

- of Washington, Harborview Medical Center, Seattle, USA;*  
<sup>3</sup>*Shimadzu Biotech, Manchester, UK*
- WPZ 488 **Experimental Peptide Identification Repository, EPIR: a Peptide-Centric Software Platform for Storage, Validation, and Mining of Tandem Mass Spectrometry Data;** Dan B. Kristensen; Jan C. Brønd; Peter A. Nielsen; Jens R. Andersen; Ole T. Sørensen; Vibeke Jørgensen; Keiryn L. Bennett; Alexandre V. Podtelejnikov; Jacek R. Wisniewski; Christian Ahrens; Søren G. Schandorff; *MDS Inc. Denmark, Odense, Denmark*
- WPZ 489 **Protein pI Related Post-Translational Modifications Proposed by 2-D HPLC Separation Combined with ESI and MALDI TOFMS and Database Search Method;** Suping Zheng<sup>1</sup>; David M. Lubman<sup>1</sup>; Timothy J. Barder<sup>2</sup>; Albert F. Bennett<sup>3</sup>; <sup>1</sup>*University of Michigan, Ann Arbor, MI*; <sup>2</sup>*Eprogen Inc., Darien, IL*; <sup>3</sup>*University of California, Irvine, Irvine, CA*
- WPZ 490 **Discovery and Identification of Differentially Expressed Native Peptides with a High Dynamic Range using Peptide Display and MALDI Tandem Time-of-Flight-MS;** Christoph Menzel<sup>1</sup>; Vincent Guillou<sup>1</sup>; Michael Juergens<sup>1</sup>; Markus Kellmann<sup>1</sup>; Matthias Glueckmann<sup>2</sup>; Dietmar Waidelich<sup>2</sup>; Hans-Dieter Zucht<sup>1</sup>; Peter Schulz-Knappe<sup>1</sup>; <sup>1</sup>*BioVisioN AG, Hanover, Germany*; <sup>2</sup>*Applied Biosystems, Darmstadt, Germany*
- WPZ 491 **Mass Spectrometry Based Proteomics: Generation of Peak List for Reliable and Reproducible Protein Identification;** Doris E Terry *Purdue University, West Lafayette, IN*
- WPZ 492 **Smart Probe Surfaces for Elimination of the Ion Suppression Effect in MALDI MS;** Meiling Li; Richard B. Timmons; Gary R. Kinsel; *University of Texas at Arlington, Arlington, TX*
- WPZ 493 **Analysis of Small Yeast Proteins Directly from Immobilized pH Gradient Gel Strips using MALDI-TOF/TOF;** Gary A Rymar; Angela K Walker; Philip C Andrews; *University of Michigan, Ann Arbor, MI*
- WPZ 494 **Several Experimental Observations in the Study of Plasma Proteome Using Depletion and 3-Dimensional HPLC;** Xiaoyao Xiao; Georgia Dolios; Rong Wang; *Mount Sinai School of Medicine, New York, NY*
- WPZ 495 **Optimizing Data Acquisition Parameters of Linear Ion Trap Proteomics Experiments to Enhance Database Search Results;** Julie A Horner; Andreas F Huhmer; Rohan A Thakur; *Thermo Electron, San Jose, CA*
- WPZ 496 **MS Gas Phase Fractionation of Albumin Depleted and Associated Serum: A Twenty Minute MudPIT Approach;** Jennifer L Rutherford; Joe Bonapace; Mai Loan Nguyen; Tonya Pekar; John Pirro; *Charles River Proteomic Services, Worcester, MA*
- WPZ 497 **Design and Development of Polyurethane Surfaces for Protein Microarrays;** Ning Tang; Daniel Chang; Scot Weinberger; *Ciphergen Biosystems, Inc., Fremont, CA*
- WPZ 498 **In-Capillary Proteolytic Digest of Native Proteins and Simultaneous Analysis of the Resulting Peptides by nanoESI MS and MS/MS;** Gottfried Pohlentz; Jasna Peter-Katalinic; *Institute for Medical Physics and Biophysics, Muenster, Germany*
- WPZ 499 **Qcomp: A Rapid and Accurate Method for Identifying Peptides and Proteins from Partial, Qualitative Amino Acid Composition Data;** Brian D. Halligan<sup>1</sup>; Andrew S. Greene<sup>1</sup>; Edward A. Dratz<sup>2</sup>; <sup>1</sup>*Medical College of Wisconsin, Milwaukee, WI*; <sup>2</sup>*Montana State University, Bozeman, MT*
- WPZ 500 **Evaluation of a Chi-Square Discrimination Function to Identify Genuine Components of Protein Complexes;** Jens S Andersen<sup>1</sup>; Christoffer J Wilkinson<sup>2</sup>; Peter Mortensen<sup>1</sup>; Erich A Nigg<sup>2</sup>; Matthias Mann<sup>1</sup>; <sup>1</sup>*University of Southern Denmark, Odense, Denmark*; <sup>2</sup>*Max Planck Institute of Biochemistry, Martinsried, Germany*
- WPZ 501 **Top-Down, Bottom-Up, and Side-to-Side Proteomics with Virtual 2-D Gels;** Rachel R. Ogorzalek Loo; Yanan Yang; Frank Hung; Robert Gunsalus; Vern Schumaker; Joseph A. Loo; *UCLA, Los Angeles, CA*
- WPZ 502 **N-terminal Side Chain Cleavage of Chemically Modified Peptides by Free Radical Processes Under CID Conditions;** Almary Chacon; Douglas Masterson; Huiyong Yin; Jeremy L. Norris; Richard M. Caprioli; Ned A. Porter; *Vanderbilt University, Nashville, TN*
- WPZ 503 **Enzymatic Micro-Reactor for Proteomic Applications;** Kamal Tobal; Séverine Le Gac; Cécile Cren-Olivé; Christian Rolando; *USTL, Lille, France*
- WPZ 504 **Integrated Top-Down/Bottom-Up Protein Analysis Platform Targeting Comprehensive and Ultrasensitive Proteomics;** Yueju Wang<sup>1</sup>; Brian M. Balgley<sup>2</sup>; Jonathan W. Cooper<sup>2</sup>; Frederick Rosenberger<sup>2</sup>; Paul A. Rudnick<sup>2</sup>; Damali George<sup>3</sup>; Eric H. Baehrecke<sup>3</sup>; Cheng S. Lee<sup>1</sup>; <sup>1</sup>*University of Maryland, College Park, MD*; <sup>2</sup>*Calibrant Biosystems, Rockville, MD*; <sup>3</sup>*University of Maryland Biotechnology Institute, College Park, MD*

#### THURSDAY POSTERS

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

#### BIOINFORMATICS

- ThPA 002 **A New Protein Identification Software Analysis Tool to Group Proteins and Assemble and View Results;** Sean L Seymour; Alex Loboda; Wilfred H Tang; Subodh Nimkar; Daniel A Schaeffer; *Applied Biosystems, Foster City, CA*
- ThPA 003 **Dynamic Calibration of PMF Data for Increased Identification Rate in Proteome Projects;** Daniel C. Chamrad<sup>1</sup>; Gerhard Koerting<sup>1</sup>; Martin Schuereberg<sup>2</sup>; Peter Hufnagel<sup>2</sup>; Helmut E. Meyer<sup>1</sup>; Martin Blueggel<sup>1</sup>; <sup>1</sup>*Protagen AG, Dortmund, Germany*; <sup>2</sup>*Bruker Daltonik GmbH, Bremen, Germany*
- ThPA 004 **How Much of a Multi-Dimensional LC-MSMS Experiment Acquired on a QSTAR is Interpretable and How Do Database Search Engines Perform;** Robert J Chalkley<sup>1</sup>; Peter R Baker<sup>1</sup>; Kirk C Hansen<sup>1</sup>; Katalin F Medzihradzsky<sup>1</sup>; Nadia P Allen<sup>2</sup>; Lan Huang<sup>3</sup>; Michael Rexach<sup>2</sup>; A. L. Burlingame<sup>1</sup>; <sup>1</sup>*UCSF, San Francisco, CA*; <sup>2</sup>*Stanford University, Stanford, CA*; <sup>3</sup>*UC Irvine, Irvine, CA*
- ThPA 005 **Cluster Analysis of Mass Spectrometry Data to Detect Protein Interactions;** Jill McAfee; Dexter Turner; Michael Assink; Andrew J Link; *Vanderbilt University School of Medicine, Nashville, TN*
- ThPA 006 **SeQuence IDentification – A Bayesian Peptide Sequencing Algorithm for Tandem Mass Spectra;** Li Ji<sup>1</sup>; Yingying Huang<sup>1</sup>; Joseph Triscari<sup>2</sup>; Katheryn Resing<sup>3</sup>; Ljiljana Pasa-Tolic<sup>4</sup>; Mary Lipton<sup>3</sup>; Richard Smith<sup>4</sup>; Vicki Wysocki<sup>1</sup>; <sup>1</sup>*University of Arizona, Tucson, AZ*; <sup>2</sup>*Science Application International Corporation, Tucson, AZ*; <sup>3</sup>*University of Colorado, Boulder, CO*; <sup>4</sup>*Pacific Northwest National Laboratory, Richland, WA*
- ThPA 007 **Strategies for Building a Proteomics Data Repository;** Randall K Julian<sup>1</sup>; James P Sefton<sup>1</sup>; Karen Gooding<sup>1</sup>; Chris Taylor<sup>2</sup>; Kai Runte<sup>2</sup>; Jon Reid<sup>3</sup>; <sup>1</sup>*Lilly Research Laboratories, Indianapolis, IN*; <sup>2</sup>*European Bioinformatics Institute, Hinxton-Cambridge, UK*; <sup>3</sup>*Savitar, Inc, West Lafayette, IN*

- ThPA 008 **“Prescriptive Annotation”: The Consideration of Polymorphisms, Alternative Splicing, and Modifications During Top Down Database Searching;** Andrew J. Forbes; Jim Pesavento; Richard Leduc; Yong-Bin Kim; Gregory K. Taylor; Neil L. Kelleher; *University of Illinois, Urbana, IL*
- ThPA 009 **Proteome Database System for Managing Proteome Data and MS Interpretation Results;** Martin Blueggel<sup>1</sup>; Gerhard Koerting<sup>1</sup>; Joerg Glandorf<sup>2</sup>; Jens Vagts<sup>2</sup>; Ralf Reinhardt<sup>1</sup>; Helmut E. Meyer<sup>1</sup>; Herbert Thiele<sup>2</sup>; <sup>1</sup>*Protagen AG, Dortmund, Germany*; <sup>2</sup>*Bruker Daltonik GmbH, Bremen, Germany*
- ThPA 010 **FOOTPRINT: A New Algorithm for Charge State Deconvolution of Complex ESI Mass Spectra;** Hailing Zhang; Kaizhong Zhang; Bin Ma; Cunjie Zhang; Amanda Doherty-Kirby; Gilles Lajoie; *University of Western Ontario, London, ON, Canada*
- ThPA 011 **RAId: a Novel de novo Algorithm Combined With Structured Library Search for the Analysis of MS/MS Data;** Gelio Alves; Yi-Kuo Yu; *National Center for Biotechnology Information, NLM, Bethesda, MD*
- ThPA 012 **Measuring MS/MS Spectral Quality With a Robust Multivariate Classifier;** Alexey I Nesvizhskii; Mathijs Vogelzang; Ruedi Aebersold; *Institute for Systems Biology, Seattle, WA*
- ThPA 013 **PTM-Explorer - Gaining Knowledge from the Numerous Uninterpreted High Quality MS/MS Spectra in Protein Analysis;** Daniel C. Chamrad<sup>1</sup>; Heike Schaefer<sup>2</sup>; Hemut E. Meyer<sup>1</sup>; Martin Blueggel<sup>1</sup>; <sup>1</sup>*Protagen AG, Dortmund, Germany*; <sup>2</sup>*Medizinisches Proteom Center, Bochum, Germany*
- ThPA 014 **Mass Spectral Data Processing using a Novel Peak Detection Algorithm Improves Results Interpretation;** LeeAnn Higgins *University of Minnesota, St. Paul, MN*
- ThPA 015 **Discovery of Unanticipated Protein Modifications Using MS/MS Database Search Software;** Wilfred H. Tang; Ignat V. Shilov; Sean L. Seymour; Sean P. Keating; Alex Loboda; Alpesh A. Patel; Daniel A. Schaeffer; *Applied Biosystems, Foster City, CA*
- ThPA 016 **Open Source Software for de novo Peptide Sequencing from Tandem Mass Spectrometry Data;** Thomas W. Blackwell<sup>1</sup>; Peter J. Ulintz<sup>1</sup>; Daniel M. Burns<sup>2</sup>; David J. States<sup>1</sup>; Philip C. Andrews<sup>3</sup>; <sup>1</sup>*U Michigan Medical School, Ann Arbor, MI*; <sup>2</sup>*U Michigan, Ann Arbor, MI*; <sup>3</sup>*National Center for Integrative Proteomics, Ann Arbor, MI*
- ThPA 017 **MSMS Peak Detection and Tools for Large Scale Analysis of MSMS data;** Navdeep Jaitly; Rachel Page-Belanger; Denis Faubert; Pierre Thibault; Paul Kearney; *Caprion Pharmaceuticals, Montreal, QC, Canada*
- ThPA 018 **An Intensity-based Probability Model for Peptide Identification using Tandem Mass Spectra and Protein Databases;** Rovshan G. Sadygov; John R. Yates, III; *The Scripps Research Institute, La Jolla, CA*
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- CARBOHYDRATES/OLIGOSACCHARIDES**
- ThPB 019 **A Novel Method of Carbohydrate Analysis by LC/MS;** Eduard Rogatsky; Daniel Stein; *Albert Einstein College of Medicine of Yeshiva Uni, Bronx, NY*
- ThPB 020 **Characterization of Glycan Structural Details Using Sequential Mass Spectrometry, MS<sup>n</sup> (Fragment Structural Library);** Suddham Singh; Hailong Zhang; Vernon Reinhold; *University of New Hampshire, Durham, NH*
- ThPB 021 **Methodology for Identifying Sites and Extent of Glycosylation Directly on Glycopeptides Using TOF/TOFTM optics;** Keith A Waddell<sup>1</sup>; Fadi Abdi<sup>1</sup>; Melanie X Lin<sup>1</sup>; Marshall Pope<sup>3</sup>; Mahbod Hajivandi<sup>3</sup>; Anthony Ferrige<sup>2</sup>; Robert Alecio<sup>2</sup>; Stuart Ray<sup>2</sup>; <sup>1</sup>*Applied Biosystems, Framingham, MA*; <sup>2</sup>*PPL, Isleham, CB7 5RX, UK*; <sup>3</sup>*Invitrogen Life Technologies, Carlsbad, CA*
- ThPB 022 **A New Analytical Method for Glycoprotein Structure Analysis using MALDI QIT-TOFMS<sup>n</sup>: an Application to Ribonuclease B;** Koichi Tanaka<sup>1</sup>; Yuko Fukuyama<sup>1</sup>; Yoshinao Wada<sup>2</sup>; Noriyuki Ojima<sup>1</sup>; Yuzo Yamazaki<sup>1</sup>; Masaki Yamada<sup>1</sup>; <sup>1</sup>*Shimadzu Corporation, Kyoto, Japan*; <sup>2</sup>*Research Institute, MCH, Osaka, Japan*
- ThPB 023 **Evaluation of the Fc oligosaccharide Pairing in a Recombinant Monoclonal Antibody After Fractionation on a Con A Lectin Column;** Rodney G. Keck; Viswanatham Katta; Bao-Jen Shyong; Andrew J.S. Jones; *Genentech, Inc., South San Francisco, CA*
- ThPB 024 **On-line LC-MS of Oligosaccharides Derived from Lyase Digestion of Heparan Sulfate;** Estee F Naggari; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- ThPB 025 **Equilibrium Size Exclusion Chromatography Mass Spectrometry for Study of Carbohydrate-Protein Binding;** Yanan Duan; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- ThPB 026 **Relative Ion Abundance Analysis for Distinguishing Between Isomeric Oligosaccharides by Using MALDI and ESI Mass Spectrometry;** Tohru Yamagaki<sup>1</sup>; Hiroshi Nakanishi<sup>2</sup>; Kazuo Tachibana<sup>1</sup>; <sup>1</sup>*University of Tokyo, Tokyo, Japan*; <sup>2</sup>*National Institute of AIST, Tsukuba, Japan*
- ThPB 027 **An Analysis of IgG N-glycans Using HPLC-Sonicspray Ionization (SSI) Ion Trap MS and MS<sup>n</sup> Spectral Matching;** Yasuhiro Takegawa<sup>1</sup>; Shinya Ito<sup>2</sup>; Shinji Yoshioka<sup>2</sup>; Kisaburo Deguchi<sup>1</sup>; Hiroaki Nakagawa<sup>1</sup>; Kenji Monde<sup>1</sup>; Shin-Ichiro Nishimura<sup>1</sup>; <sup>1</sup>*Hokkaido University, Sapporo, Japan*; <sup>2</sup>*Hitachi High-Technologies, Hitachinaka, Japan*
- ThPB 028 **A Comparison of Derivatization Procedures for Mass Spectrometric Analysis of Carbohydrates;** Erika Lattova; Helene Perreault; *University Manitoba, Winnipeg, MB, Canada*
- ThPB 029 **Quantitative Analysis of Pentose-Borate Complexes With Desorption/Ionization On porous Silicon Mass Spectrometry (DIOS-MS);** Qian Li; Alonso Ricardo; James W. Winefordner; David H. Powell; *University of Florida, Gainesville, FL*
- ThPB 030 **Structural Characterization of LAM from M. tuberculosis and M. smegmatis by ESI and MALDI Mass Spectrometry;** Leslie Stanton; Christopher J. Petzold; Julie A. Leary; *University of California, Berkeley, CA*
- ThPB 031 **Specific, Non-Reductive Release of O-Linked Glycans with Peptide and Glycan Stability; Product Characterization by MS;** Zhongfu Wang; Vernon N. Reinhold; *University of New Hampshire, Durham, NH*
- ThPB 032 **Fourier-Transform Ion Cyclotron Resonance Mass Spectrometry;** Martin Froesch<sup>1</sup>; Zeljka Vukelic<sup>2</sup>; Laura Bindila<sup>1</sup>; Alina Zamfir<sup>1</sup>; Jasna Peter-Katalinic<sup>1</sup>; <sup>1</sup>*Institute for Medical Physics and Biophysics, Muenster, Germany*; <sup>2</sup>*Medical Faculty, University of Zagreb, Zagreb, Croatia*
- ThPB 033 **Dermatan Sulfate Polysaccharide Chain Sequencing by Tandem Mass Spectrometry;** May Joy C. Miller; Catherine C. Costello; Joseph Zaia; *Boston University School of Medicine, Boston, MA*
- ThPB 034 **A Glycomics Approach to Analysis of O-linked Oligosaccharides;** Katherine M Schubothe; Jinhua Zhang; Jerry L. Hedrick; Carlito B. Lebrilla; *UC Davis, Davis, CA*
- ThPB 035 **Analysis of N-Linked Oligosaccharides from Glycopeptides by Matrix-Assisted Laser Desorption/Ionization Quadrupole Ion Trap Time-of-Flight Mass Spectrometry (MALDI-QIT-TOF MS);** Masaki Yamada<sup>1</sup>; Chris W. Sutton<sup>2</sup>; Yasuhiro Kajihara<sup>3</sup>;

