glycopeptides from Glycoprotein Digests using Ion-Pairing Normal-Phase Liquid Chromatography**; Wen Ding; Jennifer J. Hill; John Kelly; *NRC, Institute for Biological Sciences, Ottawa, Canada*

ThP 384 **Novel UPLC-UV/MS Method for Quantitative Analysis of Protein Glycoforms**; Anton Karnoup[1]; Krishna Kuppannan[1]; Demetrius Dielman[1]; David McCaskill[2]; Nile Frawley[1]; Scott A. Young[1]; *[1]The Dow Chemical Company, Midland, MI; [2]Dow AgroSciences, Indianapolis, IN*

ThP 385 **Comparing Collision-induced Dissociation and Electron-transfer Dissociation for Determining Site of Glycosylation in Glycopeptides Separated by Chip-Based Liquid Chromatography**; William R. Alley, Jr[1]; Yehia Mechref[2]; Milos V. Novotny[1]; *[1]National Center for Glycomics and Glycoproteomics, Bloomington, IN; [2]METACyt Biochemical Analysis Center, Bloomington, IN; [3]Indiana University, Bloomington, IN*

ThP 386 **A Novel Glycoproteomic Approach for the Complete Characterization of Glycopeptides from Complex Biological Mixtures**; James A. Atwood[1]; Zuzheng Luo[1]; D. Brent Weatherly[2]; Barry Boyes[1]; Ron Orlando[1]; *[1]University of Georgia, Athens, GA; [2]BioInquire, LLC, Athens, GA*

ThP 387 **Biospecific Isolation and Label Free Comparison of Complex N-linked Glycoproteins in Sera of Patients with Malignant and Benign Ovarian Tumors**; Julianne M. Cook Botelho[1]; Lin Lin[2]; D. Brent Weatherly[2]; Ron Orlando[1]; *[1]Complex Carbohydrate Research Center/UGA, Athens, GA; [2]BioInquire, LLC, Athens, GA*

ThP 388 **Comparison of Top-Up (Intact Protein) and Bottom-up Techniques for the Quantitation of Glycosylation in Recombinant IgG Molecules**; Sandipan Sinha[1]; Gary Pipes[2]; Elizabeth M. Topp[1]; Pavel V. Bondarenko[2]; Michael Treuheit[2]; Himanshu S. Gadgil[2]; *[1]University of Kansas, Lawrence, KS; [2]Amgen Inc., Thousand Oaks, CA*

ThP 389 **Integration of Mutli-Lectin Detection Based Glycoprotein Microarrays with Mass Spectrometry for Profiling N-Glycosylation Pattern Changes in Colon Cancer**; Yinghua Qiu; Tasneem H. Patwa; Missy Tuck; Dean E. Brenner ; David M. Lubman; *University of Michigan, Ann Arbor, MI*

ThP 390 **Discrimination of α2,3- and α2,6-sialylation on Oligosaccharides in the Presence of Pyrene Derivatives using MALDI-QIT-TOFMS**; Junko Amano; Fumio Tougasaki; Ichiro Sugimoto; *The Noguchi Institute, Tokyo, Japan*

ThP 391 **Glycosylation Pattern on Human Monoclonal Antibodies: A Novel Lectin Affinity- LC MS/MS Method of Characterization**; Zhigang Wu; Susan Wong; Lourdes Thevanayagam; Shrikant Deshpande; Mohan Srinivasan; *Medarex, Sunnyvale, CA*

ThP 392 **Novel LC/MS/MS Workflows for Quantitative Analysis of the Glycoform Distribution of Human Immunoglobulin Proteins**; Christof E. Lenz; Jianru Stahl-Zeng; Jörg Dojahn; *Applied Biosystems Germany, Darmstadt, Germany*

ThP 393 **Development of a Workflow for the Analysis of Clinical Glycoproteins**; Faith Hays; David Bunk; *National Institute of Standards and Technology, Gaithersburg, MD*

ThP 394 **Using Graphitized Carbon for Glycopeptide Separations Prior to Mass Spectral Detection**; William R Alley[1]; Yehia Mechref[1]; Milos V. Novotny[1]; *[1]National Center for Glycomics and Glycoproteomics, Bloomington, IN; [2]METACyt Biochemical Analysis Center, Bloomington, IN; [3]Department of Chemistry, Indiana University, Bloomington, IN*

ThP 395 **Identification of Rat Urinary Glycoproteins using Lectin Columns;** Pyong-gon Moon[1]; Hyun-Ho Hwang[1]; Hye-Jeong Kim[1]; Seung-Jin Lee[2]; Je-Yoel Cho[2]; Tae-Hwan Kwon[3]; Sun-Hee Park[4]; Yong-Lim Kim[4]; Moon-Chang Baek[1]; *[1]Dept. Molecular Medicine, School of Medicine,, Deagu, South Korea; [2]Dept. Biochemistry, School of Dentistry,, Deagu, South Korea; [3]Dept. of Biochem. and Cell Biology, School of medi, Deagu, South Korea; [4]Dept.of InternalMedicine, Kyungpook univ.hospital, Deagu, South Korea*

ThP 396 **Relative Quantification of Glyco-proteins from Yeast Lysate by Means of ICPL Labelling, ConA Capturing and MALDI-TOF Mass Spectrometry**; Katrin Sparbier[1]; Irina Kessler[1]; Gongyi Shi[2]; Markus Kostrzewa[1]; *[1]Bruker Daltonik GmbH, Leipzig, GERMANY; [2]Bruker Daltonics, Billerica, MA*

ThP 397 **Characterization of Glycoprotein Isoforms Separated by cIEF using MALDI-QIT with an On-Plate Digestion Method**; Chen Li[1]; Jia Zhao[1]; Fan Xiang[2]; David M Lubman[1]; *[1]University of Michigan, Ann Arbor, MI; [2]Shimadzu corporation, Santa Clara, CA*

ThP 398 **Identifying Glycopepteins in Complex Mixtures using a Biotin - Hydrazide Enrichment Strategy**; Prasanna Ramachandran; Anders J. Ytterberg; Rachel R. Ogorzalek Loo; Pinmanee Boonthueng; Joesph A. Loo; *University of California, Los Angeles, Los Angeles, CA*

ThP 399 **Glycoprotein Characterization using Infusion Chip Technology Combined with FT-ICR Mass Spectrometry and ECD/IRMPD Fragmentation**; Daniel Eikel[1]; Janet Mans[2]; David H. Margulies[2]; Sonja Hess[1]; *[1]DHHS, National Institutes of Health, NIDDK, Bethesda, MD; [2]DHHS, National Institutes of Health, NIAID, Bethesda, MD*

ThP 400 **Label-Free Quantitative Glycoproteomics**; Kathryn R. Rebecchi; Eden P. Go; Heather Desaire; *University of Kansas, Lawrence, KS*

ThP 401 **Maximizing Coverage of Glycosylation Heterogeneity in MALDI-MS Analysis of Human Serum Glycopeptides**; Ying Zhang; Eden P. Go; Heather Desaire; *Chemistry Department of University of Kansas, Lawrence, KS*

THURSDAY POSTERS

ThP 402 **A Novel Approach for Identification and Characterization of Glycoproteins using a Quadrupole Ion-Mobility Time-of-Flight Mass Spectrometer**; Weibin Chen; Petra Olivova; Catalin E. Doneanu; John C. Gebler; *Waters Corp, Milford, MA*