- Yuko Fukuyama<sup>4</sup>; Osamu Nishimura<sup>1</sup>; Koichi Tanaka<sup>4</sup>; <sup>1</sup>*Life Science Lab., Shimadzu Corporation, Kyoto, Japan*; <sup>2</sup>*Shimadzu Biotech, Manchester, UK*; <sup>3</sup>*Yokohama City University, Yokohama, Japan*; <sup>4</sup>*MS Lab., Shimadzu Corporation, Kyoto, Japan*
- ThPB 036 **Mass Spectrometric Sequencing of Protein Derived Carbohydrates Using MALDI-CID-TOF/TOF Technology**; Urs Lewandrowski<sup>1</sup>; Anja Resemann<sup>2</sup>; Detlev Suckau<sup>2</sup>; Albert Sickmann<sup>1</sup>; <sup>1</sup>*Rudolf-Virchow Center for Experimental Biomedicine, Wuerzburg, Germany*; <sup>2</sup>*Bruker Daltonics, Bremen, Germany*
- ThPB 037 **Bridging Proteomics and Glycomics: MS Determination of Oligosaccharide Footprints**; Bernd Gesslbauer; Nina Grobuschek; Elena Geretti; Andreas Kungl; *University of Graz, Graz, Austria*
- ThPB 038 **in vivo Glycosylation Characterization of Monoclonal IgG Antibody**; Lihua Huang; Susan Biolsi; Kelly Bales; Uma Kuchibhotla; *Eli Lilly and Company, Indianapolis, IN*
- ThPB 039 **Characterizing O-Linked Oligosaccharide Diversity and Variation by Mass Spectrometry**; Youmie Park; Yongming Xie; Jun Liu; LeAnn L. Lindsay; Jerry L. Hedrick; Carlito B. Lebrilla; *University of California, Davis, CA*
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- COMBINATORIAL CHEMISTRY**
- ThPC 040 **Electrospray Ionization FT-ICR Mass Spectrometric Characterization of Target Assisted Combinatorial Synthesis (TACS) Methods for the Generation of Metalcomplex-Based Pharmacophores**; Sergiu P. Paliu; Daniel Hutter; Steven A. Benner; John R. Eyster; *University of Florida, Gainesville, Florida*
- ThPC 041 **Analytical Strategies for the Rapid Characterization of Diacylglycerol-Lactone Combinatorial Libraries Utilizing Mass Spectrometry**; Christopher C. Lai<sup>1</sup>; Dehui Duan<sup>1</sup>; Lawrence R. Phillips<sup>1</sup>; Tracy L. Wolfe<sup>2</sup>; Victor E. Marquez<sup>1</sup>; James A. Kelley<sup>1</sup>; <sup>1</sup>*National Cancer Institute, NCI-Frederick, Frederick, MD*; <sup>2</sup>*SAIC-Frederick, Frederick, MD*
- ThPC 042 **High Throughput, Matrix-less, Combinatorial Compound Library Analysis on the Axima CFR+**; Daniel Hayes<sup>1</sup>; Matthew Openshaw<sup>3</sup>; Joseph D Cuiffi<sup>1</sup>; Stephen J Fonash<sup>2</sup>; Chris Sutton<sup>3</sup>; <sup>1</sup>*NanoHorizons, State College, PA*; <sup>2</sup>*Penn State University, University, PA*; <sup>3</sup>*Kratos Analytical, Manchester, UK*
- ThPC 043 **Obtaining Routine High Mass Accuracy in a Walk Up Environment Using LC/MS TOF**; Douglas E. McIntyre<sup>1</sup>; Linda L. Lopez<sup>1</sup>; Daniel L. Norwood<sup>2</sup>; Keith B. McKellop<sup>2</sup>; <sup>1</sup>*Agilent Technologies, Santa Clara, CA*; <sup>2</sup>*Boehringer Ingelheim Pharmaceuticals Inc, Ridgefield, CT*
- ThPC 044 **High Throughput Medicinal Library Screening Against Human Serum Albumin**; Jimmy Flarakos<sup>1</sup>; Paul Vouros<sup>1</sup>; Kenny Morand<sup>2</sup>; <sup>1</sup>*Northeastern University and Barnett Institute, Boston, MA*; <sup>2</sup>*Procter & Gamble Pharmaceuticals, Cincinnati, OH*
- ThPC 045 **Automated Affinity Chromatography Measurement of Peptide Mixtures Using a Lab-on-Valve Apparatus Coupled to Electrospray Ionization Mass Spectrometry**; Yuko Ogata; Erkang Fan; Frantisek Turecek; *University of Washington, Seattle, WA*
- ThPC 046 **We Don't Purify It Until You Order It: "Just-In-Time" Purification in Support of Lead Discovery Biology**; Kimberly A. C. Sasher; Christina N. Guintu; Shumei Jiang; Dimitri Petrov; Yingyao Zhou; John Isbell; *Genomics Institute of Novartis Research Foundation, San Diego, CA*
- ThPC 047 **The Effect of Flash Freezing on Compound Stability and Precipitation**; Nathan L. Hall; Kathleen Gibboney; Jennifer Paris; Kenneth Morand; Barb Kuzmack; Dave Stanton; *Procter & Gamble Pharmaceuticals, Mason, OH*
- ThPC 048 **Characterization of Oligo-N-Substituted-Glycine Peptoids by LC/MS and LC/MS/MS Using an Ion Trap**; K. Janota<sup>1</sup>; H. Jang<sup>2</sup>; K. Kirshenbaum<sup>2</sup>; <sup>1</sup>*Agilent Technologies, Paramus, NJ*; <sup>2</sup>*New York University, NY, NY*
- ThPC 049 **Screening for inhibitors of beta-amyloid protein aggregation using electrospray mass spectrometry**; Xun Cheng; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*
- ThPC 050 **LC/MS Studies of Compound Transfer from Compound Card into Agarose Gel**; Lan Gao; Hua Tang; Xueheng Cheng; Steve Anderson; Yihong Fan; David Burns; *Abbott Laboratories, Abbott Park, IL*
- ThPC 051 **Automated Batch Processing of LC/MS and SFC/MS Data for High-Throughput Analysis of Combinatorial Libraries**; Kathleen Tivel<sup>1</sup>; Andrew Anderson<sup>2</sup>; Mark Bayliss<sup>2</sup>; Vitaly Lashin<sup>2</sup>; Manuel Ventura<sup>1</sup>; William Farrell<sup>1</sup>; <sup>1</sup>*Pfizer Global R & D, La Jolla Laboratories, San Diego, CA*; <sup>2</sup>*Advanced Chemistry Development, Toronto, Ontario, Canada*
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- ENVIRONMENTAL: TECHNIQUES & INSTRUMENTATION**
- ThPD 052 **GC/MS-NCI Studies of Explosives and Metabolites**; M. Paul Chiarelli<sup>1</sup>; Daniel J. Graham<sup>1</sup>; Denise K. MacMillan<sup>2</sup>; Lan Gao<sup>1</sup>; Vladimir Zhukhovysky<sup>1</sup>; <sup>1</sup>*Loyola University, Chicago, IL*; <sup>2</sup>*USACE, Omaha, NE*
- ThPD 053 **Solid Phase Microextraction combined with Multiphoton Ionization Mass Spectrometry in a Quadrupole Ion Trap: Fast Analysis of Aromatics in Water**; Christian Weickhardt<sup>1</sup>; Daniel Globig<sup>2</sup>; <sup>1</sup>*Leipzig University of Applied Sciences, Leipzig, Germany*; <sup>2</sup>*Brandenburg University of Technology, Cottbus, Germany*
- ThPD 054 **A Study of the Analysis of Polybrominated Diphenyl Ether Flame Retardants by GC-MSMS**; Keith M Worrall<sup>1</sup>; Anthony Newton<sup>1</sup>; Ramesh Rao<sup>1</sup>; Bert Van Bavel<sup>2</sup>; Anneli Pettersson<sup>2</sup>; Gunilla Lindstrom<sup>2</sup>; <sup>1</sup>*Waters, Manchester, UK*; <sup>2</sup>*MTM research centre, Orebro, Sweden*
- ThPD 055 **Solid State Adsorbents: Extending the Range of SIFT-MS**; Daniel B. Milligan<sup>2</sup>; Vaughan S. Langford<sup>2</sup>; Barry J. Prince<sup>2</sup>; Murray J. McEwan<sup>1</sup>; <sup>1</sup>*University of Canterbury, Christchurch, New Zealand*; <sup>2</sup>*Syft Technologies Limited, Christchurch, New Zealand*
- ThPD 056 **Analysis of Aeromonas by Mass Spectrometry: Speciation and Virulence Factors**; Maura J. Donohue<sup>1</sup>; Jody A. Shoemaker<sup>1</sup>; Wayne Smallwood<sup>2</sup>; Mark A. Rodgers<sup>1</sup>; <sup>1</sup>*U.S. Environmental Protection Agency, Cincinnati, OH*; <sup>2</sup>*National Council on the Aging, Cincinnati, OH*
- ThPD 057 **Detection Of Hazardous Air Pollutants By Jet-RempitoFMS Using A Compact Tunable Uv Laser Source**; Michael J. Coggiola<sup>1</sup>; Harald Oser<sup>1</sup>; Steve E. Young<sup>1</sup>; Katy Briggs<sup>2</sup>; Rhett J. Barnes<sup>3</sup>; Eli Margelith<sup>3</sup>; <sup>1</sup>*SRI International, Menlo Park, CA*; <sup>2</sup>*Pacific Lutheran University, Tacoma, WA*; <sup>3</sup>*OPOTEK, Inc, Carlsbad, CA*
- ThPD 058 **Application of the AMDIS Mass Spectral Deconvolution Algorithm for the Characterization of Cigarette Smoke**; Ngee-Sing Chong; Omobola Oladipupo; Vichuda Hunter; Beng-Guat Ooi; *Middle Tennessee State University, Murfreesboro, TN*
- ThPD 059 **Secondhand Tobacco Smoke Analysis for the Identification of Nitro-Polycyclic Aromatic Hydrocarbons Using Electron Monochromator-Mass Spectrometry**; Crystal D. Havey; Christy Abbas-Hawks; A. John Dane; Kent J. Voorhees; *Colorado School of Mines, Golden, CO*

- ThPD 060 **A Microcystin Reaction Study: Identification and Analyses Using SELDI-TOFMS and LC/MS/MS;** Wayne W. Carmichael; [Moucun Yuan](#); *Wright State University, Dayton, OH*
- ThPD 061 **Quantitative Study of Alkyl Nitrates in Single Aerosol Particles;** [Theresa G Nguyen](#); Erin Mysak; David Nash; Yury Dessiaterik; Tomas Baer; Roger Miller; *University of North Carolina, Chapel Hill, NC*
- ThPD 062 **Applications of MALDI - Mass Spectrometry to the Study of Dermal Absorption of Isocyanates for Occupational Hygiene Interests;** [Brendan Prideaux](#)<sup>1</sup>; Malcolm R Clench<sup>1</sup>; Vikki A Carolan<sup>1</sup>; Jackie Morton<sup>2</sup>; <sup>1</sup>*Sheffield Hallam University, Sheffield, S1 UK*; <sup>2</sup>*The Health and Safety Laboratory, Sheffield, S3 UK*
- ThPD 063 **Detection and Characterization of Biomolecules in Ambient Air;** [Ann M. Snellinger](#); Murray V. Johnston; *University of Delaware, Newark, DE*
- ThPD 064 **Identification of Photolytic Degradation Products of Pharmaceutical Drug Diclofenac in Aqueous Solutions by Tandem GC-MS;** [Despina F. Tsipi](#)<sup>1</sup>; Vivian Koutsouba<sup>1</sup>; Anastasia E. Hiskia<sup>3</sup>; Manos Dasenakis<sup>2</sup>; <sup>1</sup>*General Chemical State Laboratory, Athens, Greece*; <sup>2</sup>*University of Athens, Athens, Greece*; <sup>3</sup>*NCSR Demokritos, Athens, Greece*
- ThPD 065 **Formation of Halonitromethanes in Drinking Water during Chlorination;** [Junghoon Choi](#); Susan D. Richardson; *Environmental Protection Agency, Athens, GA*
- ThPD 066 **Quantitation of Fourteen Polycyclic Aromatic Hydrocarbons in Mainstream Smoke from Domestic Cigarettes;** [Yan S. Ding](#); Xizeng Yan; David Ashley; Clifford Watson; *Centers for Disease Control and Prevention, Atlanta, GA*
- ThPD 067 **Identification of Disinfection By-Products in Swimming Pool Water;** [Susan D. Richardson](#); Alfred D. Thruston, Jr.; F. Gene Crumley; *U.S. EPA, Athens, GA*
- ThPD 068 **Real-Time Monitoring of Urban Air for Wood-Smoke and Vehicle Emission Tracer Molecules by Membrane Introduction Tandem Mass Spectrometry (MIMS-MS/MS);** Janet H. L. Nelson<sup>1</sup>; Alexander J. Thompson<sup>1</sup>; Duane A. Friesen<sup>1</sup>; Erik T. Krogh<sup>1</sup>; Russell L. Dills<sup>2</sup>; Chris D. Simpson<sup>2</sup>; [Chris G. Gill](#)<sup>1</sup>; <sup>1</sup>*Malaspina University-College, Nanaimo, BC, Canada*; <sup>2</sup>*University of Washington, Seattle, WA*
- ThPD 069 **The Formation of Nitro Polycyclic Aromatic Hydrocarbons During Tobacco Pyrolysis;** [A. John Dane](#)<sup>1</sup>; Crystal D. Havey<sup>1</sup>; Kent J. Voorhees<sup>1</sup>; Robert B. Cody<sup>2</sup>; <sup>1</sup>*Colorado School of Mines, Golden, CO*; <sup>2</sup>*JEOL USA, Peabody, MA*
- ThPD 070 **Selection of the Organic Priority Pollutants for the River Moscow;** [Olga V. Poliakova](#); Albert T. Lebedev; *Moscow State University, Moscow, Russia*
- ThPD 071 **Analytical Methods for the Characterization of Toxic Exposure to Jet Fuel;** [Shonetta D. Gregg](#); Jeffrey W. Fisher; Michael G. Bartlett; *University of Georgia, Athens, GA*
- ThPD 072 **Quantitative Determination of Fluoroalkyl Sulfonamides in Aqueous Systems;** [Carin A. Huset](#); Douglas F. Barofsky; Jennifer A. Field; *Oregon State University, Corvallis, OR*
- ThPD 073 **Composting Process Monitoring with a Miniature Double Focusing Mass Spectrometer Sensor;** [Enrico Davoli](#); Gabriele Iori; Luigi Cappellini; Roberto Fanelli; *Mario Negri Institute, Milano, Italy*
- ThPD 074 **Detection and Identification of N-nitrosamines and N-containing compounds at low and sub ng/L in Drinking Water by ESI FAIMS MS;** [Wojciech Gabryelski](#)<sup>1</sup>; Markus Arend<sup>2</sup>; Jeff Charrios<sup>2</sup>; Steve E. Hruddy<sup>2</sup>; <sup>1</sup>*University of Guelph, Guelph, ON, Canada*; <sup>2</sup>*University of Alberta, Edmonton, AB, Canada*
- ThPD 075 **SPME-GC-MS Analysis of JP-8 Jet Fuel Marker Components in Environmental Matrices;** [Stacy D. Brown](#); Thomas P. Caldwell; *The Citadel, Charleston, SC*
- ThPD 076 **Formation of Organobromine and Organoiodine Compounds During Water Chlorination Process;** [Albert T. Lebedev](#); Natalia A. Sinikova; *Moscow State University, Moscow, Russia*
- ThPD 077 **Analysis of Acrylamide in Groundwater Samples;** [Michael A. Sage](#); Steve W.D. Jenkins; Vince Y. Taguchi; *Ministry of the Environment, Etobicoke, Canada*
- ThPD 078 **Tracing Natural Organic Matter through Natural Systems;** [Lori Beth Milligan](#)<sup>1</sup>; Jeffrey P. Chanton<sup>1</sup>; Thorsten Dittmar<sup>1</sup>; Alan G. Marshall<sup>2</sup>; William T. Cooper<sup>1</sup>; <sup>1</sup>*Florida State University, Tallahassee, FL*; <sup>2</sup>*National High Magnetic Field Laboratory, Tallahassee, FL*
- ThPD 079 **Underwater Mass Spectroscopy: Design and Application;** [R.J. Bell](#); P.G. Wenner; S.K. Toler; J.E. Edkins; M.L. Hall; F.H.W. van Amerom; S. Gassig; R.T. Short; R.H. Byrne; *University of South Florida, St Petersburg, FL*
- ThPD 080 **Development and Validation of a Membrane Extraction System for Formaldehyde Gas Diffusion Analysis by Mass Spectrometry;** [Patrice Tremblay](#)<sup>1</sup>; Réal Paquin<sup>2</sup>; André Tessier<sup>1</sup>; Martine Savard<sup>1</sup>; <sup>1</sup>*INRS-ETE, Sainte-Foy, QC, Canada*; <sup>2</sup>*Laval University, Sainte-Foy, QC, Canada*
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- AGRICULTURE**
- ThPE 081 **Detection of a Range of Antibiotics in Honey by Liquid Liquid Extraction Followed by LCMSMS;** Bertram Nieland; [Daniel K. Blake](#); Michael T. Baynham; Stephen J. Lock; Frans Schoutsen; Darren Thomas; *Applied Biosystems, Warrington, UK*
- ThPE 082 **Metabolite Analysis of the Plant Related Bacterium Sinorhizobium Meliloti by Gas Chromatography Mass Spectrometry;** [Aiko Barsch](#); Karsten Niehaus; *University of Bielefeld, Bielefeld, Germany*
- ThPE 083 **Quantitation and Confirmation of Metabolites of Nitrofurantoin Antibiotics in Foods Using Isotope Dilution LC-ESIMS/MS;** [Seu-Ping Khong](#); Pascal Mottier; Thierry Delatour; Eric Gremaud; Janique Richoz; Richard H. Stadler; Philippe A. Guy; *Nestle Research Center, Lausanne, Switzerland*
- ThPE 084 **Caspase-like Activity is Responsible for GBSSI Fragmentation During Barley Seed Development;** [Mats G Borén](#); Håkan Larsson; Anders Falk; Christer Jansson; *Swedish University of Agricultural Sciences, Uppsala, Sweden*
- ThPE 085 **CE-MS from a Polymer Coated PDMS Microchip with an Integrated Graphite ESI tip;** [Andreas Pettersson](#); Magnus Wetterhall; Gustav Liljegren; Sara K Bergström; Leif Nyholm; Karin E Markides; Jonas Bergquist; *Analytical Chemistry, Uppsala University, Uppsala, Sweden*
- ThPE 086 **Quantitation of Tetracyclines in Honey by LC-ESIMS/MS;** [Seu-Ping Khong](#); Andrea Beck-Henzelin; Marie-Claude Savoy-Perroud; [Philippe A. Guy](#); *Nestle Research Center, Lausanne, Switzerland*
- ThPE 087 **Determination of Residues of Tebufenozide and Metabolite in Low Moisture Rotational Crops by Liquid Chromatography with Tandem Mass Spectrometry Detection;** [Abigail E Lindsey](#); Michael J Hastings; *Dow AgroSciences, Indianapolis, IN*
- ThPE 088 **Simultaneous Analysis of Limonoid Aglycones and Glucosides Using LC-ESI/MS and MS-MS;** [Qingguo Tian](#); Steven J. Schwartz; *The Ohio State University, Columbus, OH*

- ThPE 089 **Variations between Raw Peanut Allergens and Roasted Peanut Allergens: A Mass Spectrometric Perspective;** Kevin J. Shefcheck; Steven M. Musser; *US Food and Drug Administration, College Park, MD*
- ThPE 090 **Detection and Quantitation of Linamarin in Foodstuffs by Electrospray Ionization SRM Mass Spectrometry;** James A. Ferguson<sup>1</sup>; Johnie Brown<sup>1</sup>; Jeffrey D. Miller<sup>1</sup>; Dimuth Siritunga<sup>2</sup>; <sup>1</sup>*Applied Biosystems, Framingham, MA*; <sup>2</sup>*The Ohio State University, Columbus, OH*
- ThPE 091 **Study of Conjugated Fatty Acids Present in Olive Oil After Thermal Stress;** Alessandro Saba<sup>1</sup>; Andrea Raffaelli<sup>1</sup>; Francesco Mazzini<sup>2</sup>; Piero Salvadori<sup>2</sup>; <sup>1</sup>*CNR - ICCOM Sezione di Pisa, Pisa, Italy*; <sup>2</sup>*Universita' di Pisa - Dip. Chimica e Chimica Ind., Pisa, Italy*
- ThPE 092 **A Metabolomic Approach to the Identification of Traits in Tomato Introgression Lines Using TOF-MS;** Hilary Major<sup>1</sup>; Michael McCullagh<sup>1</sup>; Steve Preece<sup>1</sup>; Sarah Overy<sup>2</sup>; Paul Quick<sup>2</sup>; Heather Walker<sup>2</sup>; <sup>1</sup>*Waters Corporation, Manchester, UK*; <sup>2</sup>*University of Sheffield, Sheffield, UK*
- ThPE 093 **Systematic Identification of the Proteome of *Medicago truncatula* Suspension Cells using Two-Dimensional Electrophoresis and Tandem Mass Spectrometry;** Zhentian Lei; Aaron M. Elmer; Lloyd W. Sumner; *The Noble Foundation, Ardmore, OK*
- ThPE 094 **Understanding and Identifying Wort Proteins Involved in the Formation and Stabilization of Beer Foam;** Yuwei Qian<sup>1</sup>; Werner Ens<sup>1</sup>; Ken G. Standing<sup>1</sup>; Marta Izydorczyk<sup>2</sup>; Sharon Bazin<sup>2</sup>; Ken Preston<sup>2</sup>; <sup>1</sup>*Physics and Astronomy, University of Manitoba, Winnipeg, MB, Canada*; <sup>2</sup>*Grain Research Laboratory, Winnipeg, MB, Canada*
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- FORENSICS**
- ThPF 095 **Rapid Mass Spectral Acquisition and Statistical Analysis for Determination of Scent Discriminators;** Keiji G. Asano<sup>1</sup>; Gary J. Van Berkel<sup>1</sup>; Scott A. Ramsey<sup>2</sup>; Brian A. Eckenrode<sup>3</sup>; <sup>1</sup>*Oak Ridge National Laboratory, Oak Ridge, TN*; <sup>2</sup>*Michigan State University, East Lansing, MI*; <sup>3</sup>*Federal Bureau of Investigation, Quantico, VA*
- ThPF 096 **MS Forensics of Fuel/Air Explosives Using RC Helicopters;** Ronny C. Robbins; William M. Lagna; Geoffrey J. Roelant; *U.S. Army, Aberdeen Proving Ground, Gunpowder, MD*
- ThPF 097 **Simultaneous Determination of 19 Illicit Drugs in Human Urine by LC/MS/MS;** Vince C.X. Gao<sup>1</sup>; Yurong Zhang<sup>2</sup>; Cheng Liang<sup>3</sup>; Gangyi Liu<sup>4</sup>; Chen Yu<sup>4</sup>; <sup>1</sup>*Applied Biosystems Asia Pacific, Hong Kong, China*; <sup>2</sup>*Forensic Science Research Institute, Shanghai, China*; <sup>3</sup>*College of Medicine, Fudan University, Shanghai, China*; <sup>4</sup>*Xuhui Center Hospital, Shanghai, China*
- ThPF 098 **DSEC as an Online Cleanup Technique For High Throughput LC/MS Drug Screening of Race Horse Serum and Urine Samples;** Lori Ann Upton<sup>1</sup>; Eric Kemp<sup>1</sup>; Kerry Nugent<sup>1</sup>; Wayne Skinner<sup>2</sup>; Scott Stanley<sup>2</sup>; <sup>1</sup>*Michrom Bioresources, Auburn, CA*; <sup>2</sup>*University of California, Davis, CA*
- ThPF 099 **Linear Ion Trap Electrospray Ionization Mass Spectrometry Matches and Outperforms Electrophoresis in Size and Precision in DNA Microsatellite Analysis;** Georg Hoelzl; Peter Oefner; *Stanford Genome Technology Center, Palo Alto, CA*
- ThPF 100 **Rapid Quantitative, Confirmational Screening Method for Drugs in Race Horse Urine by ESI-LC/MS2 and MS3 using a Linear Ion Trap;** Patrick Russell<sup>1</sup>; Paul Steinberg<sup>2</sup>; Mary L. Blackburn<sup>2</sup>; Diane Cho<sup>2</sup>; <sup>1</sup>*University of Florida, Jacksonville, FL*; <sup>2</sup>*Thermo Electron Corp., San Jose, CA*
- ThPF 101 **Solid-Phase Extraction and Tandem LC/MS Determination of Drugs of Abuse in Preserved Saliva;** Kevin M. Jenkins; Michael S. Young; Michelle Wood; *Waters Corporation, Milford, MA*
- ThPF 102 **Multi Target Screening Method for 300 Drugs and Metabolites by HPLC/MS/MS with a Linear Ion Trap;** Claudia Mueller<sup>2</sup>; Andre Schreiber<sup>1</sup>; Merja Gergov<sup>3</sup>; Barbora Maralikova<sup>2</sup>; Rainer Bargon<sup>2</sup>; Wolfgang Weinmann<sup>2</sup>; <sup>1</sup>*Applied Biosystems, Darmstadt, Germany*; <sup>2</sup>*Institute of Legal Medicine, Freiburg, Germany*; <sup>3</sup>*Institute of Forensic Medicine, Helsinki, Finland*
- ThPF 103 **Mass Spectrometric Identification of Designer Steroids;** Mario Thevis; Georg Opfermann; Wilhelm Schänzer; *Institute of Biochemistry, German Sport University, Cologne, Germany*
- ThPF 104 **Identification of Furs of Domestic Dog and Cat with MALDI-ToF Mass Spectrometry;** Klaus Hollemeyer<sup>1</sup>; Wolfgang Altmeyer<sup>2</sup>; Martin Resch<sup>3</sup>; <sup>1</sup>*Saarland University, Saarbruecken, Germany*; <sup>2</sup>*Gene-Facts, Saarbruecken, Germany*; <sup>3</sup>*Shimadzu Biotech, Duisburg, Germany*
- ThPF 105 **Assessment of a SNP Genotyping Assay Using APCI Quadrupole MS;** Valerie Cavett<sup>1</sup>; Robert D. English<sup>2</sup>; Brian A. Eckenrode<sup>1</sup>; Mark Wilson<sup>1</sup>; Bruce Budowle<sup>1</sup>; <sup>1</sup>*Federal Bureau of Investigation, Quantico, VA*; <sup>2</sup>*Oak Ridge Institute for Science and Education, Oak Ridge, TN*
- ThPF 106 **Mass Spectrometric Analysis of Ballpoint Dyes and Solvents on Paper and Its Application in Forensic Sciences;** Céline Weyermann; Werner Bouschen; César Costa Vera; Dieter Kirsch; Bernhard Spengler; *Institute of Inorganic and Analytical Chemistry, Giessen, Germany*
- ThPF 107 **Multiple Techniques for Qualitative and Quantitative Data Acquisition Using a Hybrid Quadrupole-Linear Ion Trap Mass Spectrometer;** Tanya Gamble<sup>1</sup>; Tania A. Sasaki<sup>2</sup>; Gary Impey<sup>1</sup>; Elliott B. Jones<sup>2</sup>; <sup>1</sup>*Applied Biosystems/MDS Sciex, Concord, ON, Canada*; <sup>2</sup>*Applied Biosystems, Foster City, CA*
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- INSTRUMENTATION: MASS ANALYZERS (TOF)**
- ThPG 108 **Miniaturized TOF-MS with New Reflector Design;** Andreas Uphoff; Tassilo Muskat<sup>2</sup>; Juergen Grotemeyer<sup>2</sup>; <sup>1</sup>*Institute of Biomedicine, University of Helsinki, Helsinki, Finland*; <sup>2</sup>*Institute for Physical Chemistry, University Kiel, Kiel, Germany*
- ThPG 109 **A Miniature MALDI-TOF Mass Spectrometer for the Analysis of High Molecular Weight Compounds;** Ben D. Gardner<sup>1</sup>; Sara C. McGrath<sup>1</sup>; Takahiro Harada<sup>2</sup>; Shin-ichi Iwamoto<sup>2</sup>; Robert J. Cotter<sup>1</sup>; <sup>1</sup>*The Johns Hopkins University School of Medicine, Baltimore, MD*; <sup>2</sup>*Shimadzu Corporation, Kyoto, Japan*
- ThPG 110 **TOF MS Instrumentation - Effective Tool for Laser Ablation Micro Synthesis and Simultaneous Analysis of Inorganic Clusters;** Josef Havel<sup>1</sup>; Ondrej Sedo<sup>1</sup>; Milan Alberti<sup>2</sup>; <sup>1</sup>*Dept. Anal. Chem., Masaryk University, Brno, Czech Republic*; <sup>2</sup>*Dept. Inorg. Chem., Masaryk University, Brno, Czech Republic*
- ThPG 111 **Molecular Dynamical simulation of Space-Charge Effect in a Time-of-Flight Spectrometry;** Hiroaki Miyagawa<sup>1</sup>; Yoshihiro F. Mizugai<sup>2</sup>; <sup>1</sup>*Tokyo Institute of Technology, Tokyo, Japan*; <sup>2</sup>*Sophia University, Tokyo, Japan*
- ThPG 112 **A Novel Technique to Increase the Mass Resolution and Accuracy of API-TOF instruments without extension of the effective flight path;** Oliver Raether<sup>12</sup>; Michael Schubert<sup>12</sup>; Carsten Stoermer<sup>12</sup>; Juergen Suetering<sup>12</sup>; Matthias Pelzing<sup>12</sup>; <sup>1</sup>*Bruker Daltonik GmbH, Bremen, Germany*; <sup>2</sup>*Bruker Daltonik GmbH, Leipzig, Germany*
- ThPG 113 **Characterization of a Novel Dual-Pressure-Region Collision Cell in a High-Performance 2D-Trap TOF**

- Mass Spectrometer**; David G. Welkie; V. Sergey Rakov; Craig M. Whitehouse; *Analytica of Branford, Inc., Branford, Ct*
- ThPG 114 **Accurate Mass Analysis of Small Molecules and Peptides with Electrospray Ionization – Time of Flight Mass Spectrometry**; Bill Russ; Ed Darland; Michael Flanagan; Ahmed Abdelsalam; John Fjeldsted; *Agilent Technologies, Santa Clara, CA*
- ThPG 115 **A Multi-Dimensional Mass Spectrometer (MDMS): Simultaneous Measurement of Fragmentation Ions from Every Precursor Ion**; Yang Wang; Yixin Zhu; David Mintline; David Kennedy; Houle Wang; *Michrom BioResources, Auburn, CA*
- ThPG 116 **Two-Channel Hadamard Transform Time-of-flight Mass Spectrometry**; Joel R Kimmel; Oliver Trapp; Ohkyu Yoon; Ignacio A Zuleta; Facundo M Fernandez; Richard N Zare; *Stanford University, Stanford, CA*
- ThPG 117 **A Novel Approach to Protein Identification: A Direct Comparison to Traditional Mass Spectrometric Techniques**; Therese Mckenna; Iain Campuzano; Mark Ritchie; Philip Young; Keith Richardson; Richard Denny; Christopher Jones; James Langridge; *Waters Corporation MS Technologies, Manchester, UK*
- ThPG 118 **Photon Ionization Time-of-Flight Mass Spectrometry for The Rapid Analysis of Aqueous Samples**; Harald Oser<sup>1</sup>; Steve E. Young<sup>1</sup>; Virginia Hafer<sup>2</sup>; Gregory Grist<sup>3</sup>; Michael J. Coggiola<sup>1</sup>; <sup>1</sup>*SRI International, Menlo Park, CA*; <sup>2</sup>*Wellesley College, Wellesley, MA*; <sup>3</sup>*San Francisco State University, San Francisco, CA*
- ThPG 119 **Effect of the Extraction Electric Field Strength in MALDI TOF/TOF on Molecular Ion Fragmentation at High Collision Energies**; Sergei A. Ilchenko; Robert J. Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*
- ThPG 120 **A Unification of Energy and Space Focusing Analysis in TOF MS**; Adam W McMahan; Dimitris Papanastasiou; *Manchester Metropolitan University, Manchester, UK*
- ThPG 121 **Towards Precision Time-of-Flight Mass Spectrometry of Slowed-Down Exotic Nuclei**; Wolfgang R Plass<sup>1</sup>; Timo Dickel<sup>1</sup>; Alexander F Dodonov<sup>2</sup>; Sergey A Eliseev<sup>1</sup>; Hans Geissel<sup>3</sup>; Gottfried Muenzenberg<sup>3</sup>; Juergen Neumayr<sup>4</sup>; Yuri N Novikov<sup>5</sup>; Martin Petrick<sup>1</sup>; Christoph Scheidenberger<sup>3</sup>; Peter Thiroff<sup>4</sup>; Zheng Wang<sup>1</sup>; <sup>1</sup>*Justus-Liebig-Universitaet, Giessen, Germany*; <sup>2</sup>*Russian Academy of Sciences, Chernogolovka, Russia*; <sup>3</sup>*Gesellschaft fuer Schwerionenforschung, Darmstadt, Germany*; <sup>4</sup>*Ludwig-Maximilians-Universitaet, Muenchen, Germany*; <sup>5</sup>*St. Petersburg Nuclear Physics Institute, Gatchina, Russia*
- ThPG 122 **Gas Chromatography with In-Line Time of Flight Mass Spectrometry Using a Shaped Field Buncher**; Vic C Parr; Mark D Mills; Steve P Thompson; *Scientific Analysis Instruments, Manchester, UK*
- ThPG 123 **Design of a Tandem Time-of-Flight Mass Spectrometer with a Multi-turn Time-of-Flight Mass Spectrometer and a Quadratic-Field Ion Mirror**; Michisato Toyoda; Anastassios E. Giannakopoulos; Alex W. Colburn; Peter J. Derrick; *University of Warwick, Coventry, UK*
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- ION ACTIVATION/DISSOCIATION**
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- ThPH 124 **Isomeric Organic Compounds Cationized by a Silyl Group Differentiated by Collision-Induced-Dissociation within Different Multipole Collision Cells**; Christopher Taormina<sup>1</sup>; Kevin J Kuchta<sup>2</sup>; Joseph J Grabowski<sup>1</sup>; <sup>1</sup>*University of Pittsburgh, Pittsburgh, PA*; <sup>2</sup>*ABB Inc. Extrel, Pittsburgh, PA*
- ThPH 125 **Mass Selected Multipole Storage Assisted Dissociation of Proteins in a Quadrupole-Linear Ion Trap-Time of Flight Mass Spectrometer**; David M Black; Philip M Remes; Gary L Glish; Takashi Baba; *University of North Carolina Chapel Hill, Chapel Hill, NC*
- ThPH 126 **The Study of N15 Ammonia Metabolism in Mosquitoes by Mass Spectrometry in Multiple-reaction Monitoring Mode: Fragmentation Mechanism and Metabolism**; Qingfen Zhang; Patricia Scaraffia; Krishtin A Herrmann; Vicki H. Wysocki; Michael Wells; *University of Arizona, Tucson, AZ*
- ThPH 127 **Residue Selective Fragmentation of Electrospray-Generated Ubiquitin Ions in a Time Dependent Process**; Takemichi Nakamura; Naoshi Dohmae; *RIKEN (Institute of Physical & Chemical Res.), Wako, Japan*
- ThPH 128 **Slow Ion Heating Conditions in Radio Frequency Ion Traps and Guides: Theory and Experimental Verification**; Aleksey V. Tolmachev; Andrey N. Vilkov; Bogdan Bogdanov; Ljiljana Paša-Tolic; Christophe D. Masselon; Richard D. Smith; *PNNL, Richland, WA*
- ThPH 129 **Charge-Remote Fragmentation (CRF) of Electrospray Ag(I) Cationized Methylene-Interrupted Polyunsaturated Fatty Acids**; Kwan-Ming Ng; Siu-Kwan Wo; Chun-Wai Tsang; *The Hong Kong Polytechnic University, Hong Kong, China*
- ThPH 130 **Comparing Mass Measurement Uncertainties in the Unusually Complex Product Ion Spectra of PSP Toxins**; Dietrich A. Volmer<sup>1</sup>; Lekha Sleno<sup>1</sup>; Stacey Owen<sup>1</sup>; Michael J. Chalmers<sup>2</sup>; Alan G. Marshall<sup>2</sup>; <sup>1</sup>*Institute for Marine Biosciences, Halifax, Canada*; <sup>2</sup>*National High Magnetic Field Laboratory, Tallahassee, FL*
- ThPH 131 **ICR with Alternative Activating Methods in the Study of Helical Peptide Structure by <sup>1</sup>H/<sup>2</sup>H Exchange**; Dalila Bensaddek<sup>1</sup>; Matthias Witt<sup>2</sup>; Andrew J. Doig<sup>1</sup>; Simon J. Gaskell<sup>1</sup>; <sup>1</sup>*UMIST, Manchester, UK*; <sup>2</sup>*Bruker Daltonics, Bremen, Germany*
- ThPH 132 **Conversion of Methanol to Formaldehyde Following CID of a Gas-Phase Zinc Complex Ion**; Michael J. Van Stipdonk; Winnie Chien; Giao Pham; Victor Anbalagan; *Wichita State University, Wichita, KS*
- ThPH 133 **Instrument Modification for Inducing Parent Ion Fragmentation by Electron Beam Excitation**; Hong Ji; Valery G. Voinov; Max L. Deinzer; Douglas F. Barofsky; *Oregon State University, Corvallis, OR*
- ThPH 134 **Comparison of Internal Energy Transfer in DIOS and in MALDI Using Small Thermometer Molecules**; Guanghong Luo<sup>1</sup>; Gary Siuzdak<sup>2</sup>; Akos Vertes<sup>1</sup>; <sup>1</sup>*George Washington University, Washington DC*; <sup>2</sup>*The Scripps Research Institute, La Jolla, CA*
- ThPH 135 **Fragmentation Mechanisms of Substituted 2,4,6-Pyrimidines by LC-MS/MS**; Marie Tysk-Rönnqvist; Gunnar Hagman; *AstraZeneca, Södertälje, Sweden*
- ThPH 136 **High Energy Excitation in FT-ICR MS/MS (SORI-RE)**; Karoly Vekey<sup>1</sup>; Laszlo Drahos<sup>1</sup>; Kristin Herrmann<sup>2</sup>; Arpad Somogyi<sup>2</sup>; <sup>1</sup>*Chemical Research Center, Budapest, Hungary*; <sup>2</sup>*University of Arizona, Tucson, AZ*
- ThPH 137 **MALDI In-Source Decay of Peptides Generates c<sup>++</sup>-Radical Ions N-Terminal to Proline Residues**; Thomas Koecher; Ake Engstroem; Roman Zubarev; *Uppsala University, Uppsala, Sweden*
- ThPH 138 **Sequential IRMPD of Ge and Ti Hypervalent Complexes: a Convenient Approach for the Gas-Phase Synthesis of Organometallic Anions**; Luciano A. Xavier<sup>1</sup>; Nelson H. Morgon<sup>2</sup>; Jose M. Riveros<sup>1</sup>; <sup>1</sup>*Institute of Chemistry, University of Sao Paulo, Sao Paulo, Brazil*; <sup>2</sup>*Institute of Chemistry, University of Campinas, Campinas, Brazil*
- ThPH 139 **Threshold Dissociation and Molecular Modeling of the Transition Metal Complexes of Flavonoids**; Junmei Zhang; Jeffrey Wilson; Jennifer S. Brodbelt; *University of Texas, Austin, TX*