PROTEOMICS: PHOSPHORYLATION

ThP 403 **Quantitative Comparison of Myofilament Phospho-Proteomes of Neonatal and Adult Rat Hearts- A Mass Spectrometry Approach**; Chao Yuan[1]; Quanhu Sheng[2]; Haixu Tang[2]; Rong Zeng[3]; Yixue Li[3]; R. John Solaro[1]; *[1]University of Illinois at Chicago, Chicago, IL; [2]Indiana University, Bloomington, IN; [3]Shanghai Institutes for Biological Sciences, Shanghai, China*

ThP 404 **Target Analysis for PTM Discovery using A QqTOF MS Acquisition System**; Xu Guo[1]; David M. Cox[1]; Christie Hunter[2]; Min Du[3]; Eva Duchoslav[4]; John C. Mcdermott[3]; *[1]Applied Biosystems/MDS Sciex, Concord, Canada; [2]Applied Biosystem, Foster City, CA 94404; [3]York University, Toronto, Canada; [4]MDS Sciex, Concord, Canada*

ThP 405 **Phospho-protein / Peptide Enrichment Combined with MS for Phosphoproteomic Study of Salt Response Signaling Pathways in Rice**; Dawei Liu; John Patterson; Siria Natera; Kris Ford; Antony Bacic; *The University of Melbourne, Melbourne, Australia*

ThP 406 **Arabidopsis thaliana Phosphopeptide Identification by Electron Transfer Dissociation Mass Spectrometry**; Hillary A. Montgomery[1]; Joshua Blakeslee[2]; Alison DeLong[2]; Jeffrey Shabanowitz[1]; Donald F. Hunt[1]; *[1]University of Virginia, Charlottesville, VA; [2]Brown University, Providence, RI*

ThP 407 **2D-nanoLC Approach using TiO2 Columns for the Enrichment of Protein-RNA Cross-Links and Phosphopeptides Derived from Ribonucleoprotein Particles for MS-Based Identification**; Florian Richter; Eva Kühn-Hölsken; Mads Gronborg; Monika Raabe; Uwe Plessmann; Henning Urlaub; *Max Planck Institute for Biophysical Chemistry, Goettingen, GERMANY*

ThP 408 **Cross-Talk Between EGF and TNF Alpha Signaling Pathways Analyzed by Quantitative Phosphoproteomics**; Matthias Mann; Florian Gnad; Chanchal Kumar; Sonja Krueger; Gaby Sowa; Cuiping Pan; Jürgen Cox; Jesper V. Olsen; *Max Planck Institute for Biochemistry, D Martinsried, Germany*

ThP 409 **LC-Time Scale Peptide Sequencing and PTM Characterization in the Negative Ion-mode using Electron Detachment Dissociation;** Frank Kjeldsen; Anders Giessing; Ole N. Jensen; *University of Southern Dennark, Odense , Denmark*

ThP 410 **Phosphoprotein Profiling by Negative Mode Precursor Ion Scanning**; William Old[1]; John Shabb[3]; Chia-yu Yen[1]; Stephane Houel[1]; Brian Eichelberger[1]; Carrie Croy[1]; Katheryn Resing[1]; Natalie Ahn[2]; *[1]University of Colorado, Boulder, CO; [2]HHMI, Boulder, CO; [3]University of North Dakota, Grand Forks, ND*

ThP 411 **Improved Characterisation Approaches for the Identification of Post-Translationally Modified Peptides by Utilising Travelling Wave-Based Ion Mobility Mass Spectrometry**; Susan E. Slade[1]; Thalassinos Konstantinos[1]; Jonathan P. Williams[1]; James H. Scrivens[1]; Robert H. Bateman[2]; *[1]Biological Sciences, University of Warwick, Coventry, United Kingdom; [2]Waters MS Technologies, Manchester, United Kingdom*

ThP 412 **Global Phosphorylation Analysis using Protein Microarrays And Mass Spectrometry to Assess Processes that Change from Pre-Malignant to Malignant Breast Cancer**; Tasneem H. Patwa[1]; Fred R. Miller[2]; David M. Lubman[1]; *[1]University of Michigan, Ann Arbor, MI; [2]Wayne State University School of Medicine, Ann Arbor, MI*

ThP 413 **Improved Detection of Phosphopeptides using a Combination of Electro Capture and High Performance MALDI ToF/ToF**; D J Evason[1]; V C Parr[1]; T Lavold[2]; J Astorga[2]; O N Jensen[3]; *[1]SAI, Manchester, United Kingdom; [2]Biomotif AB, Stockholm, Sweden; [3]University of Southern Denmark, Odense, Denmark*

ThP 414 **Application of Phosphoproteomic Strategies and Mass Spectrometry to Study the Molecular Processes Underlying Odor Perception in Mouse**; Heike Piechura[1]; Jon Barbour[1]; Eva Neuhaus[2]; Hanns Hatt[2]; Helmut E. Meyer[1]; Bettina Warscheid[1]; *[1]Medical Proteome Center, Bochum, GERMANY; [2]Cellphysiology, Bochum, Germany*

ThP 415 **Quantitative Monitoring of Dynamic Phosphorylation in the Extracellular signal-Regulated Kinase Pathway**; Gum YONG Kang; *Konkuk University, Seoul, South Korea*

ThP 416 **Quantitative Determination of Phosphorylated Isomers in Human Cardiac Troponin I by Top Down Electron Capture Dissociation/Electron Transfer Dissociation Mass Spectrometry**; Ying Ge[1]; Vlad Zabrouskov[2]; Jae Schwartz[2]; Jeffery W. Walker[1]; *[1]UW Madison, Madison, WI; [2]Thermo Fisher Scientific, San Jose, CA*

ThP 417 **Phosphoproteome Analysis using Electron Transfer Dissociation Ion Trap Mass Spectrometry and Database Searching**; Ning Tang[1]; David M. Horn[1]; Henrik Molina[2]; Suresh Mathivanan[2]; Akhilesh Pandey[2]; *[1]Agilent Technologies, Santa Clara, CA; [2]Johns Hopkins University, Baltimore, MD*

ThP 418 **Optimizing Phosphoprotein Analysis for Arabidopsis thaliana;** Katharina Lohrig[1]; Bernd Müller[2]; Dario Leister[2]; Dirk Wolters[1]; *[1]Ruhr Universität Bochum, Bochum, Germany; [2]Ludwig Maximilian Universität, München, Germany*

ThP 419 **Exploring the Relative Efficiencies between Rapid Online and Offline Phosphopeptide Enrichment Sample Preparation Techniques**; Nina Viswanathan[1]; Stuart Lam[1]; Peter Kent[2]; Kerry Nugent[2]; Mark T Cancilla[1]; *[1]Sunesis Pharmaceuticals INC, South San Francisco, CA; [2]Michrom BioResources, Auburn, CA*

ThP 420 **A Covalent Solid-Phase Enrichment Technique Used in the Isolation and Analysis of Phosphorylated Proteins;** Samantha M. Frawley; Jetze J. Tepe; *Michigan State University, East Lansing, MI*

ThP 421 **Analysis of Phosphopeptides in Cerebrospinal Fluid by Liquid Chromatography Coupled to Inductively Coupled Plasma Mass Spectrometry and to HPLC-Chip-Mass Spectrometry;** Jenny Ellis; Kevin Kubachka; Joseph Caruso; *University of Cincinnati, Cincinnati , OH*

PROTEINS: PHOSPHO PROTEINS

ThP 422 **Improved Positive Mode Ionization Efficiency of Phosphopeptides by Use of Metal Adducts and Ion Pairing Reagents**; Hye Kyong Kweon; Kristina Hakansson; *The University of Michigan, Ann Arbor, MI*