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**LIPIDS: STRUCTURAL ANALYSIS**


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- ThPI 140 **Photospray Ionization and Tandem Mass Spectrometry of Wax Esters**; Robert M. Barkley; Robert C. Murphy; *University of Colorado Health Sciences Center, Denver, CO*
- ThPI 141 **Identification of Plasmalogen as A Major Phospholipid Component in Human Myocardium: A Study Using Two-Dimensional Electrospray Ionization Mass Spectrometry**; Richard W. Gross; Hua Cheng; Dana R. Abendschein; Xianlin Han; *Washington University School of Medicine, St. Louis, MO*
- ThPI 142 **Characterization of Two Unknown Sphingolipids from the Fruit Fly *Drosophila Melanogaster* by LC/ESI-Ion Trap Mass Spectrometry**; Xinyi Zhang<sup>1</sup>; Julie D. Saba<sup>2</sup>; Greg L. Harris<sup>3</sup>; Henrik Fyrst<sup>2</sup>; <sup>1</sup>*Bruker Daltonics Inc., Fremont, CA*; <sup>2</sup>*Children's Hospital Oakland Research Institute, Oakland, CA*; <sup>3</sup>*San Diego State University, San Diego, CA*
- ThPI 143 **Structural Determination of Free Radical Oxidation Products of Plasmalogen Glycerophosphocholine Containing Esterified Docosahexenoic Acid**; Karin A Zemski-Berry; Robert C Murphy; *National Jewish Medical Center, Denver, CO*
- ThPI 144 **Mass Spectrometry and Sample Preparation Combination for Characterization of Lipids A from Marine Bacteria**; Yury N. Elkin<sup>1</sup>; Bogdan A. Budnik<sup>1</sup>; Lothar Brecker<sup>2</sup>; Svetlana V. Tomshich<sup>3</sup>; Eugeny L. Nazarenko<sup>3</sup>; Peter O. O'Connor<sup>1</sup>; Catherine E. Costello<sup>1</sup>; <sup>1</sup>*Boston University School of Medicine, Boston, MA*; <sup>2</sup>*University of Viena, Viena, Austria*; <sup>3</sup>*Pacific Institute of Bioorganic Chemistry, Vladivostok, Russia*
- ThPI 145 **Optimization of TLC/HP-FTMS Method for Gangliosides Analyses**; Vera Ivleva; Bogdan A. Budnik; Peter B. O'Connor; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*
- ThPI 146 **A Search Tool for Lipid Identification from Mass Data**; Ryo Taguchi<sup>1</sup>; Toshiyuki Yamazaki<sup>1</sup>; Mayuko Ishida<sup>1</sup>; Toshiaki Houjou<sup>1</sup>; Masayoshi Imagawa<sup>2</sup>; Takao Shimizu<sup>1</sup>; <sup>1</sup>*Graduate School of Medicine, The Univ. of Tokyo, Tokyo, Japan*; <sup>2</sup>*Pharmaceutical Sciences, Nagoya City Univ., Nagoya, Japan*
- ThPI 147 **Isolation of Molecular Species of Lactosylceramide. Confirmation of the Fatty Acid Moiety and Long Chain Base Using LC/ESI-MS**; Naoko Kaga; Saiko Kazuno; Hikari Taka; Kazuhisa Iwabuchi; Kimie Murayama; *Juntendo University Graduate School of Medicine, Bunkyo-ku, Tokyo, Japan*
- ThPI 148 **Negative Ion Phospholipid Fragmentation: a Mechanistic and Regiochemical Study**; Bethny Morrissey; Todd W Mitchell; Stephen G Pyne; Alison T Ung; Stephen J Blanksby; *University of Wollongong, Wollongong, Australia*
- ThPI 149 **Analysis of Lipid A from *Pseudomonas aeruginosa* by Tandem Mass Spectrometry**; Geoffrey Madalinski<sup>1</sup>; Françoise Fournier<sup>2</sup>; Jean-Claude Tabet<sup>2</sup>; <sup>1</sup>*CEB, Vert-le-Petit, France*; <sup>2</sup>*LCSOB - UMR7613 - Université Pierre et Marie Curie, Paris, France*
- ThPI 150 **Identification of Molecular Species of Phospholipids by Normal and Reverse Phase Cap-LC/ESIMS/MS**; Toshiaki Houjou<sup>2</sup>; Kotoko Yamatani<sup>1</sup>; Masayoshi Imagawa<sup>2</sup>; Takao Shimizu<sup>1</sup>; Ryo Taguchi<sup>1</sup>; <sup>1</sup>*Graduate School of Medicine, The University of Tokyo, Japan*; <sup>2</sup>*Faculty of Pharmaceutical Science, Nagoya City University, Japan*
- ThPI 151 **Characterization of Sophorolipids Produced by *Rhodotorula bogoriensis* and their Lipase-Mediated Rearrangement Products**; Alberto Nuñez; Richard D. Ashby; Thomas A. Foglia; Daniel Solaiman; *USDA-ARS-ERRC, Wyndmoor, PA*
- ThPI 152 **Investigation of Cu and Fe Cationization for the Characterization of Fatty Acids by Electrospray Mass Spectrometry**; Anne Riu; Carlos Afonso; Françoise Fournier; Ying Xu; Jean-Claude Tabet; *CNRS UMR7613, Paris, France*
- ThPI 153 **Controlling the Degree of Head Group Fragmentation of Phospholipids in Electrospray Ionization Mass Spectrometry**; Timothy J Garrett; Matthew H Merves; Richard A Yost; *University of Florida, Gainesville, FL*
- ThPI 154 **Study of Single Micron Sized Phospholipid Aerosol Particles by Aerosol Mass Spectrometry: Influence of Laser Fluence and Matrix Addition**; Abneesh Srivastava; Paul T. Steele; Maurice E. Pitesky; Herb J. Tobias; David P. Ferguson; Joanne M. Horn; Eric E. Gard; Matthias Frank; *Lawrence Livermore National Laboratory, Livermore, CA*
- ThPI 155 **Structure Determination of Glucosylceramides Isolated from Egg of Starfish *Asterias amurensis***; Young Hwan Kim<sup>1</sup>; Mihee Kim<sup>1</sup>; Jung-Rae Rho<sup>2</sup>; <sup>1</sup>*Korea Basic Science Institute, Daejeon, South Korea*; <sup>2</sup>*Kunsan National University, Kunsan, South Korea*
- ThPI 156 **Detection of Lipid Components in Cytochrome c Oxidase from Rhodobacter Sphaeroides During Purification and Crystallization Process by MALDI-TOF Mass Spectrometry**; Xi Zhang<sup>1</sup>; Ling Qin<sup>2</sup>; Carrie Hiser<sup>2</sup>; John Allison<sup>1</sup>; Shelagh Ferguson-Miller<sup>2</sup>; <sup>1</sup>*Department of Chemistry, East Lansing, MI*; <sup>2</sup>*Department of Biochemistry, East Lansing, MI*
- ThPI 157 **Lipidomics of Human Stratum Corneum Ceramides: Online LC/APCI-MS versus Offline HPTLC/ESI-MS/MS**; Klaus Raitth; Hany Farwanah; Reinhard Neubert; *Martin Luther University, Halle, Germany*
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- ThPJ 159 **Quantitation and Improved de Novo Sequencing of Proteins by Isotopic N-Terminal Labeling of Peptides with a Multifunctional Charged Tag**; Weibin Chen; Peter J. Lee; Daniel B. Wall; Ying-Qing Yu; John C. Gebler; *Waters Corporation, Milford, MA*
- ThPJ 160 **Smart Nanodispensing - Reliable Nanoliter Fluid Handling for MALDI Applications**; Carsten Haber<sup>1,2</sup>; Marc Boillat<sup>1,2</sup>; Bart van der Schoot<sup>1,2</sup>; <sup>1</sup>*Seyonic SA, Cohasset, MA*; <sup>2</sup>*Seyonic SA, Neuchatel, Switzerland*
- ThPJ 161 **New Features of 2,5-Dihydroxybenzoic Acid Butylamine and Other Ionic Liquid Matrices Applied to the MALDI MS analysis of biomolecules**; Marko Mank; Bernd Stahl; Guenther Boehm; *Numico Research Germany, Friedrichsdorf, Germany*
- ThPJ 162 **A New Approach of Liquid Sample Handling on MALDI Plates Enabling Advanced High Throughput Proteomics Applications**; Angelika Muscate-Magnussen<sup>1</sup>; Xiangping Zhu<sup>2</sup>; Joachim Wesener<sup>3</sup>; Holger Röhl<sup>1</sup>; Philipp Harder<sup>1</sup>; Karsten Reihls<sup>1</sup>; <sup>1</sup>*SuNyx GmbH, Leverkusen, Germany*; <sup>2</sup>*Applied BioSystems, Framingham, MA*; <sup>3</sup>*Bayer Industry Services, Leverkusen, Germany*
- ThPJ 163 **Introduction of Microwave-Assisted Denaturing (MAD) for H/D Exchange Monitored by MALDI**; Charles Ngowe; Xue Li; Jack Watson; *Michigan State University, East Lansing, MI*

- ThPJ 164 **MALDI-TOF/MS Assay of a Single-Cell under Interaction with a Fibroblast Cell Layer;** Masakazu Shimizu; Noriyuki Ojima; Yasuyuki Hirakawa; Tsutomu Masujima; *Hiroshima University, Hiroshima, Japan*
- ThPJ 165 **Development of a Method to Analyze Monolayer Cells by MALDI-TOFMS - Applications for Photodynamic Therapy -;** Natacha Lourette<sup>1</sup>; Benoît Maunil<sup>1</sup>; Lina Bezdetsnaya<sup>2</sup>; François Guillemin<sup>2</sup>; Jean-François Muller<sup>1</sup>; <sup>1</sup>LSMCL-Université de Metz, Metz, France; <sup>2</sup>Centre Alexis Vautrin, Nancy, France
- ThPJ 166 **Chemistry Assisted Fragmentation Combined with MDLC-MALDI-MS/MS for Improved De Novo Sequencing of Tryptic Peptides;** Anna Edman Örlefors; Henrik Wadensten; John Flensburg; Maria Liminga; Anders Tangen; *Amersham Biosciences, Uppsala, Sweden*
- ThPJ 167 **Concentrating Samples Directly on Target Plate – A New MALDI Sample Preparation Method;** Kevin Chen<sup>1</sup>; Neia Illingworth<sup>1</sup>; Guannan Kuang<sup>2</sup>; Dan Sexton<sup>2</sup>; Bill Galbraith<sup>1</sup>; Guy Page<sup>1</sup>; <sup>1</sup>BD Biosciences Discovery Labware, Bedford, MA; <sup>2</sup>Dyax Corporation, Cambridge, MA
- ThPJ 168 **Are Cleavable Detergents Good Detergents? A Comparison Between Cleavable and Commercial Detergents;** Jeremy L. Norris; Ned A. Porter; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- ThPJ 169 **Optimized Sample Preparation in MALDI Mass Spectrometry as a Strategy to Improve Peptide Mass Fingerprinting Matches;** Neerav D. Padliya; Troy D. Wood; *University at Buffalo, State University of New York, Buffalo, NY*
- ThPJ 170 **Ionic-liquid Matrices for Peptide Quantification and for Analysis of Lipids by MALDI-TOF MS;** Ying Li; Fong-fu Hsu; Michael L. Gross; *Washington University, St. Louis, MO*
- ThPJ 171 **Optimization of the MALDI Sample Preparation Protocol for the Determination of Glycanheterogeneities of Intact Glycoproteins;** Martina Marchetti; Günter Allmaier; *Vienna University of Technology, Vienna, Austria*
- ThPJ 172 **A Rapid and Improved Chemical Method for Deglycosylation of Glycoproteins;** Asgar Electricwala<sup>1</sup>; Ian Wright<sup>1</sup>; Elner B. Rathbone<sup>1</sup>; Steven L. Cockrill<sup>2</sup>; <sup>1</sup>Sigma-Aldrich Corporation, Poole, United Kingdom; <sup>2</sup>Sigma-Aldrich Corporation, Saint Louis, MO
- ThPJ 173 **Improved Sample Preparation Strategies for MALDI-MS of Proteins, Glycans and Lipids;** Steven L. Cohen; Xiarong Sharon Wei; *Merck Research Laboratories, West Point, PA*
- ThPJ 174 **Identification of Processing Sites in Neuropeptides Employing Microaffinity Columns and MALDI-MS;** Wolfgang H. Fischer; Rebecca Ross; Minkyu Park; Chien Li; Cynthia Donaldson; Joan Vaughan; *The Salk Institute, La Jolla, CA*
- ThPJ 175 **An Inexpensive Separation and MALDI Deposition Device for the Analysis of Proteins Obtained from 1-D SDS-PAGE;** Vincent C. Chen<sup>1</sup>; Ximbo Li<sup>1</sup>; Keding Cheng<sup>2</sup>; Werner Ens<sup>1</sup>; Kenneth G. Standing<sup>1</sup>; James I. Nagy<sup>1</sup>; Helene Perreault<sup>1</sup>; <sup>1</sup>University of Manitoba, Winnipeg, Canada; <sup>2</sup>Manitoba Center for Proteomics, Winnipeg, Canada
- ThPJ 176 **MALDI-TOF MS Analysis of Proteins by an Enhanced, Rapid Guanidination Procedure;** Steven L. Cockrill; Kelly L. Foster; Justin Wildsmith; April R. Goodrich; John G. Dapron; Tom C. Hassell; Graham B.I. Scott; *Sigma-Aldrich Corporation, Saint Louis, MO*
- ThPJ 177 **Single-Use Prestructured and Prespotted Plastic Chips as Sample Supports for Axial MALDI-TOF MS;** Martin Schuerenberg<sup>1</sup>; Johan Gobom<sup>2</sup>; <sup>1</sup>Bruker Daltonik GmbH, Bremen, Germany; <sup>2</sup>Max-Planck-Institute for Molecular Genetics, Berlin, Germany
- ThPJ 178 **Performance of Single-Use Inserts for High-Throughput MALDI MS and MS/MS Applications;** Todd A Taylor; Timothy E Hutchins; Hari Nair; Igor Smirnov; Cheryl Murphy; Richard Perkins; Philip J Savickas; Robert McCarthy; Andrew J Tomlinson; *Applied Biosystems, Framingham, MA*
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- METABOLISM STUDIES: QUANTITATION**
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- ThPK 179 **Simultaneous Determination of a Novel Synthetic Triterpenoid Derivative (CDDO-Im) and its Metabolites using LC/MS/MS;** Greg S Gorman<sup>1</sup>; Lori U Coward<sup>1</sup>; Lara A Greene<sup>1</sup>; Corena Kerstner-Wood<sup>1</sup>; Patricia E Noker<sup>1</sup>; John G Page<sup>1</sup>; Lee Jia<sup>2</sup>; Karen M Schweikart<sup>2</sup>; <sup>1</sup>Southern Research Institute, Birmingham, AL; <sup>2</sup>National Cancer Institute, Bethesda, MD
- ThPK 180 **Simultaneous Determination of ET-743 and One of Its Major Metabolites, ET-729, in Mouse Plasma by Liquid Chromatography/Tandem Mass Spectrometry;** Jianming Yin<sup>1</sup>; Pablo Aviles<sup>2</sup>; Carl Ly<sup>1</sup>; William Lee<sup>1</sup>; Maria Jose Guillen<sup>2</sup>; Simon Munt<sup>2</sup>; Carmen Cuevas Merchante<sup>2</sup>; Glynn Faircloth<sup>1</sup>; <sup>1</sup>PharmaMar USA, Inc., Cambridge, MA; <sup>2</sup>PharmaMar S.A, Madrid, Spain
- ThPK 181 **Determination of NKP608 and Its Metabolites Using LC-APCI-MS/MS;** Cindy Chen; Tapan K. Majumdar; Shari Wu; Francis L. S. Tse; *Novartis, East Hanover, NJ*
- ThPK 182 **Simultaneous Determination of Glycyrrhizin and Its Major Metabolite Glycyrrhetic Acid in Human Plasma by LC-MS/MS;** Zhongping John Lin<sup>1</sup>; Sheng-Xiang Qiu<sup>2</sup>; Linyee Shum<sup>1</sup>; <sup>1</sup>Avantix Laboratories, Inc., New Castle, DE; <sup>2</sup>Department of Chemistry, Washington University, St. Louis, MO
- ThPK 183 **A Rapid and Sensitive LC-MS/MS Method for the Determination of Amonafide and N-Acetyl Amonafide in Human Plasma;** G. McRae<sup>1</sup>; J. Bouchard<sup>1</sup>; K. Goodman<sup>2</sup>; M. Harvey<sup>3</sup>; <sup>1</sup>CTBR Bio-Research, Senneville, Quebec, Canada; <sup>2</sup>Xanthus Life Sciences Inc., Cambridge, MA, USA; <sup>3</sup>Xanthus Life Sciences, Montreal, PQ, Canada
- ThPK 184 **A Simple and Improved LC-MS/MS Method for the Simultaneous Determination of Codeine, Morphine and Their Major Metabolites in Biological Matrices;** Maria-A. Vindigni; The-Minh Tu; Hélène Maurice; Heli Parenteau; Sophie Dautrety; Julie Ducharme; *AstraZeneca R&D Montreal, Montreal, Canada*
- ThPK 185 **Extraction, Resolution, and Detection of Testosterone Glucoside and Dihydrotestosterone Glucoside in Cynomolgus Monkey Serum by LC-MS/MS;** Jeffry B Plomley<sup>1</sup>; Garnet McRae<sup>1</sup>; Nathalie Proulx<sup>1</sup>; Rob Derrick<sup>2</sup>; <sup>1</sup>CTBR Bio-Research, Senneville, QC, Canada; <sup>2</sup>Strakan Pharmaceuticals Ltd, Buckholm Mill, Galashiels, Scotland
- ThPK 186 **Quantitation of Prostamides and Anandamide in Mouse Tissues Using HPLC-Tandem Mass Spectrometry Methods;** Jinsong Ni; Allan Weber; John Ling; David Woodward; Diane Tang-Liu; Andrew Acheampong; *Allergan, Irvine, CA*
- ThPK 187 **Specific and Sensitive Quantitative Methods for the Determination of Salcatonin in Human Biological Matrices by  $\mu$ LCMS;** Mike Aguiar; Robert Masse; Bernard F. Gibbs; *MDS Pharma Services, Montreal, Canada*
- ThPK 188 **Determination of Cellular Uptake of Antineoplastic Benzyl Styryl Sulfone Analogs in Various Tumor Cell Cultures;** Shouxun Zhao<sup>1</sup>; John Roboz<sup>2</sup>; Jian-Dong Jiang<sup>1</sup>; Yanling Wang<sup>1</sup>; Stanley C. Bell<sup>2</sup>; Premkumar Reddy<sup>3</sup>; James F Holland<sup>1</sup>; <sup>1</sup>Mount Sinai School of Medicine, New York, NY; <sup>2</sup>Onconova Therapeutics, Inc., Larenceville, NJ; <sup>3</sup>Fels Inst. Cancer Res., Temple Univ., Philadelphia, PA