ThP 423 **Characterization of the Phosphorylation States by HPLC ESI-MS and ESI-MS/MS of IRAK-4, A Key Regulatory Cell Signaling Kinase**; Marshall M. Siegel[12]; Wayne Stochaj[12]; Quing Yao[12]; Kerry Kelleher[12]; Vikram Rao[12]; *[1]Wyeth Research, Pearl River, NY; [2]Wyeth Research, Cambridge, MA*

ThP 424 **Characterizing the Phosphoproteome of Human Serum**; Ming Zhou; Haleem J. Issaq; Timothy D. Veenstra; *SAIC-Frederick, Frederick, MD*

ThP 425 **Ack1-mediated Phosphorylation of Androgen Receptor on a Quadrupole Linear Ion Trap and Its Implications to Prostate Cancer**; Maria Esteban Warren[1]; Nupam Mahajan[2]; Carol Parker[1]; Xian Chen[1]; H. Shelton Earp[2];

[1]University of North Carolina, Chapel Hill, NC; [2]UNC Lineberger Comprehensive Cancer Center, Chapel Hill, NC

ThP 426

ThP 427 **Identification of Sites of Phosphorylation Of Human Nrf2 And Quantitative Analysis using Mass Spectrometry**; Yan Luo; Aimee L. Eggler; Dongting Liu; Ang Liu; Andrew D. Mesecar; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*

ThP 428 **Isoelectric Point-Based Phosphopeptide Enrichment Combined with NanoElectrospray Ionization Mass Spectrometry**; Chien-Wen Hung; Dieter Kuebler; Wolf D. Lehmann; *German Cancer Research Center, Heidelberg, Germany*

ThP 429 **Identification of Phosphorylation Sites on Filamin A Protein (from Normal and TRAP-Activated Platelets) using RP-LC-MS/MS Analysis and Fe (III) IMAC**; Erin D Jeffery[1]; Boris I Ratnikov[2]; Mark H. Ginsberg[3]; Donald F. Hunt[1]; *[1]University of Virginia, Charlottesville, VA; [2]Burnham Institute for Medical Research, La Jolla, CA; [3]University of California, San Diego, San Diego, CA*

ThP 430 **Phosphorylation of 12S Globulin (Cruciferin) in Wild Type and abi1-1 Mutant Arabidopsis Thaliana Seeds**; Lianglu Wan[1]; Andrew RS Ross[1]; Jingyi Yang[1]; Dwayne D Hegedus[2]; Allison R Kermode[3]; *[1]National Research Council of Canada, Saskatoon, Canada; [2]Agriculture and Agri-Food Canada, Saskatoon, Canada; [3]Simon Fraser University, Burnaby, Canada*

ThP 431 **Toward Phosphoproteome Profiling using Hydroxy Acid-Modified Metal Oxide Chromatography Coupled with NanoLC-MS/MS**; Naoyuki Sugiyama[1]; Sumiko Ohnuma[2]; Yutaka Kyono[3]; Yasuyuki Igarashi[2]; Kosaku Shinoda[1]; Takeshi Masuda[2]; Akihiro Nakamura[2]; Masaru Tomita[2]; Yasushi Ishihama[2]; *[1]Human Metabolome Technologies, Inc., Tsuruoka, Japan; [2]Institute for Advanced Biosciences, Keio Universit, Tsuruoka, Japan; [3]GL Sciences Inc., Iruma, Japan*

ThP 432 **Identification of Myb-Binding Protein 1a (MYBBP1A) as a Novel Substrate for Aurora Kinases**; Claudia Perrera; Sonia Troiani; Riccardo Colombo; Laura Gianellini; Michele Modugno; Patrizia Carpinelli; Barbara Valsasina; Luisa Rusconi; *Nerviano Medical Sciences, Nerviano (MI), ITALY*

ThP 433 **A Systematic Proteomics Approach for Identifying Kinase Substrates using MS**; Shu-hui Chen; Sheng-Yu Huang; Mei-Ling Tsai; Guan-Yuan Chen; Chin-Jen Wu; *National Cheng Kung University, Tainan, Taiwan*

ThP 434 **In-Depth Analysis of the HeLa Phosphoproteome using Specific Phosphoprotein Purification Chromatography and MALDI Chip Based IMAC Phosphopeptide Enrichment**; Marcia Armstrong[1]; Udo Roth[2]; Karen Kowalewski[2]; Christoph Menzel[2]; Christopher Belisle[1]; Kerstin Steinert[2]; *[1]Qiagen Sciences, Germantown, MD; [2]Qiagen GmbH, Hilden, Germany*

ThP 435 **Direct Quantitation of Site Specific Tyrosine Phosphorylation in Activated High Affinity IgE Receptors by Electrospray LC/MS**; Peter S. Backlund[1]; Toshiyuki Yamashita[2]; Juan Rivera[2]; *[1]NICHD, National Institutes of Health, Bethesda, MD; [2]NIAMS, National Institutes of Health, Bethesda, MD*

ThP 436 **The Application of Nanoelectrospray Mass Spectrometry on Phosphoprotein Analysis**; Nan Li; Fang Shen; Yong Seok Choi; Sarah L. Gaffen; Troy D. Wood; *SUNY at Buffalo, Buffalo, NY*

ThP 437 **Mapping Differential Phosphorylation Patterns of the Cell Cycle Checkpoint Protein Chk-2**; Michael D. Ward; Cindy Guo; Saurub Gupta; Kimberly Fryrear; Ali Haoudi; O. John Semmes; *Eastern Virginia Medical School, Norfolk, VA*

ThP 438 **Methyl Esterification of Peptides Improves the Isolation of Phosphorylated Peptides from Titanium Dioxide**; Eric Simon; Matthew A. Young; Philip C. Andrews; *University of Michigan, Ann Arbor, MI*

ThP 439 **ABRF-sPRG 2007 Study: Development and Evaluation of a Phosphoprotein Standard Mix**; Jeffrey A. Kowalak[1]; Philip C. Andrews[2]; David Arnott[3]; Mary Ann Gawinowicz[4]; William S. Lane[5]; Kathryn S. Lilley[6]; Rachel R. Ogorzalek Loo[7]; Larry Martin[8]; Steven E. Stein[9]; *[1]National Institute of Mental Health, Bethesda, MD; [2]University of Michigan School of Medicine, Ann Arbor, MI; [3]Genentech, Inc., So. San Francisco, CA; [4]Columbia University, New York, NY; [5]Harvard University, Cambridge, MA; [6]Cambridge University, Cambridge, UK; [7]University of California, Los Angeles, CA; [8]East-West University, Chicago, IL; [9]National Institute of Standards and Technology, Gaithersburg, MD*

ThP 440 **A Novel Strategy to Quantitatively Analyze the Phosphoproteomic Response of Muscle to Glucocorticoids;** Erica Reeves; Zohra Olumee-Shabon; Yetrib Hathout; Eric Hoffman; *Children's National Medical Center, Washington, DC*

ThP 441 **Novel Protein Kinase A-mediated Endothelial Cell Myosin Light Chain Kinase Phosphorylation Sites using Data Dependent Nano-LC/MS/MS Mass Spectrometry Method**; Jing Zhao[1]; Sara M. Camp[1]; Eddie T. Chiang[1]; Alexander Schilling[2]; Steven M. Dudek[1]; Joe G.N. Garcia[1]; *[1]University of Chicago, Chicago, IL; [2]University of Illinois Chicago, Chicago, IL*