- ThPK 189 **A Liquid Chromatographic-Electrospray Ionization-Tandem Mass Spectrometric Method for Determination of Quetiapine and Its Application to in vitro Metabolism**; Yan Chang; Shen-Nan Lin; David E. Moody; *University of Utah, Salt Lake City, UT*
- ThPK 190 **Development of an HPLC/MS/MS Bioanalytical Method for the Quantitative Analysis of a Polypeptide Proteinase Inhibitor from Plasma**; Shane R Needham<sup>1</sup>; Binying Ye<sup>1</sup>; Mike T Pearson<sup>1</sup>; Judy Fox<sup>2</sup>; <sup>1</sup>*Alturas Analytics, Inc., Moscow, ID*; <sup>2</sup>*Genencor International, Palo Alto, CA*
- ThPK 191 **Determination of Capecitabine, an Antineoplastic Fluoropyrimidine Carbamate, and Three Metabolites by LC/MS/MS in Human Plasma**; Dino Cicci; John Simpson; Rudolf Guilbaud; *MDS Pharma Services, Montreal, QC, Canada*
- ThPK 192 **Simultaneous Analytical Method for the Determination of TCH346 and Four Metabolites in Human Plasma and in Human Urine by LC-MS/MS**; Hisanori Hara<sup>1</sup>; Ulirke Pfaar<sup>2</sup>; Markus Trunzer<sup>2</sup>; Hans-Peter Gschwind<sup>2</sup>; Takashi Uchimura<sup>1</sup>; Naotsugu Akashi<sup>1</sup>; Tomoyoshi Naganuma<sup>1</sup>; Machiko Iino<sup>1</sup>; Tetsushi Aizawa<sup>1</sup>; Yusuke Nagae<sup>1</sup>; Naoki Masuda<sup>1</sup>; <sup>1</sup>*Novartis Pharma K.K., Tsukuba, Japan*; <sup>2</sup>*Novartis Pharma AG, Basel, Switzerland*
- ThPK 193 **Metabolite Profiling Utilizing an In-Line Electrochemical System for LC/MS**; Byron Kieser<sup>1</sup>; Gary Impey<sup>1</sup>; David F. Meyer<sup>2</sup>; Doina Caraiman<sup>1</sup>; Paul Gamache<sup>2</sup>; <sup>1</sup>*Applied Biosystems/MDS Sciex, Concord, ON Canada*; <sup>2</sup>*ESA Inc., Chelmsford, MA*
- ThPK 194 **Sensitive Determination of Beraprost in Human Plasma by Use of Automated 96-Well SPE and LC-MS/MS**; Hee Joo Lee<sup>2</sup>; Kyu Young Chang<sup>1</sup>; Moon Sun Jang<sup>1</sup>; Ye-Rie Lee<sup>2</sup>; Kyung Ryul Lee<sup>2</sup>; Hohyun Kim<sup>2</sup>; <sup>1</sup>*BioCore Co., Ltd., Seoul, South Korea*; <sup>2</sup>*Seoul Medical Science Institute (SCL), Seoul, South Korea*
- ThPK 195 **High-Throughput Automated 96-Well Solid-Phase Extraction and Liquid Chromatography-Tandem Mass Spectrometric Analysis of Erdosteine in Human Plasma**; Kyu Young Chang<sup>2</sup>; Chang Hun Park<sup>2</sup>; Moon Sun Jang<sup>2</sup>; Hee Joo Lee<sup>2</sup>; Kyung Ryul Lee<sup>1</sup>; Hohyun Kim<sup>1</sup>; <sup>1</sup>*Seoul Medical Science Institute (SCL), Seoul, South Korea*; <sup>2</sup>*BioCore Co., Ltd., Seoul, South Korea*
- ThPK 196 **LC/MS/MS Method Development on Simultaneous Determination of MS-275 and its Metabolites in Rat Plasma and Urine**; Jeff Gillespie; Xuejun Peng; Zhiyun Jin; Roussen Pascal; James J Wang; *MethylGene Inc., Montreal, PQ, Canada*
- ThPK 197 **Quantitation of the HIV-Protease Inhibitors (PIs) Atazanavir (ATV), Ritonavir (RTV) and Lopinavir (LPV) in Human Plasma by LC/MS**; Linge Li; Jennifer King; Edward Acosta; *University of Alabama at Birmingham, Birmingham, AL*
- ThPK 198 **Norepinephrine Transporter Mediated 4-(4-(dimethylamino)styril)-N-methyl-pyridinium (ASP<sup>+</sup>) Accumulation in HEK-293 Cells Monitored by LC-MS/MS**; M. Lisa Manier; Joel W. Schwartz; David L. Hachey; Louis J. DeFelice; *Vanderbilt University, Nashville, TN*
- ThPK 199 **Overlapping Dual-Range Strategy for LC/MS/MS Methods Supporting Drug Development**; Girish S. Gudi; Enaksha R. Wickremsinhe; John H. Mullen; *Eli Lilly & Co., Indianapolis, IN*
- ThPK 200 **The Development of a 1.00 pg/ml Robust Analytical Procedure to Support Microdosing Studies**; Anna Akrami; Shubhada Kulkarni; Elizabeth Williams; Craig Marshall; Beth Tominey; Bernd Bruenner; Keyang Xu; John Laycock; Julie Flynn; Krys Miller; *Amgen Inc., Thousand Oaks, CA*
- ThPK 201 **Quantitative Analysis of 9-(2'-phosphonomethoxyethyl)adenine (Adefovir) and its Phosphorylated Anabolites in HepG2 Cells by Ion Pairing LC/MS/MS**; Loren Y Olson; Adrian S Ray; Jennifer E Vela; Alan X Huang; Lori H Takahashi; Arnold Fridland; *Gilead Science Inc, Foster City, CA*
- ThPK 202 **An Electrospray LC-MS/MS Method for the Quantitative Analysis of SR141716 and <sup>13</sup>C<sub>6</sub>-SR141716 in Human Plasma Following a SPE Disk Extraction**; Rhoda Torres; Regina Burton; Brian Folk; John Newton; Donald Smallwood; *Sanofi-Synthelabo Research, Malvern, PA*
- ThPK 203 **Quantitative Determination of Three Important Polyamines in MEL Cells by Atmospheric Pressure Chemical Ionization-Mass Spectrometry (APCI-MS)**; Jing Yuan; Xiaoyi Hu; Jim Blankenship; O. David Sparkman; Patrick R. Jones; *University of the Pacific, Stockton, CA*
- ThPK 204 **The Evolution of a Method from HPLC/UV, to HPLC/MS/MS, to Open Access HPLC/MS for Quantitation of CYP450 Metabolites**; C. Michelle Dunaway; Marcia M. Ketcha; John R. Entwistle; John A. Troutman; Kevin T. Rockich; Timothy R. Baker; *Procter & Gamble Pharmaceuticals, Mason, OH*
- ThPK 205 **Specific, Sensitive and Accurate LC-MS/MS Method for the Measurement of Puerarin in Rat Serum**; Jeevan K. Prasain; Kenneth Jones; Ray Moore; Ning Peng; J. Michael Wyss; Stephen Barnes; *University of Alabama at Birmingham, Birmingham, AL*
- ThPK 206 **Determination of MPL Induced Tyrosine Aminotransferase Level Changes in Rat Liver Using Liquid Chromatography Tandem Mass Spectrometry and ICAT**; Jun Qu; Robert M Straubinger; William J. Jusko; Toufigh Gordi; *University at Buffalo, Amherst, NY*
- ThPK 207 **Simultaneous Determination of Sofalcone and Its Metabolite in Human Plasma by Liquid Chromatography-Tandem Mass Spectrometry**; Moon Sun Jang<sup>2</sup>; Jung-Ae Lee<sup>2</sup>; Hee Joo Lee<sup>1</sup>; Kyung Ryul Lee<sup>1</sup>; Hohyun Kim<sup>1</sup>; <sup>1</sup>*Seoul Medical Science Institute (SCL), Seoul, South Korea*; <sup>2</sup>*BioCore Co., Ltd., Seoul, South Korea*
- ThPK 208 **Determination of Granisetron, an Antinauseant and Antiemetic Agent, by LC/MS/MS in Human Plasma**; Fleur Gaudette Gaudette; Paule-Emilie Groleau; John Simpson; Rudolf Guilbaud; *MDS Pharma Services, Montreal, QC, Canada*
- ThPK 209 **Quantification of 5-Fluorouracil in Human Plasma by LC/MS/MS**; Michael S. Alexander; Michael Nelson; Ryan Minikis; John W. Dolan; Lori D. Payne; *BASi Northwest Laboratory, McMinnville, OR*
- ThPK 210 **Human Kinetics of Environmental Level of 13C<sub>2</sub>-Dichloroacetate as Determined by GC-MS/MS in ECNCI Mode**; Minghong Jia; George N. Henderson; Paul A. Chadik; Richard A. Yost; Peter W. Stacpoole; *University of Florida, Gainesville, FL*
- ThPK 211 **Quantitative Determination of Calcium L-Threonate in Human Plasma and Urine with LC-MS/MS and TI-MS**; Hongyun Wang; Ji Jiang; Pei Hu; *Peking Union Medical College Hospital, Beijing, China*
- ThPK 212 **Quantification of a raf Antisense Oligonucleotide (rafAON) by LC-MS/MS in Biological Matrices Containing Liposome-Entrapped rafAON (LErafAON-ETU)**; Jenifer L. Johnson; Wei Guo; June Zang; Sumsullah Khan; Sofia Bardin; Ateeq Ahmad; Jeffrey X. Duggan; Imran Ahmad; *NeoPharm, Inc., Waukegan, IL*
- ThPK 213 **Quantitative Analysis Using LC-MS-MS of Sulindac in Plasma and Tissue**; Long Yuan; Sool Yeon Cho; Richard

- B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*
- ThPK 214 **Analysis of Nitrofurantoin Metabolites in Poultry Muscles Using Tandem LC/MS/MS System;** Daniel T. Lebre<sup>1</sup>; Mateus G. Campos<sup>1</sup>; Claudia Stringher<sup>1</sup>; Alexandre Wang<sup>1</sup>; Pedro Y. Sugueta<sup>2</sup>; Valéria C. Rodrigues<sup>2</sup>; José L. Donato<sup>3</sup>; Mauro Sucupira<sup>3</sup>; Jane K. Finzi<sup>3</sup>; Gilberto De Nucci<sup>3</sup>; <sup>1</sup>*Applied Biosystems do Brasil, Sao Paulo, SP, Brazil*; <sup>2</sup>*Sadia S.A., Sao Paulo, SP, Brazil*; <sup>3</sup>*Galeno Research Unit, Campinas, SP, Brazil*
- ThPK 215 **LC-MS-MS Characterization of Bergamottin Exposure in Humans: The Key to Assessment of Grapefruit Juice-Drug Interactions;** Chongwoo Yu; Theunis C. Goosen; John Hollembaek; J. Andrew Williams; Lucinda H. Cohen; *Pfizer Global Research & Development, Ann Arbor, MI*
- ThPK 216 **Determination of Paclitaxel(Taxol) and Docetaxel in Human Serum and Human Plasma by LC/MS/MS;** Sherwin Jiang; Robert Harman; Daniel Meyer; Nancy McAleer; Yongdong Zhu; Kumar Ramu; Benjamin M. Chien; *Quest Pharmaceutical Services, Newark, DE*
- ThPK 217 **Development of an LC/MS/MS Analytical Method to Determine ABT-224 and ABT-743 in Dog Plasma Sample;** Julie Y. Zhou; Brendan A. Swaine; Grace Kim; Naxing Xu; Min Chang; Tawakol El-Shourbagy; *Abbott Laboratories, Abbott Park, IL*
- ThPK 218 **Determination of AZT and 3TC in Maternal Plasma, Amniotic Fluid, Fetal and Placental Tissues by LC-MS-MS;** Michael G Bartlett; Yazen Alnouti; Catherine A White; *University of Georgia, Athens, GA*
- ThPK 219 **LC-ES/MS/MS Determination of Acrylamide Toxicokinetics and DNA Adduct Formation in Mice;** Mona I. Churchwell; L. Patrice McDaniel; Nathan C. Twaddle; Daniel R. Doerge; *Nat Ctr Toxicol Res, Jefferson, AR*
- ThPK 220 **Sensitive and Selective LC/MS/MS Method for Determination of Endogenous Polyols in Human Nerve Tissues;** Hairui Liang; Rodger Foltz; Patrick Bennett; *Tandem Labs, A Division of NWT Inc., Salt Lake City, Utah*
- ThPK 221 **Simultaneous Determination of Aprepitant and Two Metabolites in Human Plasma by High-Performance Liquid Chromatography with Tandem Mass Spectrometric Detection;** Cynthia M. Chavez-Eng; Marvin L. Constanzer; Bogdan K. Matuszewski; *Merck & Co., West Point, PA*
- ThPK 222 **Determination of Nelfinavir and its metabolite M-8 in Human Plasma by LC/MS/MS;** Jerry Cao; Jason Lopez; Yongdong Zhu; Kumar Ramu; Benjamin M. Chien; *Quest Pharmaceutical Services, Newark, DE*
- ThPK 223 **Direct Analysis of Drugs and Metabolites in Bile by LC/MS System Using Methylcellulose - Immobilized Cation Exchange Pretreatment Column;** Satoshi Yamaki<sup>1</sup>; Takahisa Sakaguchi<sup>2</sup>; Eiichi Yamamoto<sup>2</sup>; Ikuro Kushida<sup>2</sup>; Takashi Kajima<sup>2</sup>; Tomio Fujita<sup>1</sup>; Junko Iida<sup>1</sup>; Neil Loftus<sup>3</sup>; Naoki Asakawa<sup>2</sup>; <sup>1</sup>*Shimadzu Co., Kyoto, Japan*; <sup>2</sup>*Eizai Co., Ibaraki, Japan*; <sup>3</sup>*Shimadzu Biotech, Manchester, UK*
- ThPK 224 **Blood-Brain Barrier Permeability of the Natural Product 23-epi-26-Deoxyactein from Black Cohosh (*Cimicifuga racemosa*);** Yan Pang; Yongmei Li; Wenzhong Liang; Daniel S. Fabricant; Shao-nong Chen; Richard B. van Breemen; *University of Illinois, College of Pharmacy, Chicago, IL*
- ThPK 225 **LC/MS/MS Tissue Quantitation of Docetaxel to Support Target Organ Penetration Studies;** Rick L. Hamler; Yongdong Zhu; Kumar Ramu; Benjamin M. Chien; *Quest Pharmaceutical Services, Newark, DE*
- ThPK 226 **Simultaneously Measuring Drug Metabolic Stability and Identifying its Metabolites Using HPLC/linear-ion-trap Mass Spectrometry;** Alicia (Yinghua) Du; Elliott Jones; Tania Sasaki; Ling Chen; *Applied Biosystems, Foster City, CA*
- ThPK 227 **A Novel On-line Filtering and Extraction System for Turbulent Flow Chromatography (TFC) MS/MS Quantitation;** Dahai Dong; Ron Kong; Kimloan Nguyen; *Synaptic Pharmaceutical Corporation. A Lundbeck Co, Paramus, NJ*
- ThPK 228 **Achieving High Sensitivity (20 pg/mL) for an Acidic Analyte in Negative Ion LC/MS/MS Mode Using an Acidic Mobile Phase;** David J. Humphries; Lennon H. McKendry; Kenneth J. Ruterbories; *Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN*
- ThPK 229 **Electrospray LC-MS/MS Method for the Quantitative Analysis of the Cannabinoid CB1 Receptor Antagonist, Rimonabant, in Plasma Following a Protein Precipitation;** Theresa R. Moran; Brian M. Folk; Piper Iorio-Price; Nick Pimlett; Regina Burton; *Sanofi-Synthelabo Research, Malvern, PA*
- ThPK 230 **A LC-MS Method for Quantitation of 4-Phenylbutyrate and Its Metabolites in Biological Samples;** George N. Henderson<sup>1</sup>; Minghong Jia<sup>1</sup>; Lambert C. M. Ngoka<sup>2</sup>; Mark L. rantly<sup>1</sup>; <sup>1</sup>*University of Florida, Gainesville, FL*; <sup>2</sup>*Virginia Commonwealth University, Richmond, VA*
- ThPK 231 **Quantitative Determination of Norastemizole in Human Plasma by Using LC-MS/MS;** Yufang Hu; Bei Hu; Ji Jiang; *Peking Union Medical College Hospital, Beijing, China*
- ThPK 232 **Rapid LC/MS Quantitation of Desmosine and Isodesmosine to Determine Elastin Content in Mouse Aorta Tissue Hydrolysates;** Taegen P. Clary; Richard Fitch; Jun Shen; Xue Ge; Ying Cheng; Babu Subramanyam; Jih-Lie Tseng; *Berlex Biosciences, Richmond, CA*
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- MULTISTAGE CHROMATOGRAPHY**
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- ThPL 233 **Monolithic Capillary Columns in 2D-LC ESI MS Proteomics;** Alexander R. Ivanov *Harvard School of Public Health, Boston, MA*
- ThPL 234 **Experimental Measurement of the Ion Intensity Time Profile in Response to Rapid Stepwise CV Changes in FAIMS;** Roger Guevremont; Govindanunny Thekkadath; Randy W Purves; Beata M Kolakowski; Ragnar G Dworschak; *Ionalytics Corporation, Ottawa, ON, Canada*
- ThPL 235 **Overlapped Protein Digest Analysis Using Multiple nanospray Columns on a Microchip;** Bernd Glatz<sup>1,2</sup>; Paul C. Goodley<sup>1,2</sup>; Karsten Kraiczek<sup>1,2</sup>; Patric Hoerth<sup>1,2</sup>; Martin Vollmer<sup>1,2</sup>; <sup>1</sup>*Agilent Technologies, Waldbronn, Germany*; <sup>2</sup>*Agilent Technologies, Santa Clara, CA*
- ThPL 236 **Two-Dimension LC/LC/MS for Characterization of Therapeutic Antibodies for Pharmaceuticals;** Andrew C. Nichols; Grace C. Chu; Sururat Bamigba; Pavel V. Bondarenko; *Amgen, Thousand Oaks, CA*
- ThPL 237 **Automated Two-Dimensional Nanocapillary Liquid Chromatography Interfaced to Electrospray Ionisation Mass Spectrometry. Application to the Proteomes of Pancreas and Acidocalcisomes;** Jenny Samskog<sup>1</sup>; Marcela Ferella<sup>2</sup>; Theres Jägerbrink<sup>1</sup>; Björn Andersson<sup>2</sup>; Hans Jörnvall<sup>1</sup>; <sup>1</sup>*Karolinska Institutet/MBB, Stockholm, Sweden*; <sup>2</sup>*Karolinska Institutet/CGB, Stockholm, Sweden*
- ThPL 238 **Comprehensive 2-Dimensional Gas Chromatography Coupled to a Time-of-Flight Mass Spectrometer for Broad Spectrum Organic Analysis;** Stefan Scherer; Hunter Waite; Bruce Block; Richard Sacks; Megan McGuigan; Mark Libardoni; PT Stevens; Ernest