ThP 442 **Functionalized Surfaces for on MALDI Target Phosphopeptide Capture and Analysis**; Mohammed Kajjout; Mohammed Kajjout; Caroline Tokarski; Christian Rolando; Séverine Le Gac; *Univ. des Science/Tech de Lille, Villeneuve d'Ascq, France*

PROTEINS: MEMBRANE METHODS

ThP 443 **Intact Membrane Protein Purification and Analysis using Supercritical Fluid Chromatography and Mass Spectrometry**; Xu Zhang; Mark Scalf; Michael Westphall; Lloyd Smith; *UW-Madison, Madison, WI*

ThP 444 **Development of Methods to Profile Cytochrome P450s from Normal and Tumour Tissues**; Chris Sutton; Laurence Patterson; *Institute of Cancer Therapeutics, Bradford, United Kingdom*

ThP 445 **Elevated Temperature Facilitates Shotgun Analysis of Membrane Proteins**; Anna E Speers; Christine C Wu; *University of Colorado School of Medicine, Aurora, CO*

ThP 446 **A Proteomic Approach Based on Ion Exchange Beads for Membrane Protein Analysis**; Jianjun Zhai; Zhenyu Huang; Li Liu; Haining Zhu; *University of Kentucky, Lexington, KY*

ThP 447 **On-Column Enrichment of Hydrophobic CYP450 Proteins in HPLC Fractionation of Mouse Microsomes Prior to Protein Digestion and Nanospray-LC/MSMS analysis**; Witold M. Winnik; Pedro Ortiz; *US EPA, RTP, NC*

ThP 448 **Comparison of Acid-Labile and Traditional Detergents for Membrane Solubilization and Digestion of Membrane Proteins**; Adele Blackler[1]; Michael MacCoss[2]; Christine Wu[1]; *[1]University of Colorado HSC, Aurora, CO; [2]University of Washington, Seattle, WA*

ThP 449 **Characterizing Denaturation Products of 8 MegaDalton Ribonucleoprotein Vault Complexes using ESI-IMS**; Shirley H. Lomeli; Catherine S. Kaddis; A. Jimmy Ytterberg; Leonard H. Rome; Joseph A. Loo; *UCLA, Los Angeles, CA*

ThP 450 **Rapid HPLC and LC-MS Methods for the Analysis of p14 Fusion-Associated Small Transmembrane (FAST) Protein**; Reno Nguyen[1]; Roberto de Antueno[2]; Roy Duncan[2]; *[1]Grace Davison, Hesperia, CA; [2]Dalhousie University, Nova Scotia, Canada*

ThP 451 **LC-MS/MS Compatible Separation of Membrane Proteins in Solution using Interval Zone Free-Flow**

Electrophoresis; Mikkel Nissum; *BD Diagnostics, Martinsried, Germany*

ThP 452 **Membrane Protein Analysis using Lipid-Based Protein Immobilization Technology**; Tasso Miliotis[1]; Anders Karlsson[2]; Max Davidson[2]; Jenny Wikström[2]; *[1]AstraZeneca R&D Molndal, Molndal, Sweden; [2]Nanoxis, Göteborg, Sweden*

ThP 453 **Quantitative ESI MS/MS Lipid Analysis of Cytochrome c Oxidase Purified from Wild-Type and Cardiolipin-Deficient Rhodobactor sphaeroides**; Xi Zhang; Carrie Hiser; Shelagh Ferguson-Miller; Gavin Reid; *Michigan State University, East Lansing, MI*

PROTEOMICS: CANCER BIOMARKERS II

ThP 454 **Comparative Proteomic Analysis of Healthy Individuals and Breast Cancer Patient Sera by Two-dimensional Liquid Chromatography-Tandem Mass Spectrometry**; Yuening Zhang; Iveta Klouckova; Yehia Mechref; Milos V. Novotny; *Indiana University, Bloomington, IN*

ThP 455 **Comprehensive Proteomic Profiling of Human Pancreatic Cancer Duct Fluid (Juice) using 1D-Gel-, OFFGEL- and HPLC-Chip-MS Technology**; Vadiraja B. Bhat[1]; Rebecca Wiatrek[1]; Christopher Thompson[1]; Mohsen Shabahang[1]; Arundhati Rao[1]; Alexzander A. Asea[1]; *[1]Scott & White Memorial Hospital, Temple, TX; [2]Texas A&M Health Science Center, Temple, TX*

ThP 456 **Protein Profiling of Formalin-Fixed Paraffin-Embedded Pediatric Brain Stem Glioma**; Javad Nazarian; Eric P. Hoffman ; Rita-Maria Santi; Tobey J. MacDonald; Yetrib Hathout; *Children's National Medical Center, Washington , DC*

ThP 457 **Proteomic Analysis iof Markers Associated with Tumor Stage in Ovarian Serous Tissues using MALDI-QIT-TOF-MS**; Yanfei Wang[1]; Kathleen R. Cho[1]; Fan Xiang[2]; David M. Lubman[1]; *[1]University of Michigan, ann arbor, MI; [2]Shimadzu, Pleasanton, CA*

ThP 458 **Two-Dimensional Separation and nano-ESI Ion Trap Analysis on Pancreatic Cancer Stem Cells**; Lan Dai; *Univ of Michigan, Ann Arbor, MI*

ThP 459 **Proteomic Profile of Lymph in Metastatic Breast Cancer**; Catherine Riley[1]; Jiri adamec[1]; Xiang Zhang[1]; Elwood Walls[2]; Charles Buck[1]; Sulma Mohammed[2]; *[1]Bindley Bioscience Center Purdue University, West Lafayette , IN; [2]Purdue University, West Lafayette, IN*

ThP 460 **Improving the Detection and Quantitation of Protein Expression Changes in Mucinous and Serous Pancreatic Cystic Neoplasms;** Puneet Souda; James J. Farrell; Babak Hassanzadeh; Ali Ammar; Kym F. Faull; Julian P. Whitelegge; *University of California Los Angeles, Los Angeles, CA*

ThP 461 **Tissue Proteomic Analysis of Low and High Metastatic Potential Intermediate Risk Stage I Endometrial Cancer**; Brian L. Hood[1]; Julie M. Oliver[2]; Susan E. Abbatiello[1]; David A. Lucas[1]; Manda J. Welsh[1]; William L. Bigbee[1]; George L. Maxwell[2]; Thomas P. Conrads[1]; *[1]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [2]Walter Reed Army Medical Center, Washington, DC*

ThP 462 **Serum Proteomic Profiling of Stage 1 Invasive Ductal Breast Carcinoma Patients with PROFILE™ Biomarker Discovery System**; Kevin Dawson[1]; Daniel Tuse[1]; Robert L. Erwin[1]; Gordon R. Whiteley[2]; Earl L. White[1]; *[1]Predictive Diagnostics, Inc, Vacaville, CA; [2]SAIC-Frederick, Inc., Gaithersburg, MD*

ThP 463 **Probing the Different Secreated Proteins of Pancreatic Cancer Cells by ITRAQ**; Haijing Zhang; Liyan Lv; Yanchun Deng; Zhili Li; *Chinese Academy of Medical Sciences, Beijing, CHiNA*

ThP 464 **Analyzing the Proteome of Formalin Fixed Paraffin Embedded Tissues**; Rumen Bogoev; Mahbod R. Hajivandi; Xiquan Liang; Song-Hua Ke; Paul Predki; Marshall Pope; *Invitrogen, R & D, Carlsbad, CA*

ThP 465 **Proteins Identification from Formalin-Fixed Paraffin-Embedded Tissues**; Sheng-ta Tsai; *The Genomics Research Center, Academia Sinica., Taipei, Taiwan*

ThP 466 **The Use of Affinity Labeled Peptide Substrates for the Screening of Disease-Associated Protease Products (DAPPs)**; Nicolas A. Stewart[1]; DaRue A. Prieto[1]; Louis M. Consentino[2]; Haleem J. Issaq[1]; Timothy D. Veenstra[1]; *[1]SAIC-Frederick, Frederick, MD; [2]National Cancer Institute at Frederick, Frederick, MD*

ThP 467 **Applying Time-of-Flight Secondary Ion Mass Spectrometry with Cell Isolation Techniques to Aid in the Classification of Circulating Breast Tumor Cells**; Susan L. Fortson; Mark G. Knize; Kuang Jen Wu; Elena S.F. Berman; Ligang Wu; James S. Felton; Kristen S. Kulp; *Lawrence Livermore National Laboratory, Livermore, CA*

ThP 468 **Novel Method for Full-Length Soluble Protein Extraction from Formalin-Fixed Tissues for Immunological and Mass Spectrometry Analysis**; Sandra Nitschke[1]; Paige Weis[2]; Sven Andrecht[1]; Anja Seiler[1]; Uwe Michelsen[1]; Rob Hendriks[1]; Joerg von Hagen[1]; *[1]Merck KGaA, Darmstadt, Germany; [2]EMD Biosciences, Inc., Madison, WI*

ThP 469 **Biomarker Discovery from Trace Amounts of Cervical Tissue in Pre-Cancer Stages using Laser Capture Microdissection of ThinPrep Slides and LC-MS**; Ye Gu[1]; Shiaw-lin Wu[1]; Jane Meyer[2]; William S. Hancock[1]; David Hanlon[2]; Barry L. Karger[1]; *[1]Northeastern University, Boston, MA; [2]Cytyc Corporation, Marlborough, MA*

ThP 470 **Biomarker Proteomics from Formalin-Fixed Paraffin-Embedded Liver and Breast Tissue Sections**; Laura Dubois[1]; Deidre Dalmas[2]; Marshall Scicchitano[2]; Daniela Schlatzer[3]; Mary Moyer[2]; Jack Liu[2]; Arthur Moseley[4]; Neal Cariello[2]; Marlene Darfler[5]; Kevin Blackburn[6]; *[1]Serenex, Durham, NC; [2]GlaxoSmithKline, RTP, NC; [3]Case Western Reserve University, Cleveland, OH; [4]Duke University, Durham, NC; [5]Expression Pathology, Gaithersburg, MD; [6]North Carolina State University, Raleigh, NC*

ThP 471 **Quantitative Proteomics to Decipher Secretome Changes of Breast Fibroblasts with Loss of TGF-beta Type II Receptor**; Baogang J Xu; Bojana Jovanovic; Mary E Aakre; Jennifer L Jennings; Andrew J Link; Harold L Moses; *Vanderbilt University, Nashville, TN*

ThP 472 **Discovery of Metastasis Factors from In-depth Proteome Analysis of Formalin Fixed Lung Carcinoma Tissues**; Toshihide Nishimura[1]; Takashi Hirano[1]; Tomoyo Nakano[2]; Maiko Ebisawa[2]; Masahiro Tsuboi[1]; Masaharu Nomura[1]; Hidetoshi Honda[1]; Masatoshi Kakihana[1]; Kouichi Yoshida[1]; Junichi Maeda[1]; Kiyonaga Fujii[3]; Yasuhiko Bando[2]; Kiyoshi Mukai[1]; Harubumi Kato[1]; *[1]Tokyo Medical University, Tokyo, JAPAN; [2]Biosys Technologies, Inc., Tokyo, JAPAN; [3]Hokkaido University, Sapporo, JAPAN*

PROTEOMICS: LABELING & AFFINITY

ThP 473 **Identification of the ß-amyloid Epitope Recognized by the Protease Inhibitor Human Cystatin C (hCC) using Epitope Excision- Mass Spectrometry**; Paulina Juszczyk[1]; Gabriela Ioana Paraschiv[1]; Aneta Szymanska[2]; Zbigniew Grzonka[2]; Michael Przybylski[1]; *[1]University of Konstanz, Konstanz, Germany; [2]University of Gdansk, Gdansk, Poland*

ThP 474 **Protein Interaction Network Analysis with Mass Spectrometry**; James E. Bruce[1]; Haizhen Zhang[1]; Xiaoting Tang[1]; Natalia Zakharova[1]; Gerhard R. Munske[1]; Hye In Nam[1]; Li Yang[1]; Nikola Tolic[2]; Gordon A. Anderson[2];

THURSDAY POSTERS

[1]Washington State University, Pullman, WA; [2]Pacific Northwest National Laboratory, Richland, WA

ThP 475 **Epitope Identification of Llama Single Chain Anti-β Amyloid Antibodies using Proteolytic Epitope Extraction- and Excision- Mass Spectrometry**; Gabriela Ioana Paraschiv[1]; Paulina Juszczyk[1]; Cecile Vincke[2]; Serge Muyldermans[2]; Michael Przybylski[1]; *[1]University of Konstanz, Konstanz, Germany; [2]Vrije University of Brussel, Brussel, Belgium*

ThP 476 **Actvity Based Probe with a Diazo Cleavable Linker - a Novel Tool in Proteomic Analysis of Cysteine Proteases**; Marko Fonovic; Steven Verhelst; Matthew Bogyo; *Stanford University School of Medicine, Stanford, CA*

ThP 477 **Chemical Tagging Methods for Analysis of Protein N-terminus**; Hongying Zhong; Joseph Fernandez; Nagarajan Chandramouli; Haiteng Deng; *The Rockefeller University, New York, NY*

ThP 478 **A Novel Size-Label for Sorting Phosphopeptides for Mass Spectrometry**; Yu Shi; Xudong Yao; *Chemistry Department, University of Connecticut, Storrs, CT*

ThP 479 **Probing the Active Sites of Adenosine Nucleotide-Binding Proteins by Affinity Labeling and LC-MS/MS**; Haibo Qiu; Yinsheng Wang; *University of California, Riverside, Riverside, CA*

ThP 480 **Identification of Novel Protein Interactions in the eIF4E-mRNA Complex by Tandem Affinity Purification using a Chimeric Construct of eIF4E-calbindin-IgG**; Laurent Volpon[1]; Nadeem Siddiqui[1]; Michael J Osborne[1]; Ivan Topisirovic[1]; Mike Aguiar[2]; Katherine LB Borden[1]; Bernard F Gibbs[2]; *[1]Dept. of Pathology and Cell Biology, U de Montreal, Montreal, Canada; [2]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

ThP 481 **Augmented Limits of Detection for Peptides with Hydrophobic Alkyl Tags (ALiPHAT)**; Jennifer L. Frahm; Adam M. Hawkridge; Daniel L. Comins; Ibrahim D. Bori; David C. Muddiman; *NC State University, Raleigh, NC*

ThP 482 **Click Chemistry as a Proteomic Approach to Identify Protein Targets of Thiol-Reactive Electrophiles**; Kripa Keerthi; Elizabeth B Burnette; Daniel C Liebler; *Vanderbilt University, Nashville, TN*