Hasselbrink; Patrick Hunt; *University of Michigan, Ann Arbor, MI*

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#### PARTICLES, SURFACES & MATERIALS

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- ThPM 239 **Mass Spectrometric Study of Conjugated Schiff-Base Macrocyces**; Alvin Feng; Dickson Lai; Marshall Lapawa; Cindy Lee; Mark MacLachlan; Yun Ling; *University of British Columbia, Vancouver, BC, Canada*
- ThPM 240 **Z-Touch: A Sensitive Method for Analyte Extraction Using DIOS-MS**; Sunia A. Trauger<sup>1</sup>; Eden P. Go<sup>1</sup>; Junefredo V. Apon<sup>1</sup>; Zhouxin Shen<sup>2</sup>; Gary Siuzdak<sup>1</sup>; <sup>1</sup>*The Scripps Research Institute, La Jolla, CA*; <sup>2</sup>*Mass Consortium Corporation, San Diego, CA*
- ThPM 241 **Spray Ionization Interfaces for Surface Sampling with Mass Spectrometry**; Michael J. Ford; Gary J. Van Berkel; *Oak Ridge National Laboratory, Oak Ridge, TN*
- ThPM 242 **Improvements in Sensitivity and Mass Range by Increased Ion Transmission Efficiency in an Aerosol Time of Flight Mass Spectrometer**; Scott C Russell<sup>1</sup>; Gregg Czerwieniec<sup>1</sup>; Eric Gard<sup>2</sup>; Carlito Lebrilla<sup>1</sup>; <sup>1</sup>*University of California, Davis, CA*; <sup>2</sup>*Lawrence Livermore National Lab, Livermore, CA*
- ThPM 243 **Real-time Analysis of Particles Using Aerosol CIMS**; Geoffrey D. Smith; John D. Hearn; *University of Georgia, Athens, GA*
- ThPM 244 **Pulsed Glow-Discharge Time-of-Flight Mass Spectrometry for Elemental and Molecular Analysis**; Markus Hohl<sup>1</sup>; Michler Johann<sup>1</sup>; Gonin Marc<sup>2</sup>; Fuhrer Katrin<sup>2</sup>; Wurz Peter<sup>3</sup>; <sup>1</sup>*Empa, Thun, Switzerland*; <sup>2</sup>*Tofwerk AG, Thun, Switzerland*; <sup>3</sup>*Universität Bern, Bern, Switzerland*
- ThPM 245 **Single Photon Ionization of a Chemical Labeled Peptide Covalently Bound to a Surface**; Praneeth D. Edirisinghe<sup>1</sup>; Jerry F. Moore<sup>2</sup>; Syed S. Lateef<sup>1</sup>; Carrie A. Crot-Pavloski<sup>1</sup>; Michael J. Pellin<sup>2</sup>; Luke Hanley<sup>1</sup>; <sup>1</sup>*University of Illinois, Chicago, IL*; <sup>2</sup>*Argonne National Laboratory, Argonne, IL*
- ThPM 246 **Investigation of PEG-PU Non-Fouling Mechanisms by MALDI Mass Spectrometry**; Jiang Zhang; Charles Savage; Xiaofang Li; Richard Timmons; Gary Kinsel; *Univ. Texas at Arlington, Arlington, TX*
- ThPM 247 **Comparison between Fluorinated and Brominated Surfaces: A surface Induced Dissociation (SID) Study**; Zhuhua Qi; Ronald Wysocki; Vicki Wysocki; *University of Arizona, Tucson, AZ*
- ThPM 248 **Gas-Phase Energy and Electron Transfer of Self-Assembled Monolayers on Gold**; Xi Yang; Vicki Wysocki; *University of Arizona, Tucson, AZ*
- ThPM 249
- ThPM 250 **Bioaerosol Detection by MALDI Mass Spectrometry**; Jae-Kuk Kim; Shelley N. Jackson; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*
- ThPM 251 **Silyl Chemical Modification for Desorption/Ionization on Silicon Mass Spectrometry (DIOS-MS): Application to Surface Stability and Analyte Specificity**; Eden P. Go<sup>1</sup>; Junefredo V. Apon<sup>1</sup>; Bruce J. Compton<sup>2</sup>; M.G. Finn<sup>1</sup>; Zhouxin Shen<sup>3</sup>; Gary Siuzdak<sup>1</sup>; <sup>1</sup>*The Scripps Research Institute, La Jolla, CA*; <sup>2</sup>*Waters Corporation, Milford, MA*; <sup>3</sup>*Mass Consortium Corporation, San Diego, CA*
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- #### PEPTIDES: POST TRANSLATIONAL MODIFICATIONS
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- ThPN 252 **Optimization of an LC-MALDI Interface for the Analysis of Phosphopeptides**; Cameron O. Scarlett; Christoph H. Borchers; *UNC-Chapel Hill, Chapel Hill, NC*
- ThPN 253 **Characterization by ESI-ITMS of Microcin E492 Posttranslational Modification**; Thomas Xavier<sup>1</sup>; Afonso Carlos<sup>2</sup>; Delphine Destoumieux<sup>1</sup>; Jean Péduzzi<sup>1</sup>; Sylvie Rebuffat<sup>1</sup>; Jean-Claude Tabet<sup>2</sup>; <sup>1</sup>*UMR 5154 CNRS, Paris, France*; <sup>2</sup>*UMR 7613 CNRS, Paris, France*
- ThPN 254 **Probing the N-Terminal Sequence and N-Terminal Modifications of Proteins on a Large Scale**; Wilhelm Haas; Scott A. Gerber; Steven P. Gygi; *Harvard Medical School, Boston, MA*
- ThPN 255 **Comprehensive Characterization of Post-Translationally Modified Proteins on a Hybrid Quadrupole/ Linear Ion Trap Instrument**; Peter M. Romanowski; Jason C. Rogalski; Shujun Lin; Juergen Kast; *Biomedical Research Centre, Vancouver, BC, Canada*
- ThPN 256 **Probing Protein Cysteine Post-Translational Modification**; Mark E. McComb; Hua Huang; Sequin Huang; Timothy P. Skelton; Martin H. Steinberg; David H.K. Chui; Amareth Lim; Tatiana Prokaeva; Lawreen H. Connors; Martha Skinner; Richard Cohen; Catherine E. Costello; *Boston University School of Medicine, Boston, MA*
- ThPN 257 **Electron Capture Dissociation (ECD) and Infrared Multiphoton Dissociation (IRMPD) of Ubiquitinated and SUMO-Modified Peptides and Proteins**; Helen J. Cooper<sup>1</sup>; Xuan Li<sup>1</sup>; John K. Heath<sup>1</sup>; Ronald T. Hay<sup>2</sup>; <sup>1</sup>*University of Birmingham, Birmingham, UK*; <sup>2</sup>*University of St Andrews, St. Andrews, Scotland*
- ThPN 258 **80 Da Modification of Protein Serine and Threonine Residues: Not Always Phosphate!**; Katalin F. Medzihradzsky; Robert C. Chalkley; Alma L. Burlingame; *UCSF, San Francisco, CA*
- ThPN 259 **A Multiplexed, Precise, Fast and Sensitive Precursor Ion Scan Like Analysis Mode for LC Quadrupole Time of Flight Based Instruments**; Ricarda Niggeweg; Marc Gentzel; Matthias Wilm; *European Molecular Biology Laboratory (EMBL), Heidelberg, Germany*
- ThPN 260 **A Time Course Study of the Phosphorylation of the PSD Region of the MARCKS Protein by FT-ICR-MS**; Kellie A. Woodling; Jill Adcox Adcox; Iman Al-Naggar; Hazel Tapp; John R. Eyley; Arthur S. Edison; Michael R. Bubb; *University of Florida, Gainesville, FL*
- ThPN 261 **Organelle Enrichment for Increased Identification of Posttranslational Modifications in the Mouse Liver and Brain Tissues**; Petra Hrnčirova; Randy J. Arnold; Milos V. Novotny; *Indiana University, Bloomington, IN*
- ThPN 262 **GPI-Anchor Cleavage Site Identification for Arabinoxylated Peptides of *Arabidopsis thaliana***; Kristina L Ferguson<sup>1</sup>; Carolyn J Schultz<sup>2</sup>; Jelle Lahnstein<sup>2</sup>; Antony Bacic<sup>1</sup>; <sup>1</sup>*University of Melbourne, Melbourne, Vic, Australia*; <sup>2</sup>*University of Adelaide, Adelaide, SA, Australia*
- ThPN 263 **A General Chemical Strategy for Posttranslational Modification Profiling**; Saiful M Chowdhury; Gerhard R Munske; James E Bruce; *Washington State University, Pullman, WA*
- ThPN 264 **MS/MS 'Tag-searching' - A Method of Analysing Ragged Ends of Proteins**; Andrew D Scott; Klaus C Rumpel; *Pfizer Global R&D, Sandwich, UK*
- ThPN 265 **De Novo Sequencing of Post-Translationally Modified Tryptic Peptides Using Chemically Assisted Fragmentation-MALDI (CAF-MALDI) MS/MS**; Andrew W. Carr; P. Clayton Gough; Amareth Lim; Bryan J. Harmon; *Eli Lilly and Company, Indianapolis, IN*
- ThPN 266 **A Method to Enrich and Identify Heme-Containing Peptides from *Shewanella Oneidensis***; Feng Yang; Marina A. Gritsenko; Dwayne Elias; Eric F. Strittmatter; Mary S. Lipton; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- ThPN 267 **Analysis of Post-Transitionally Modified Peptides and Proteins by APMALDI-oeTQFMS**; Jun Tamura<sup>1</sup>; Kenji Nagatomo<sup>1</sup>; Tetsuichiro Morita<sup>1</sup>; Yasunori Nishimura<sup>1</sup>; Robert B. Cody<sup>2</sup>; Phillip Tan<sup>3</sup>; <sup>1</sup>*JEOL Ltd., Akishima,*

- Tokyo, Japan; <sup>2</sup>JEOL USA, Inc., Peabody, MA; <sup>3</sup>MassTech, Inc., Colombia, MD
- ThPN 268 **Rapid Detection and Unambiguous Identification of Phosphopeptides from Complex Mixtures using On-Target Phosphatase Assays Combined with IMAC and MALDI MS/MS;** Matthew P. Torres; Christoph H. Borchers; *University of North Carolina at Chapel Hill, Chapel Hill, NC*
- ThPN 269 **Determination of Protein Ubiquitination by Mass Spectrometry Analysis of Sulfonated Tryptic Peptides;** Dongxia Wang<sup>1</sup>; Wanping Xu<sup>2</sup>; Len Neckers<sup>2</sup>; Robert J. Cotter<sup>1</sup>; *<sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD; <sup>2</sup>National Cancer Institute, Rockville, MD*
- ThPN 270 **Characterization of the 70S Ribosome from *Rhodospirillum rubrum* using an Integrated "Top-Down" and "Bottom-Up" Mass Spectrometric Approach;** Michael B. Strader<sup>1</sup>; Nathan C. VerBerkmoes<sup>2</sup>; Dave Tabb<sup>1</sup>; Heather M. Connelly<sup>2</sup>; John W. Barton<sup>1</sup>; Barry D. Bruce<sup>2</sup>; Dale A. Pelletier<sup>1</sup>; Brian H. Davison<sup>1</sup>; Robert L. Hettich<sup>2</sup>; Frank W. Larimer<sup>1</sup>; Gregory B. Hurst<sup>1</sup>; *<sup>1</sup>Oak Ridge National Laboratory, Oak Ridge, TN; <sup>2</sup>University of Tennessee-Oak Ridge National Laboratory, Knoxville, TN*
- ThPN 271 **Analysis of Peptide Modifications with Seamless Post Source Decay on MALDI TOF Mass Spectrometer;** Annie Wang<sup>1</sup>; Nick Shkriabai<sup>2</sup>; Mamuka Kvaratskhelia<sup>2</sup>; Mary Ann Robinson<sup>3</sup>; *<sup>1</sup>Shimadzu Biotech, Woburn, MA; <sup>2</sup>Ohio State University Comprehensive Cancer Center, Columbus, OH; <sup>3</sup>NIH/NIH, Rockville, MD*
- ThPN 272 **Fragmentation of Ubiquitinated Peptides: Optimizing Conditions for Generating Novel Ubiquitin-Specific Fragment Ions;** Maria R. Esteban Warren; Carol E. Parker; Viorel Mocanu; David G. Klapper; Christoph H. Borchers; *UNC-Chapel Hill, Chapel Hill, NC*
- ThPN 273 **Quantitative Phosphopeptide Screening Using Multiplexed Isobaric Mass Tags;** Philip Ross; Yulin Huang; Steve Guertin; Kefei Zheng; Subhashish Purkayastha; Steve Martin; *Applied Biosystems, Framingham, MA*
- ThPN 274
- ThPN 275 **Characterization of Post-translational Modification of SERCA-Ca<sup>2+</sup>ATPase by Mass Spectrometry;** Hidee L. Aponte<sup>1</sup>; David G. Taylor<sup>2</sup>; Harm Johan Knot<sup>2</sup>; Nancy D. Denslow<sup>3</sup>; Rick A Yost<sup>1</sup>; *<sup>1</sup>University of Florida-Department of Chemistry, Gainesville, FL; <sup>2</sup>University of Florida-Pharmacology & Therapeutics, Gainesville, FL; <sup>3</sup>University of Florida-Biochemistry & Molecular Bio, Gainesville, FL*
- ThPN 276 **Characterization of Novel Post-translational Modifications on Several Isoforms of Histone H1 from HeLa Cells;** Scott A Busby; Benjamin A Garcia; Jeffery Shabanowitz; Donald F Hunt; *University of Virginia, Charlottesville, VA*
- ThPN 277 **Differentiation of  $\alpha$  Versus  $\beta$ -Aspartic Acid Residues in Peptide by Electron Capture Dissociation;** Jason J Cournoyer; Jason L Pittman; Vera B Ivelva; Lucy Waskell; Peter B O'Connor; *Boston University School of Medicine, Boston, MA*
- ThPN 278 **Automated Identification and Quantification of Protein Phosphorylation Sites using Novel Scan Functions of a Linear Quadrupole Ion Trap Mass Spectrometer;** Brian L Williamson<sup>1</sup>; Nick Morrice<sup>2</sup>; Peter Juhasz<sup>1</sup>; Steve Martin<sup>1</sup>; *<sup>1</sup>Applied Biosystems, Framingham, MA; <sup>2</sup>University of Dundee, Dundee, UK*
- ThPN 279 **MS/MS Strategies for Indole-acylation in Peptides;** Seijin Park; LeeAnn Higgins; Jerry D. Cohen; *University of Minnesota, Saint Paul, MN*
- ThPN 280 **Data Dependent Detection of Protein and Peptide Disulfide Bonds After Derivatization With Sodium Sulfite;** Mark J Raftery *University of New South Wales, Sydney, Australia*
- ThPN 281 **A Novel Method for Identification of Protein Ubiquitination Sites in Yeast by Peptide Immunoprecipitation and Tandem Mass Spectrometry;** Donald S Kirkpatrick<sup>1</sup>; Carilee Denison<sup>1</sup>; Scott A Gerber<sup>1</sup>; John Rush<sup>2</sup>; Steven P Gygi<sup>1</sup>; *<sup>1</sup>Harvard Medical School, Boston, MA; <sup>2</sup>Cell Signaling Technology, Beverly, MA*
- ThPN 282 **Derivatization on Reversed-Phase Supports for Enhanced Detection of Phosphorylated Peptides;** Heinz Nika; David H. Hawke; Ryuji Kobayashi; *UT-M.D. Anderson Cancer Center, Houston, TX*
- ThPN 283 **Analysis of Protein Phosphorylation Using a Novel "Parallel PSD" Approach on a MALDI Mass Spectrometer;** Emmanuelle Claude; Jeff Brown; Marten Snel; Therese McKenna; Daniel Kenny; James Langridge; *Waters Corporation, Manchester, UK*
- ThPN 284 **Analysis of Phosphorylated Peptides by Ion Mobility-Mass Spectrometry;** Brandon T. Ruotolo<sup>1</sup>; Kent J. Gillig<sup>1</sup>; Amina S. Woods<sup>2</sup>; Thomas F. Egan<sup>3</sup>; Michael V. Ugarov<sup>3</sup>; J. Albert Schultz<sup>3</sup>; David H. Russell<sup>1</sup>; *<sup>1</sup>Texas A&M University, College Station, TX; <sup>2</sup>NIDA, Baltimore, MD; <sup>3</sup>Ionwerks, Inc., Houston, TX*
- ThPN 285 **Studies on the Use of Open Tubular IMAC Combined with HPLC-MS/MS for the Analysis of the E.Coli phosphoproteome;** Jacek Stupak; Huazhi Liu; Liang Li; *University of Alberta, Edmonton, Alberta, Canada*
- ThPN 286 **Phosphorylation Analysis using a MALDI-TOF/TOF;** Yuejun Zhen; Jun Lu; Nafei Xu; John M. Peltier; *Prolexys Pharmaceuticals, Inc, Salt Lake City, UT*
- ThPN 287 **Accurate and Rapid Detection of Serine, Threonine, and Tyrosine Phosphopeptides in the QTOF2;** Edward S. Umstot; Dominic M. Desiderio; *University of Tennessee, Memphis, TN*
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- PEPTIDES: QUANTITATION**
- ThPO 288 **A New Approach Based on Isotope Coded Non Affinity Tag Used for the Characterisation and the Quantification of Membrane Proteins;** Laurent Mignet<sup>1</sup>; Christelle Lemaitre-Guillier<sup>1</sup>; Axel Siroz<sup>2</sup>; Christine Carapito<sup>1</sup>; Alain Van Dorsselaer<sup>1</sup>; Emmanuelle Leize<sup>1</sup>; *<sup>1</sup>LSMBO, Strasbourg, France; <sup>2</sup>Polymeres, Biopolymeres, Membranes, Mont Saint Aignan, France*
- ThPO 289 **Application of High-Field Asymmetric Waveform Ion Mobility Spectrometry (FAIMS) coupled to LC-MS/MS to Improve the Detection of Peptide-like Therapeutics;** Aristidis Gritsas<sup>1</sup>; Themis Flarakos<sup>1</sup>; Milton Furtado<sup>1</sup>; Edward J. Daly<sup>1</sup>; Donald Chun<sup>1</sup>; Mark L. J. Reimer<sup>1</sup>; Randy W. Purves<sup>2</sup>; *<sup>1</sup>MDS Pharma Services, Montreal, CANADA; <sup>2</sup>Ionalytics, Ottawa, CANADA*
- ThPO 290 **Analyte Normalization for Improved IC50 Determination using Activity-Based Profiling and Ion Trap Tandem Mass Spectrometry;** Jennie R Lill; Avery G Frey; Jennifer E Hanson; Nigel J Clarke; *ActivX BioSciences, La Jolla, CA*
- ThPO 291 **Challenges in Peptide Quantitation in Biological Matrices via LC/MS/MS;** Peter J Stoffolano; Salane L King; H. Jain Dai; Kenneth R Wehmeyer; John D Manwaring; Timothy R Baker; *P&G Pharmaceuticals, Mason, OH*
- ThPO 292 **Peptide Quantification in Complex Mixtures Using DeCyder for Mass Spectrometry;** Harald Pettersen<sup>1</sup>; Andreas F. Huhmer<sup>2</sup>; Anders Kaplan<sup>1</sup>; Malin Soderstrom<sup>1</sup>; Staffan Lindqvist<sup>1</sup>; David Fenyo<sup>1</sup>; Magnus Isaksson<sup>1</sup>; Lennart Bjorkesten<sup>1</sup>; *<sup>1</sup>Amersham Biosciences, Uppsala, Sweden; <sup>2</sup>Thermo Electron Corporation, San Jose, CA*

- ThPO 293 **Measurement of Protein Mole Ratios and Atomic Enrichment from a Single High Resolution Measurement of an Unlabeled and Labeled Peptide;** Michael J. MacCoss<sup>1</sup>; Christine C. Wu<sup>2</sup>; Dwight E. Matthews<sup>3</sup>; John R. Yates III<sup>2</sup>; <sup>1</sup>University of Washington, Seattle, WA; <sup>2</sup>The Scripps Research Institute, La Jolla, CA; <sup>3</sup>University of Vermont, Burlington, VT
- ThPO 294 **Reproducibility and Quantitative Use of MALDI TOF Mass Spectrometry for Measurements of Cerebrospinal Fluid Tryptic Peptides;** Lennard Dekker<sup>1</sup>; Hans Dalebout<sup>1</sup>; Guido Jenster<sup>1</sup>; Peter Sillevs Smitt<sup>1</sup>; Ivar Siccama<sup>2</sup>; Theo Luider<sup>1</sup>; <sup>1</sup>ErasmusMC, Rotterdam, The Netherlands; <sup>2</sup>KiQ Limited, Amsterdam, The Netherlands
- ThPO 295 **Kinetic Analysis of Bioactive Peptides and Its in vitro Degradation by DP-IV Using ESI LC/MS;** Ellen Y.T. Chien; Kheng B. Lim; Lu Zeng; Daniel B. Kassel; Syrrx, Inc., San Diego, CA
- ThPO 296 **Novel Quantitative LC-MS/MS Method for PEGylated Peptides;** Craig A Marshall; James T Meyer; Krys J Miller; Amgen Inc., Thousand Oaks, CA
- ThPO 297 **Determination Of Recovery From Peptide Purification Using MALDI Mass Spectrometry;** Zeu Hong Tzeng; Norman H.L. Chiu; Northeastern University, Boston, MA
- ThPO 298 **Determination of DX-88, a Recombinant Protein Plasma Kallikrein Inhibitor, by LC/MS/MS in Human Plasma;** Marius Foltea<sup>1</sup>; John Simpson<sup>1</sup>; Rudolf Guilbaud<sup>1</sup>; Daniel Villeneuve<sup>1</sup>; Lynn G. Baird<sup>2</sup>; <sup>1</sup>MDS Pharma Services, Montreal, QC, Canada; <sup>2</sup>Dyax Corp., Cambridge, MA
- ThPO 299 **Photoionization of Desorbed Biomolecules with Tunable VUV: High Sensitivity Detection;** J.F. Moore<sup>1</sup>; W.F. Calaway<sup>1</sup>; B.V. King<sup>2</sup>; I.V. Vervovkin<sup>1</sup>; M.J. Pellin<sup>1</sup>; J.W. Lewellen<sup>1</sup>; Yuelin Li<sup>1</sup>; S.V. Milton<sup>1</sup>; <sup>1</sup>Argonne National Laboratory, Argonne, IL; <sup>2</sup>University of Newcastle, Newcastle, NSW, Australia
- ThPO 300 **Guanidino-Labeling Derivatization for Global Characterization of Peptide Mixtures by Liquid Chromatography(LC) Matrix-Assisted Laser Desorption Ionization Mass Spectrometry (MALDI);** Francesco L Brancia<sup>1</sup>; Helen Montgomery<sup>2</sup>; Koichi Tanaka<sup>2</sup>; Sumio Kumashiro<sup>1</sup>; <sup>1</sup>Shimadzu Research Laboratory, Manchester, UK; <sup>2</sup>Koichi Tanaka Mass Spectrometry Res. Laboratory, Kyoto, Japan
- ThPO 301 **Quantitative Phosphorylation Analysis in SKAR, a Novel Target of S6 Kinase 1;** Mark Broenstrup<sup>2</sup>; Celeste Richardson<sup>1</sup>; John Rush<sup>3</sup>; John Blenis<sup>1</sup>; Steven P Gygi<sup>1</sup>; <sup>1</sup>Harvard Medical School, Boston, MA; <sup>2</sup>Aventis Pharma, Frankfurt, Germany; <sup>3</sup>Cell Signaling, Beverly, MA
- ThPO 302 **Quantitative Analysis for the Identification of Surrogate Markers for Huntington's Disease using a Novel N-terminal Isotope Labeling Method;** Eugene C. Yi<sup>1</sup>; Kelly Cooke<sup>1</sup>; D.J. Pappin<sup>2</sup>; Patrick Pedrioli<sup>1</sup>; P.L. Ross<sup>2</sup>; S Purkayastha<sup>2</sup>; L.R. Zieske<sup>2</sup>; Ruedi Aebersold<sup>1</sup>; Julian Watts<sup>1</sup>; <sup>1</sup>Institute For Systems Biology, Seattle, WA; <sup>2</sup>Applied Biosystems, Foster City, CA
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- PROTEINS: FOLDING & GENERAL**
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- ThPP 303 **Probing Ras Protein Conformation by Mass Spectrometry;** Zohra Olumee-Shabon; Hee-Yong Kim; NIAAA/NIH, Rockville, MD
- ThPP 304 **Biophysical Studies with the Steroidogenic Acute Regulatory Protein (StAR) and Membranes Show pH Dependent Interactions;** Dustin C. Yaworsky<sup>1</sup>; Himangshu S. Bose<sup>1</sup>; John D. Bell<sup>2</sup>; Lauren B. Jensen<sup>2</sup>; Walter L. Miller<sup>1</sup>; Michael A. Baldwin<sup>1</sup>; <sup>1</sup>University of California, San Francisco, CA; <sup>2</sup>Brigham Young University, Provo, UT
- ThPP 305 **MALDI-TOF-MS and Circular Dichroism Spectroscopy in Structural Assignment of a Ubiquitin Homolog;** Christina M. Sorensen; Lea A. Rempel; Brian R. Francis; David J. Perry; Thomas R. Hansen; University of Wyoming, Laramie, WY
- ThPP 306 **Single Residue Resolution of Cross-Link Positions using ECD-FTMS;** Petr Novak; William E. Haskins; Marites J. Ayson; Michael D. Leavell; Joseph S. Schoeniger; Gary H. Kruppa; Sandia National Laboratories, Livermore, CA
- ThPP 307 **Amidation as a Way to Probe Solvent Accessible Surfaces of Proteins;** Dariusz J Janeczek; James P Reilly; Indiana University, Bloomington, IN
- ThPP 308 **Probing Three-dimensional Structure of Bovine Serum Albumin by Proteolytic O-18 labeling, Chemical Cross-linking and Mass Spectrometry;** Bill X. Huang<sup>1</sup>; Chhabil Dass<sup>2</sup>; Hee-Yong Kim<sup>1</sup>; <sup>1</sup>NIAAA, NIH, Rockville, MD; <sup>2</sup>The University of Memphis, Memphis, TN
- ThPP 309 **Radical Approaches to Study Actin Cytoskeleton by Mass Spectrometry;** Jing Guan; Steve Almo; Mark Chance; Albert Einstein College of Medicine, Bronx, NY
- ThPP 310 **Protein Surface Mapping by Mass Spectrometry to Monitor pH-Dependent Structural Transitions in Beta-Lactoglobulin A;** Robert L. Hettich<sup>1</sup>; Demet Ataman<sup>1</sup>; Joshua Sharp<sup>2</sup>; <sup>1</sup>Oak Ridge National Laboratory, Oak Ridge, TN; <sup>2</sup>NIEHS, Research Triangle Park, NC
- ThPP 311 **Kinetics of Acid-Induced Hemoglobin Denaturation Studied by ESI-MS;** Douglas A. Simmons; Derek J. Wilson; Lars Konermann; University of Western Ontario, London, ON, Canada
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- PROTEINS: FOLDING H/D EXCHANGE**
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- ThPQ 312 **Native-state Hydrogen Exchange Coupled with MALDI MS Reveals a Stable Sub-core in the Dimerization Domain of E. coli Trp Repressor;** B. Robert Simler; C. Robert Matthews; University of Massachusetts Medical School, Worcester, MA
- ThPQ 313 **Simultaneous Determination of Multiple Protein Synthesis Rates by in vivo Deuterium Labeling;** Gang Sun; Benlian Wang; Stephen Previs; Vernon E Anderson; Case Western Reserve University, Cleveland, OH
- ThPQ 314 **Solution Phase H/D Exchange to Probe Structures of Hsp18.1 and Hsp/substrate Complexes;** Guilong (Charles) Cheng; Elizabeth Vierling; Vicki H. Wysocki; University of Arizona, Tucson, AZ
- ThPQ 315 **Protein Folding Intermediate Detection by SUPREX;** Susie Y. Dai; Michael C. Fitzgerald; Duke University, Durham, NC
- ThPQ 316 **H/D Exchange High Resolution Mass Spectrometry Reveals Structural Changes in a Molten Globular Protein: Diphtheria Toxin Repressor (DtxR);** TuKiet T. Lam<sup>1</sup>; Vijay Rangachari<sup>2</sup>; Timothy M. Logan<sup>2</sup>; Mark R. Emmett<sup>1</sup>; Alan G. Marshall<sup>2</sup>; <sup>1</sup>National High Magnetic Field Laboratory, Tallahassee, FL; <sup>2</sup>Florida State University, Tallahassee, FL
- ThPQ 317 **Isotopic Depletion Enhances Subunit Fragment Determination in Solution Phase H/D Exchange with High Resolution FT-ICR Analysis;** Mark R. Emmett<sup>1</sup>; TuKiet T. Lam<sup>1</sup>; Tomas Johansson<sup>3</sup>; Christine Oswald<sup>3</sup>; Ute Krengel<sup>3</sup>; Alan G. Marshall<sup>2</sup>; <sup>1</sup>National High Magnetic Field Laboratory, Tallahassee, FL; <sup>2</sup>Florida State University, Tallahassee, FL; <sup>3</sup>Chalmers University of Technology, Goteborg, Sweden
- ThPQ 318 **Integration of Hydrogen/Deuterium Exchange and Cyanylation-Based Methodology for Conformational Studies of Cystinyl Proteins;** Xue Li; Yi-Te Chou; Rhonda Husain; Jack Throck Watson; Michigan State University, East Lansing, MI

- ThPQ 319 **Comparisons of Native and Molten Globule Structures of Ubiquitin using Hydrogen-Deuterium Exchange;** Joshua K. Hoerner; Igor A. Kaltashov; *University of Massachusetts at Amherst, Amherst, MA*
- ThPQ 320 **Conformational Analysis of Angiotensin I and II in Receptor Binding Site Mimetic Environments;** Pegah R Jalili; Chhabil Dass; *Univ. of Memphis, Memphis, TN*
- ThPQ 321 **Conformational Changes During DHFR Binding Studied by Hydrogen Exchange and Mass Spectrometry;** Suma Kaveti; John R. Engen; *The University of New Mexico, Albuquerque, NM*
- ThPQ 322 **Structure and Dynamics of Intermediate States of Proteins Revealed by HDX CAD MS;** Hui Xiao; Igor A. Kaltashov; *Univ. of Massachusetts, Amherst, MA*
- ThPQ 323 **Mapping Nucleotide Induced Conformational Changes in the Escherichia Coli Hsp70 Chaperone DnaK Using Amide Hydrogen Exchange and Mass Spectrometry;** Wolfgang Rist; Christian Graf; Bernd Bukau; Matthias P. Mayer; *University of Heidelberg, Heidelberg, Germany*
- ThPQ 324 **Structure Determination of C-Occludin using H/D Exchange Coupled with Mass Spectrometry;** Tarun Gheyi<sup>1</sup>; Chhabil Dass<sup>1</sup>; Gautam Kale<sup>2</sup>; R.K. Rao<sup>2</sup>; <sup>1</sup>*University of Memphis, Memphis, TN*; <sup>2</sup>*University of Tennessee, Memphis, TN*
- ThPQ 325 **Determining Disulfide Status and Elucidating Conformational Dynamics of a 12-Cysteine Protein by Cyanylation-based Mass-Mapping Methodology and Integrated with Hydrogen Exchange;** Yi-Te Chou<sup>1</sup>; Andrew P. Hinck<sup>2</sup>; J. Throck Watson<sup>1</sup>; <sup>1</sup>*Michigan State University, East Lansing, MI*; <sup>2</sup>*University of Texas Health Science Center, San Antonio, TX*
- ThPQ 326 **Interactions between murine DHFR and Hsp70 probed with HX MS;** Suma Kaveti; Tamara Sibray; John R. Engen; *The University of New Mexico, Albuquerque, NM*
- ThPQ 327 **Hydrogen-Deuterium Exchange/ ESIMS for Determining Conformation of Human Cystathionine Beta Synthase;** Jiong Yu; Suvajit Sen; Ruma Banerjee; *University of Nebraska, Lincoln, NE*
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- PROTEOMICS: CANCER MARKERS**
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- ThPR 328 **Quantitative Differential Profiling and Identification of Overexpressed Plasma Membrane Proteins from Xenograft Mouse Tumors;** Thomas A. Shaler<sup>1</sup>; David A. Suhy<sup>2</sup>; Hua Lin<sup>1</sup>; Weixun Wang<sup>1</sup>; Arie Abo<sup>2</sup>; Christopher H. Becker<sup>1</sup>; <sup>1</sup>*SurroMed, Inc., Menlo Park, CA*; <sup>2</sup>*PPD Discovery, Inc., Menlo Park, CA*
- ThPR 329 **Directed Membrane Proteomics of Breast Cancer Cell Lines Using Recombinant HER2 Extracellular Domain and Solid Phase Mass Tagging;** James A. Wilkins; Rong Xiang; Yang Shi; Csaba Horvath; *Yale University, New Haven, CT*
- ThPR 330 **Human-Mouse Brain Proteomics;** Kenneth C. Parker<sup>1</sup>; Norie Araki<sup>2</sup>; Peter Juhasz<sup>1</sup>; Steve Hattan<sup>1</sup>; Jason Marchese<sup>1</sup>; Brian Williamson<sup>1</sup>; Hideyuki Saya<sup>2</sup>; Hideo Nakamura<sup>2</sup>; Armin Graber<sup>1</sup>; Stephen Martin<sup>1</sup>; <sup>1</sup>*DPMS Research Center, Applied Biosystems, Framingham, MA*; <sup>2</sup>*Kumamoto University, Kumamoto, Honjo, Japan*
- ThPR 331 **Profiling and Identification of Native Peptides from Plasma of Pancreatic Cancer Patients;** John M. Koomen; Donghui Li; Lianchun Xiao; Tiffany C. Bennett; Andrea P. Cervin; Kevin R. Coombes; James L. Abbruzzese; Ryuji Kobayashi; *MD Anderson Cancer Center, Houston, TX*
- ThPR 332 **Proteomic Profiling Human Serum Samples for Breast Cancer Markers by ICAT, With and Without Abundant Protein Depletion;** David H. Hawke; Bing Zhang; Francisco Esteve; Ryuji Kobayashi; *UT-M.D. Anderson Cancer Center, Houston, TX*
- ThPR 333 **Global Proteomic Analysis of Mouse Serum;** Brian L Hood; Ming Zhou; King C Chan; David A Lucas; Haleem J Issaq; Timothy D Veenstra; Thomas P Conrads; *SAIC-Frederick, Inc., Frederick, MD*
- ThPR 334 **High Throughput Quantitative Analysis of Serum Proteins Using Glycopeptide Capture and LC-MS;** Hui Zhang<sup>1</sup>; Eugene C. Yi<sup>1</sup>; Xiao-jun Li<sup>1</sup>; Karen S.K. Spratt<sup>2</sup>; Chris J. Kemp<sup>2</sup>; Ruedi Aebersold<sup>1</sup>; <sup>1</sup>*Institute for Systems Biology, Seattle, WA*; <sup>2</sup>*Fred Hutchinson Cancer Research Center, Seattle, WA*
- ThPR 335 **Peptide-Based Plasma Profiling using MALDI and ESI TOFMS;** Waleed Nasser; John M. Koomen; Haitao Zhao; Donghui Li; Keith Baggerly; James L. Abbruzzese; Ryuji Kobayashi; *MD Anderson Cancer Center, Houston, TX*
- ThPR 336 **Exploring MALDI-MS for Biomarker Screening of Colon Cancer;** Lianji Jin<sup>1</sup>; Matthew Sperling<sup>1</sup>; Amadeo Pesce<sup>1</sup>; Michael Wagner<sup>2</sup>; Patrick A. Limbach<sup>1</sup>; <sup>1</sup>*University of Cincinnati, Cincinnati, OH*; <sup>2</sup>*Cincinnati Children's Hospital, Cincinnati, OH*
- ThPR 337 **Global Proteomic Analysis of Human Serum;** King C Chan<sup>1</sup>; David A Lucas<sup>1</sup>; Denise Hise<sup>2</sup>; Carl F Schaefer<sup>2</sup>; Zhen Xiao<sup>1</sup>; George M Janini<sup>1</sup>; Kenneth H Buetow<sup>2</sup>; Haleem J Issaq<sup>1</sup>; Timothy D Veenstra<sup>1</sup>; Thomas P Conrads<sup>1</sup>; <sup>1</sup>*SAIC-Frederick, Inc., Frederick, MD*; <sup>2</sup>*National Cancer Institute, Bethesda, MD*
- ThPR 338 **New Approaches to the Detection of Glycoprotein Biomarkers from Human Plasma using Capillary LC with High Resolution Accurate Mass Spectrometry;** Shiaw-Lin Wu; William S. Hancock; Ziping Yang; Jian Zhang; Lei Cao; Barry L. Karger; *Northeastern University, Boston, MA*
- ThPR 339 **HLA Peptide Repertoires as a Probe for the Proteome of Human Cancer Cells;** Arie Admon<sup>1</sup>; Elena Milner<sup>1</sup>; Lior Dassau<sup>1</sup>; Eilon Barnea<sup>1</sup>; Tamar Ziv<sup>1</sup>; Ilan Beer<sup>2</sup>; <sup>1</sup>*Technion - Israel Institute of Technology, Haifa, Israel*; <sup>2</sup>*IBM Research Laboratory, Haifa, Israel*
- ThPR 340 **Intact Protein Based High-Resolution Three-Dimensional Quantitative Analysis System to Profile the Human Serum Proteome in Acute Graft-Versus-Host-Disease;** Hong Wang<sup>1</sup>; Vladimir Galchev<sup>2</sup>; Shawn Clothier<sup>2</sup>; David Misek<sup>2</sup>; Rong Zhao<sup>2</sup>; Fiona Crawford<sup>1</sup>; Mike Mullan<sup>1</sup>; Gilbert Omenn<sup>2</sup>; James Ferrara<sup>2</sup>; Samir Hanash<sup>2</sup>; <sup>1</sup>*Roskamp Institute, Sarasota, FL*; <sup>2</sup>*University of Michigan, Ann Arbor, MI*
- ThPR 341 **Proteins Modulated by Grape Seed Extract in Its Chemopreventive Activity Against 7-12 dimethylbenz(a)anthracene Induced Mammary Tumors;** Poonam Sarkar; Heath McCorkle; Todd Sanderson; Landon Wilson; Marion Kirk; Clinton Grubbs; Stephen Barnes; Helen Kim; *University of Alabama at Birmingham, Birmingham, AL*
- ThPR 342 **nanoLC DualESI FT-ICR Mass Spectrometry for Biomarker Discovery in Serum;** David C. Muddiman; Christopher J. Mason; Kenneth L. Johnson; Angelito I. Nepomuceno; Adam M. Hawkrigde; Jeanette E. Eckel; Ann L. Oberg; *Mayo Clinic College of Medicine, Rochester, MN*
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- PROTEOMICS: FUNDAMENTAL STUDIES**
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- ThPS 343 **Alternative Cleavage Reagents for Cyanylation-Based Disulfide Mass Mapping;** José Luis Gallegos Pérez; Laura Rangel Ordóñez; Jack Throck Watson; *Michigan State University, East Lansing, MI*
- ThPS 344 **Determination of the Specific Interactions of Arabidopsis 14-3-3 Protein Isoforms With Phosphorylated Target Peptides by ESI-FTICR-MS;** Helene L. Cardasis; David H. Powell; Robert J. Ferl; Paul