ThP 483 **Mass Defect Labeling of Tryptophan for Improving Protein Identification in Shotgun Proteomic Analyses**; Chunyan Li; Ryan M. Phillips; George F. Majetich; I. Jonathan Amster; *University of Georgia, Athens, GA*

ThP 484 **Application of the Cross-Linker Based Protein Interaction Reporter Technology to Saccharomyces cerevisiae**; Natalia L. Zakharova[1]; Gerhard R. Munske[1]; Gordon A. Anderson[2]; Nikola Tolic[2]; Xiaoting Tang[1]; James E. Bruce[1]; *[1]Washington State University, Pullman, WA; [2]Pacific Northwest National Laboratory, Richland, WA*

ThP 485 **Biotinylation and MS Analysis: A Combined Approach for the Identification of the Surface Exposed Residues of Hsp90**; Wendell P. Griffith[1]; Xueguang Lui[2]; Dwella M. Nelson[1]; Jennifer S. Isaacs[2]; Robert J. Cotter[1]; *[1]Johns Hopkins School of Medicine, Baltimore, MD; [2]Medical University of South Carolina, Charleston, SC*

PROTEOMICS: LOWER ORGANISMS

ThP 486 **Comparative Profiling of Proteins Associated with Aluminum Tolerance in Maize Root Tips by 2D-gel Electrophoresis/LC-MS/MS**; Yong Yang[1]; Sheng Zhang[2]; Theodore W Thannhauser[1]; *[1]USDA-ARS, US Plant, Soil & Nutrition Laboratory, Ithaca, NY; [2]Proteomics & Mass Spectrometry Core Facility, Corn, Ithaca, NY*

ThP 487 **Protein Reference Map of Thermoplasma Acidophilum and Implications for Macromolecular Complexes**; Na Sun; Florian Beck; Roland Wilhelm Knispel; Frank Siedler; Beatrix Scheffer; Stephan Nickell; Wolfgang Baumeister; Istvan Nagy; *Max-Planck-Institute for Biochemistry, D-82152 Martinsried, Germany*

ThP 488 **Proteome Profile of *Danio rerio* (Zebrafish) Gill using 2D LC-ESI QTOF MS/MS**; Andrea G. De Souza; Tyson MacCormack; Greg G. Goss; Liang Li; *University of Alberta, Edmonton, Canada*

ThP 489 **Identification of Mycobacteria and Mycobacteria Biomarker Proteins by Novel Biological Sample Preparation Combined with Tandem Mass Spectrometry**; Miquel D. Antoine[1]; Nathan Hagan[1]; Timothy Cornish[1]; Justin Hettick[2]; Plamen A. Demirev[1]; *[1]JHU-APL, Laurel, MD; [2]CDC, NIOSH, Morgantown, WV*

ThP 490 **Proteomic Analysis of Lysine Acetylation in Yeast**; Junmei Zhang; Sung Chan Kim; Yue Chen ; Yingming Zhao; *University of Texas Southwestern Medical Center, Dallas, TX*

ThP 491 **Large Scale Label-Free and cICAT-Based Comparative Proteomics of an Arabidopsis Clp Protease Mutant; Consequences for Leaf Development and Protein Homeostasis**; Paul Dominic B. Olinares; Giulia Friso; Boris Zybailov; Andrea Rudella; Qi Sun; Klaas J. van Wijk; *Plant Biology, Cornell University, Ithaca, NY*

PROTEOMICS: QUANTITATION TECHNIQUES II

ThP 492 **Delving Deeper into Proteomes to Generate Quantitative Data;** Julia Smith; Isaac Matus; Andrew Greene; *Medical College of Wisconsin, Milwaukee, WI*

ThP 493 **A Comparison of Separation Strategies for Proteomic Samples Labeled with iTRAQ™ Reagents at the Protein Level;** Matthew Willetts[1]; Pete Ulintz[2]; Marjorie Minkoff[1]; R Marks[2]; Philip Andrews[2]; *[1]Applied Biosystems, Framingham, MA; [2]University of Michigan, Ann Arbor, MI*

ThP 494 **Identification and Quantification of P53 Hot Spot Mutations by using Restriction Fragment Mass Polymorphism(RFMP) and Absolute QUAntification of protein(AQUA)**; Joo Young Bang; *Konkuk Univtsty, Seoul, South Korea*

ThP 495 **Differential Protein Expression of Human Vitreous Fluids using 8-plex iTRAQ Reagent Labeling and nanoLC MALDI-TOF/TOF Mass Spectrometry**; Ruiqing Qiu[1]; Marjorie Minkoff[1]; Philip Ross[1]; Matthew Willetts[1]; Judy Quong[2]; *[1]Applied Biosystems, Framingham, MA; [2]Thomas Jefferson University, Philadelphia, PA*

ThP 496 **Spectral Indexing Reveals Quantitative Differences Between Endothelial Cell Caveolae and Plasma Membrane Proteomes**; Noelle M Griffin; Jingyi Yu; Anne Simonson; Phil Oh; Yan Li; Brea Midthune; Sabrina Shore; Halina Witkiewicz; Jan E Schnitzer; *Sidney Kimmel Cancer Center, San Diego, CA*

ThP 497 **Development of Quantitative Monitoring Method for the Detection of Mutations in Bcr-Abl from Chronic Myeloid Leukemia;** Jung Ok Park; *Konkuk University, Seoul, South Korea*

ThP 498 **A Novel Integrated Method Coupling 2D GeLC-MS/MS with Protein Abundance Index for Improved Accuracy in 2D Gel-Based Comparative Proteomics**; Yong Yang[1]; Theodore Thannhauser[1]; Li Li[1]; Sheng Zhang[2]; *[1]US Plant Soil and Nutrition Laboratory, Cornell U, Ithaca, NY; [2]Proteomics and Mass Spectrometry, Cornell Univ, Ithaca, NY*

ThP 499 ***In vitro* Synthesis of Stable-Isotope Labeled Proteins for Use as Internal Standards in Quantitative Mass Spectral Measurements of Clinical Proteins**; Johanna E. Camara; Faith A. Hays; Nathan G. Dodder; David M. Bunk; *NIST, Gaithersburg, MD*

ThP 500 **Antibody-Independent Quantitation of Cellular Phosphopathways**; Melissa Dix; Francesca Zappacosta; Michael Huddleston; Dean McNulty; Andy West; Ceri

THURSDAY POSTERS

Lewis; Alastair Reith; Roland S. Annan; *GlaxoSmithKline, King of Prussia, PA*

ThP 501 **Investigation into Changes Into the Spheroplast and Mitoproteome of Saccharomyces Cerevisiae Induced by Recombinant AOX using SILAC**; Rowan Laura Dobson[1]; *[1]Laboratory of Mass Spectrometry, Liège, Belgium; [2]Laboratory of Bioenergetics, Liège, Belgium*

ThP 502 **Investigation on the Role of Huntingtin Phosphorylation in the Pathogenesis of Huntington's Disease**; Xin Cong; Birgit Schilling; Juliette Gafni; Cameron Torcassi; Lisa M. Ellerby; Bradford W. Gibson; *Buck Institute for Age Research, Novato, CA*

ThP 503 **Comparative Study of Five Methods for Quantitative Proteomics; cICAT, iTRAQ, ICPL, ^{18}O, and Acetylation, using Tandem Mass Spectrometry;** Monica H. Elliott; Candice Madalena; Darryl Hardie; Leanne Ohlund; Derek Smith; Christoph H. Borchers; *University of Victoria/Genome BC Proteomics Centre, Victoria, Canada*

ThP 504 **Tackling the Challenge of Quantifying Co-Migrating Proteins in Two Dimensional Gel Electrophoresis-Based Proteome Analysis;** Maarten Dhaenens; *Ghent University, Ghent, Belgium*

ThP 505 **Absolute SILAC: Absolute Quantitation of Proteins in Complex Mixtures using Recombinant Stable Isotope Labeled Proteins**; Stefan Hanke; Hüseyin Besir; Dieter Oesterhelt; Matthias Mann; *Max-Planck-Institute for Biochemistry, Munich, Germany*

ThP 506 **Absolute Quantification of Two Biomarkers of GH Abuse using LC-ID-MS/MS**; Stéphanie Kirsch; Joelle Widart; Edwin De Pauw; *University of Liege, Liege, Belgium*

ThP 507 **Directly Identify Protein N-Terminal Residues by Mass Spectrometry and Its Potential Applications in Protein-Level Comparative Proteomics**; Jue-liang Hsu; Ding-Tzai Li; Fong-Ku Shi; *Life Science Business Unit of CSUN MFG. Ltd., Tainan county, Taiwan*

ThP 508 **An Approach for Absolute Quantification of Therapeutic Proteins in Plasma using 2D-SPE Coupled with LC-MS/MS**; Ziping Yang; Michael Hayes; Xinping Fang; Francis Tse; *Novartis Pharmaceuticals Corporation, East Hanover, NJ*

ThP 509 **Quantitative Analysis of Yeast Protein Expression using the Protein iTRAQ&trade Reagent Strategy;** Patrick Pribil[1]; Shixin Sun[2]; Marjorie Minkoff[2]; *[1]MDS Sciex, Concord, Canada; [2]Applied Biosystems, Framingham, MA*

ThP 510 **A New Strategy for Quantitative Proteomic Analysis of Organisms with Unsequenced Genomes**; Tomas Rejtar; Marina Hincapie; John T. Oldham; Carolyn W.T. Lee-Parsons; Jennifer G. Dy; Barry L. Karger; *Northeastern University, Boston, MA*

ThP 511 **Quantitative Proteomic Analysis of Oral HPV Lesions from HIV Patients using Mass Spectrometry**; Marlene M. Darfler[1]; Mohit R. Jain[2]; Tong Liu[2]; Jun Hu[2]; Valere Fitzhugh[2]; Joseph Rinaggio[3]; Hong Li[2]; *[1]Expression Pathology Inc., Gaithersburg, MD; [2]UMDNJ-New Jersey Medical School, Newark, NJ; [3]UMDNJ-New Jrsey Dental School, Newark, NJ*

ThP 512 **Relative Protein Quantification by Isobaric SILAC with Immonium Ion Splitting (ISIS)**; Mara Colzani[1]; Alexandra Potts[1]; Patrice Waridel[1]; Frederic Schutz[2]; Manfredo Quadroni[1]; *[1]University of Lausanne, Epalinges, Switzerland; [2]Swiss Institute of Bioinformatics, Lausanne, Switzerland*

ThP 513 **Evaluation of SISCAPA; an Automated Targeted Biomarker Enrichment and Validation Platform;** Angela Jackson[1]; Derek Smith[1]; Jamie Thomas[2]; Terry Pearson[2]; Christoph Borchers[1]; Leigh Anderson[3]; *[1]University of Victoria Genome BC Proteomics Centre, Victoria, Canada; [2]University of Victoria, Victoria, Canada; [3]Plasma Proteome Institute, Washington, DC*

ThP 514 **Combining Quantitative Proteomics by Stable Isotope Labeling with Top-Down Mass Spectrometry**; Leonie F. Waanders; Stefan Hanke; Jesper V. Olsen; Matthias Mann; *Max Planck Institute for Biochemistry, Martinsried, Germany*

ThP 515 **Quantitative Analysis of Mice Synaptic Membranes with 8-plex iTRAQ Reagents**; Roel C. van der Schors[1]; Huibert D. Mansvelder[1]; Rhiannon M Meredith[1]; Oleg Klychnikov[1]; Sabine Spijker[1]; Jianru Stahl-Zeng[23]; Brian Williamson[23]; August B. Smit[1]; Ka Wan Li[1]; *[1]CNCR, Vrije Universiteit, Amsterdam, Netherlands; [2]Applied Biosystems, Darmstadt, Germany; [3]Applied Biosystems, Framingham, MA*

ThP 516 **Identification of Biological Marker Proteins in the Patient Serum with a Pregnancy Induced Hypertension (PIH) using Proteomic Approach**; Ji Sook Park; *Konkuk Univ., Seoul, South Korea*

ThP 517 **Use of DNA Ladders for Reproducible Protein Fractionation by SDS-PAGE for Quantitative Proteomics**; Guoan Zhang[1]; David Fenyo[2]; Thomas A. Neubert[1]; *[1]New York University School of Medicine, New York, NY; [2]The Rockefeller University, New York, NY*

ThP 518 **Comprehensive Quantitative Analyses on Protein Dynamics of The Human Pathogen *Staphylococcus aureus* by the Implementation of an 8-plex iTRAQ™ Labeling**; Susanne Wolff[1]; Jianru Stahl-Zeng[2]; Michael Hecker[1]; Dörte Becher[1]; *[1]University, Greifswald, GERMANY; [2]Applied Biosystems, Darmstadt, Germany*

PROTEOMICS: BIOCHEMISTRY (GEL BASED)

ThP 519 **S100b Induced Chromatin Remodeling at the Human Cyclooxygenase-2 (COX-2) Promoter;** Thomas K. Bane; Narkunaraja Shanmugam; Yunan Miao; Roger Moore; Arthur D. Riggs; Rama Natarajan; Terry D. Lee; *City of Hope Nat'l Med Center, Duarte, CA*

ThP 520 **Composition of the Synaptic PSD-95 Complex**; Ayse Dosemeci[1]; A. James Makusky[2]; Ewa Jankowska-Stephens[2]; Xiaoyu Yang[2]; Douglas J. Slotta[2]; Sanford P. Markey[2]; *[1]NINDS, NIH, Bethesda, MD; [2]NIMH, NIH, Bethesda, MD*

ThP 521 **Proteomics in a Unique Fish Melanoma Model using 2D PAGE, DIGE, and COFRADIC**; Katrin Denker; Albert Sickmann; *Rudolf Virchow Center, Wuerzburg, Germany*

ThP 522 **Proteomics of Toxoplasma Gondii Tubulin**; Hui Xiao; Pascal Verdier-Pinard; Berta Burd; Fayun Che; Hongshan Zhang; Kami Kim; Louis M. Weiss; Ruth H. Angeletti; *Albert Einstein College of Medicine, Bronx, NY*

ThP 523 **Identification of the Interacting Proteins to the Noradrenergic Neuron Specific Transcription Factor, Phox2, by ESI-Ion-Trap MS and ChIP Analysis**; Jinkyu Lim; Ilyn L. Santos; Hyun-Soo Choi; *Kyungpook University, Daegu, South Korea*

ThP 524 **Analysis of Protein-Protein Interactions within EphB2-NG108 Cells in Response to EphrinB1-Fc Stimulation by Blue Native PAGE and Mass Spectrometry**; Costel C. Darie; Daniel S. Spellman; Vivekananda Shetty; Wen Chen; Thomas A. Neubert; *Skirball Institute/New York University, New York, NY*

ThP 525 **Proteomic Analysis Suggests that the Bystander Effect in Trout gill is Protective**; Jiaxi Wang[1]; Richard W. Smith[2]; Carmel E. Mothersill[2]; Colin B. Seymour[2]; M. Kirk Green[1]; *[1]MRCMS, McMaster University, Hamilton, Canada; [2]McMaster University, Hamilton, Canada*

ThP 526 **Cdc48, the Homolog of Mammalian p97, Mediates Aggresomal Deposits in Yeast PolyQ Model**; Yan Wang[1]; Anatoli Meriin[2]; Michael Sherman[2]; Catherine Costello[1];

THURSDAY POSTERS

[1]*Boston University/ Mass Spectrometry Resource, Boston, MA;* [2]*Boston University, Boston, MA*

ThP 527 **Slippery When Translated: Extensive Programmed Ribosomal Frameshifting Revealed by Proteomics**; Rachel O. Loo[1]; Yanan Yang[2]; Housna Mouttaki[3]; Robert Gunsalus[1]; Joseph A. Loo[1]; Michael McInerney[3]; *[1]UCLA, Los Angeles, CA; [2]Agilent Technologies, Santa Clara, CA; [3]University of Oklahoma, Norman, OK*

ThP 528 **Integrated Time- and Dose-Resolved Proteomic, Redox Metabonomic, and Functional Analysis of the Cardioprotective Effects of Nitrite Treatment on the Heart**; David H. Perlman[1]; Selena Bauer[2]; Nathan S. Bryan[2]; Maria F. Garcia-Saura[2]; Chee C. Lim[2]; Bernadette O. Fernandez[2]; Mark E. McComb[1]; Catherine E. Costello[1]; Martin Feelisch[2]; *[1]Cardiovascular Proteomics Ctr., BUSM, Boston, MA; [2]Whitaker Cardiovascular Institute, BUSM, Boston, MA*

ThP 529 **A Proteomic Probing of the Protein Partners in Huntington's Disease using a Novel BAC Transgenic Model of Disease**; Dyna I. Shirasaki[1]; Michelle Gray[2]; Tara K. Murphy[2]; X. William Yang[2]; Joseph A. Loo[1]; *[1]UCLA, Department of Chemistry and Biochemistry, Los Angeles, CA; [2]UCLA, Brain Research Institute, Los Angeles, CA*

ThP 530 **Neuroproteomic Analysis of Chronic Methamphetamine Treatment in Rat Cortex**; Firas Kobeissy[1]; Jean Lud Cadet[2]; Devon Graham[2]; Issa Isaac[3]; Neil Sharma[3]; Marjorie Chow[4]; Nicole Boyle[4]; Mark S Gold[1]; Kevin K K Wang[1]; *[1]University of Florida, Dept of Psychiatry, Gainesville, FL; [2]Molecular Neuropsychiatry Branch/ NIDA, Baltimore, MD; [3]Genomic Solutions, Ann Arbor, MI; [4]Protein Core, Gainesville, FL*

ThP 531 **In Silico Prediction and LC-MS/MS Identification of the Outer Membrane Proteome of Actinobacillus Pleuropneumoniae**; Jacqueline Chung[1]; Chris Ng-Thow-Hing[1]; Lorne Budman[1]; John HE Nash[2]; Mario Jacques[3]; Robert Masse[4]; James W. Coulton[1]; Bernard F Gibbs[5]; *[1]Dept. of Microbiology and Immunology, McGill U, Montreal, Canada; [2]Institute for Biological Sciences, NRC, Ottawa, Canada; [3]Dept. de pathologie et microbiologie, St. Hyacinthe, Canada; [4]MDS Pharma Services, Montreal, Canada; [5]Sheldon Biotechnology Center, McGi, Montreal, Canada*

ThP 532 **Protein Synthesis is an Immediate Early Response to EGFR Signaling**; Tim Wehr[1]; Naina Shastri[2]; Nora Bayani[2]; Ning Liu[1]; Aran Paulus[1]; Richard M. Neve[2]; *[1]Bio-Rad Labs, Hercules, CA; [2]Lawrence Berkeley National Laboratory, Berkeley, CA*

ThP 533

PROTEOMICS: SAMPLE PREPARATION & METHODS (GEL BASED)

ThP 534 **Importance of Sample Preparation for MS Analysis of Protein Complexes Purified by Blue Native Gels**; Mahbod R. Hajivandi; Tom Beardslee; Xiquan Liang; Paul Predki; Marshall Pope; *Invitrogen, R & D, Carlsbad, CA*

ThP 535 **Plasma Protein and Post Translational Modification Study on New 2D Electrophoresis Gels Exhibiting Outstanding Properties for MS Analysis**; Caroline Tokarski[1]; Florence Guerard[1]; Olivia Guerre[1]; Anatoli Tassis[2]; Christian Rolando[1]; *[1]Univ. des Science/Tech de Lille, Villeneuve d'Ascq, FRANCE; [2]Elchrom, Cham, Switzerland*

ThP 536 **An In-gel Derivatization Method for the Identification of Proteolytic Cleavage Sites**; J. Isabella Zhang[1]; Jingwei Li[1]; N. Naomi Jayasuriya[1]; Patrick D. Haller[1]; Mari Enoksson[2]; Guy Salvesen[2]; W. Andy Tao[1]; *[1]Purdue University, West Lafayette, IN; [2]Burnham Institute, San Diego, CA*

ThP 537 **Proteomic Profiling of Fructose-Induced Hepatic Steatosis**; Lihe Zhang; Steven Ringquist; Massimo Trucco; Henry Dong; *Children's Hospital of Pittsburgh, Pittsburgh, PA*

ThP 538 **Proteomic Analysis of Mucin Glycoproteins and their Complexes after Agarose Gel Electrophoresis;** Mehmet Kesimer; Genevieve DeMaria; John K. Sheehan; *University of North Carolina, Chapel Hill, NC*

ThP 539 **Reversed Gel Filtration for the Sample Preparation;** Ashok K. Shukla; Mukta Shukla; *Glygen Corp., Columbia, MD*

ThP 540 **Aging and the Insolubleome: Identifying SDS-Insoluble Proteins from Brains of Aging and Neurodegenerative Disease Mouse Models by Mass Spectrometry;** Birgit Schilling; Aaron Miller; John P. Miller; Emily A. Gaman; Lisa M. Ellerby; Bradford W. Gibson; Robert E. Hughes; *Buck Institute for Age Research, Novato, CA*

ThP 541 **A Simple Method To Remove Salt From IPG Strips Prior To Isoelectric Focusing;** Carrie J. Heppelmann; Linda M. Benson; H. Robert Bergen, III; *Mayo Foundation, Rochester, MN*

ThP 542 **Three-layer "Sandwich" Gel Electrophoresis: a Novel Method for Salt Removal and Protein Concentration**; Ting Liu; Angela M. Martin; Anthony P Sinai; Bert C Lynn; *University of Kentucky, Lexington, KY*

ThP 543 **Size-Based Peptide Sorting: Gel Mobility Study of Cysteinyl Tryptic Peptides**; Alexis Ramos; Xudong Yao; *Department of Chemistry, University of Connecticut, Storrs, CT*

ThP 544 **To See the Unseen: Specific Localization of Proteins using Score Imaging?** Paulo Marcelo[1]; Arnaud Bruneel[2]; Iman Haddad[1]; Bruno Baudin[2]; Jean Rossier[1]; Joelle Vinh[1]; *[1]ESPCI/CNRS, Paris, France; [2]Hopital Saint-Antoine, Paris, France*