- C. Sehnke; John R. Eyler; *University of Florida, Gainesville, FL*
- ThPS 345 **Protein Identification Combining SORI-CID and SID Ion Activation in a Fourier Transform Ion Cyclotron Resonance Mass Spectrometer**; Facundo M. Fernandez<sup>1</sup>; Julia Laskin<sup>2</sup>; Jean H. Futrell<sup>2</sup>; Vicki H. Wysocki<sup>3</sup>; <sup>1</sup>*Georgia Institute of Technology, Atlanta, GA*; <sup>2</sup>*ESML Pacific Northwest National Laboratory, Richland, WA*; <sup>3</sup>*University of Arizona, Tucson, AZ*
- ThPS 346 **Using Mass Spectrometry to Reveal Protein Mixtures in Spots from Quantitative 2D-Gels**; Jennifer L. Baltz<sup>1</sup>; Stephen W. Hunsucker<sup>1</sup>; Frank J. Accurso<sup>2</sup>; Mark W. Duncan<sup>1</sup>; <sup>1</sup>*University of Colorado Health Sciences Center, Denver, CO*; <sup>2</sup>*The Children's Hospital of Denver, Denver, CO*
- ThPS 347 **Malathion Induced Differential Protein Expression in SY5Y Cell Culture Models by Two Dimensional Gel Electrophoresis(2DE) and LC-MS/MS**; Meena Sundaramoorthy; Mark A. Lovell; Bert C. Lynn; *University of Kentucky, Lexington, KY*
- ThPS 348 **LC-MS and MALDI MS Investigation of Tryptic Protein Digestion: Towards Protein Digestion Standards**; Amy E Daly; Martin Gilar; Ying-Qing Yu; Bonnie A Alden; John C Gebler; *Waters Corporation, Milford, MA*
- ThPS 349 **Approaches to Clinical Proteomics: A Key Role for Gel Electrophoresis, MALDI-tof Mass Spectrometry and Improved Protein Identification Algorithms**; Mark W. Duncan; Steve Helmke; Jennifer L. Baltz; Stephen W. Hunsucker; Lewis M. Brown; *University Of Colorado Health Sciences Center, Denver, Co*
- ThPS 350 **Identification of an Inhibitory Binding Site to HIV-1 Integrase with Affinity Acetylation and MS**; Nick Shkriabai<sup>1</sup>; D. Eric Anderson<sup>2</sup>; Sachindra S. Patil<sup>3</sup>; Sonja Hess<sup>2</sup>; Terrence R. Burke Jr.<sup>3</sup>; Mamuka Kvaratskhelia<sup>1</sup>; <sup>1</sup>*Center for Retrovirus Research, Columbus, OH*; <sup>2</sup>*NIDDK, Bethesda, MD*; <sup>3</sup>*NCI, Frederick, MD*
- ThPS 351 **A Mass Spectrometric Approach to Identify Polarity Complexes in Mammalian Cells**; James Fawcett; Amy Holdorf; Kelly Elder; Giselle Wiggin; Paul O'Donnell; Karen Colwill; Tony Pawson; Pavel Metalnikov; *Samuel Lunenfeld Research Institute, Toronto, Canada*
- ThPS 352 **Protein and RNA Expression Profiling of Lung Development in the Mouse**; Brian J. Cox<sup>2</sup>; Thomas Kislinger<sup>3</sup>; Dennis A. Wigle<sup>2</sup>; Kevin Brown<sup>1</sup>; David Manning<sup>2</sup>; Igor Jurisica<sup>4</sup>; Andrew Emili<sup>3</sup>; Janet Rossant<sup>2</sup>; <sup>1</sup>*Princess Margaret Hospital, Toronto, Canada*; <sup>2</sup>*Samuel Lunenfeld Research Institute, Toronto, Canada*; <sup>3</sup>*Banting and Best Research Insitute, Toronto, Canada*; <sup>4</sup>*Univerity of Toronto, Toronto, Canada*
- ThPS 353 **Characterization of Native and Reduced Cholera toxin B via Collision-Induced Dissociation in Quadrupole Ion Trap**; Tegafaw T. Mekecha; Ravi Amunugama; Scott A. McLuckey; *Purdue University, West Lafayette, IN*
- ThPS 354 **The Impact of Blood Contamination on the Proteome of Cerebrospinal Fluid**; Jin-Sam You<sup>2</sup>; Michael D. Knierman<sup>1</sup>; Valentina Gelfanova<sup>1</sup>; Frank A. Witzmann<sup>2</sup>; Mu Wang<sup>2</sup>; John E. Hale<sup>1</sup>; <sup>1</sup>*Eli Lilly & Co, Indianapolis, IN*; <sup>2</sup>*Indiana University Medical School, Indianapolis, IN*
- ThPS 355 **Integration of Qualitative and Quantitative Peptidomics: Towards an Inventory and Differential Display of the Human Plasma Peptidome**; Markus Kellmann; Thomas Möhring; Christoph Menzel; Imke Schulte; Harald Tammen; Rüdiger Hess; Michael Jürgens; Michael Schrader; Peter Schulz-Knappe; *BioVisioN AG, Hannover, Germany*
- ThPS 356 **2D-LC-MS/MS Analysis of Membrane Extracts from CLL B cells**; David R. Barnidge; Renee C. Tschumper; Diane F. Jelinek; David C. Muddiman; Neil E. Kay; *Mayo Clinic College of Medicine, Rochester, MN*
- ThPS 357 **Identification of the Phosphotyrosine Proteome from the Liver of Pervanadate Treated Mice**; Qingping Wang; Deena Waddleton; Johna P. Kirkwood; Lijing Xu; Evonne Kwok; *Merck Frosst Canada, Kirkland, QC, Canada*
- ThPS 358 **Global Proteomic Analysis of Tissue- and Organelle-Specific Protein Expression Patterns in Mouse**; Thomas Kislinger<sup>1</sup>; Brian Cox<sup>2</sup>; Alex Ignatchenko<sup>1</sup>; Janet Rossant<sup>2</sup>; Andrew Emili<sup>1</sup>; <sup>1</sup>*University of Toronto, Toronto, ON, Canada*; <sup>2</sup>*Samuel Lunenfeld Research Institute, Toronto, ON, Canada*
- ThPS 359 **Comprehensive Analysis of All Peaks in Mass Spectra of In-Gel Protein Digests**; Muyang Li; Wei Gu; Wenzhu Zhang; *Columbia University, New York, NY*
- ThPS 360 **Direct Mapping of *Synechocystis* sp. PCC6803 MS/MS Data onto Genomic DNA sequence**; Yoko Ishino<sup>1</sup>; Hitomi Okada<sup>1</sup>; Hisaaki Taniguchi<sup>2</sup>; <sup>1</sup>*RIKEN, Mikazuki, Japan*; <sup>2</sup>*University of Tokushima, Tokushima, Japan*
- ThPS 361 **MS/MS Protein Identification with SEQUEST and Mascot Database Searching Algorithms**; Bryan D. Woosley; James Atwood; Brent Weatherly; Rick Tarleton; Ron Orlando; *University of Georgia, Athens, GA*
- ThPS 362 **Comparison of Relative Protein Levels in Prostate from Young and Old Noble Rat by ICAT**; Ying-Wai Lam; Neville N.C. Tam; Peiyu Sun; Karin M Green; James E Evans; Shuk-mei Ho; *University of Massachusetts Medical School, Worcester, MA*
- ThPS 363 **Protein Identification from Tandem Mass Spectra of Peptides Validated by Prediction of the Retention Times in Liquid Chromatography/Mass Spectrometry**; Takao Kawakami<sup>1</sup>; Keita Tateishi<sup>2</sup>; Toshihide Nishimura<sup>1</sup>; <sup>1</sup>*Clinical Proteome Center, Tokyo Medical University, Shinjuku-ku, Tokyo, Japan*; <sup>2</sup>*Medical Proteoscope Co., Ltd., Shinjuku-ku, Tokyo, Japan*
- ThPS 364 **Proteomic Analysis of Plasma Membrane Protein from Human Erythroid Cells**; Graeme Carlile<sup>1</sup>; Deborah H. Smith<sup>1</sup>; Jeffrey C. Silva<sup>2</sup>; Scott Geromanos<sup>2</sup>; Martin Wiedmann<sup>1</sup>; <sup>1</sup>*Memorial Sloan-Kettering Cancer Center, New York, NY*; <sup>2</sup>*Waters Corporation, Milford, MA*
- ThPS 365 **What Determines the Detection Probability of Peptides in LC-FTMS? A Physicochemical Study**; Michael L. Nielsen; Mikhail M. Savitski; Frank Kjeldsen; Roman A. Zubarev; *Uppsala University, Uppsala, Sweden*
- ThPS 366 **Exclusive Trypsin Specificity Determined by nanoLC-FTICR-MS/MS**; Jesper V Olsen; Shao-En Ong; Matthias Mann; *Center for Experimental BioInformatics, Odense, Denmark*
- ThPS 367 **Quaternization of Cysteine-Containing Tryptic Peptides for Selective Enrichment Using SCX-RPC-MS**; Samir Julka; Diya Ren; Dorota Inerowicz; Fred.E Regnier; *Purdue University, West Lafayette, IN*
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- PROTEOMICS: LOWER ORGANISMS**
- ThPT 368 **Fingerprinting of Campylobacter Species and Strains by Mass Spectrometric Identification of Protein Biomarkers**; Clifton K Fagerquist<sup>1</sup>; Leslie A Harden<sup>1</sup>; William G Miller<sup>1</sup>; Derrick E Fouts<sup>2</sup>; Karen E Nelson<sup>2</sup>; Robert E Mandrell<sup>1</sup>; <sup>1</sup>*U.S. Department of Agriculture, ARS, WRRRC, Albany, CA*; <sup>2</sup>*The Institute for Genomic Research, Rockville, MD*
- ThPT 369 **Pathogenic Proteomics: Identification of Novel Virulence Effectors in Infectious Bacteria Utilizing a Mass Spectrometry Based Approach**; Paul O'Donnell<sup>1</sup>; Samantha Gruenheid<sup>2</sup>; Wanyin Deng<sup>2</sup>; Yuling Li<sup>2</sup>; Keith Ashman<sup>3</sup>; Anthony Pawson<sup>1</sup>; Pavel Metalnikov<sup>1</sup>; Brett Finlay<sup>2</sup>; <sup>1</sup>*Samuel Lunenfeld Research Institute, Toronto,*

- Canada; <sup>2</sup>University of British Columbia, Vancouver, Canada; <sup>3</sup>MDS Sciex, Toronto, Canada
- ThPT 370 **Quantitative Microbial Proteomics of *Yersinia Pestis***; Lianming Wu<sup>1</sup>; Maloney Sandra McCutchen<sup>2</sup>; Chromy Brett<sup>2</sup>; Kim K. Hixson<sup>1</sup>; Nikola Tolic<sup>1</sup>; Ljiljana Pasa-Tolic<sup>1</sup>; Matt Monroe<sup>1</sup>; Richard D. Smith<sup>1</sup>; Mary L. Lipton<sup>1</sup>; <sup>1</sup>Pacific Northwest National Laboratory, Richland, WA; <sup>2</sup>Lawrence Livermore National Laboratory, Livermore, CA
- ThPT 371 **Global Analysis of the Proteome of *Methanococcus jannaschii* by LC/LC/MS/MS**; Wenhong Zhu<sup>1</sup>; Claudia I. Reich<sup>2</sup>; Gary J. Olsen<sup>2</sup>; John R. Yates<sup>1</sup>; <sup>1</sup>The Scripps Research Institute, La Jolla, CA; <sup>2</sup>University of Illinois, Urbana, IL
- ThPT 372 **Enzymatic Labeling of *Rhodobacter Capsulatus* Protein Digests for Differential Expression Analysis**; Michael E Lassman; Kimberley A Schneider; *Naval Research Laboratory, Washington, DC*
- ThPT 373 **Proteomic Analysis of Novel Marine Aerobic Anoxygenic Phototrophs Using Multidimensional Chromatography, MALDI, and ESI Mass Spectrometry**; Martha D. Stapels; Jang-Cheon Cho; Stephen J. Giovannoni; Douglas F. Barofsky; *Oregon State University, Corvallis, OR*
- ThPT 374 **Proteome Comparison of Two *Haemophilus ducreyi* Strains Using Two-Dimensional Electrophoresis**; Deborah M Post; Bradford W Gibson; *Buck Institute, Novato, CA*
- ThPT 375 **Rapid Identification of Infectious Microorganisms using Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry**; Lloyd V. Reitz, Jr.; Denise M. Toney, Ph.D.; Timothy R. Croley, Ph.D.; *Division of Consolidated Laboratory Services, Richmond, VA*
- ThPT 376 **Identification and Characterization of Proteins Involved with Stress Response in *Desulfovibrio vulgaris***; Sara P. Gaucher; Swapnil Chhabra; Masood Z. Hadi; Anup K. Singh; *Sandia National Laboratories, Livermore, CA*
- ThPT 377 **Evaluation of "Top-down" and "Bottom-up" Approaches to the Identification of Mutations in Atlantic Cod Hemoglobins**; Zhixia Yan; Wendell P Griffith; Igor A Kaltashov; *University of Massachusetts, Amherst, MA*
- ThPT 378 **Proteomic Analysis of Permafrost Bacteria - Protein Expression of *Exiguobacterium 255-15* at Low Temperatures**; Yinghua Qiu; David Lubman; *University of Michigan, Ann Arbor, MI*
- ThPT 379 **Proteomic Analysis of the *C. albicans* Using Sequential HPLC and Tandem MS Analysis Using a Quadrupole-Linear Ion Trap**; Roger O. Ebanks<sup>1</sup>; Kenneth Chisholm Chisholm<sup>1</sup>; Stewart McKinnon<sup>1</sup>; Malcom Whiteway<sup>2</sup>; Devanand M. Pinto<sup>1</sup>; <sup>1</sup>NRC - Institute for Marine Biosciences, Halifax, NS Canada; <sup>2</sup>NRC - Biotechnology Research Institute, Montreal, PQ Canada
- ThPT 380 **A Linear Ion Trap Based System for Comprehensive Microbial Shotgun Proteomics**; Tiansong "Tony" Wang; Qiangwei Xia; Fred Taub; Murray Hackett; *University of Washington, Seattle, WA*
- ThPT 381 **Proteomic Analysis of Differentially Expressed Secreted Proteins of *Aspergillus Flavus* Using Two-Dimensional Gel Electrophoresis, MALDI-TOF and Tandem Mass Spectrometry**; Martha L. Medina<sup>1</sup>; Urban A. Kiernan<sup>2</sup>; Paul A. Haynes<sup>3</sup>; Wilson A. Francisco<sup>1</sup>; Linda A. Brecci<sup>3</sup>; <sup>1</sup>Arizona State University, Phoenix, AZ; <sup>2</sup>Intrinsic Bioprobes Inc, Tempe, AZ; <sup>3</sup>The University of Arizona, Tucson, AZ
- ThPT 382 **Enhanced Characterization of the Membrane Proteome from the Anoxygenic Phototrophic Bacterium *Rhodospseudomonas palustris* Under All Major Metabolic States**; Nathan C. VerBerkmoes<sup>1</sup>; Patricia Lankford<sup>1</sup>; Anthony P. Fejes<sup>2</sup>; Michael B. Strader<sup>1</sup>; David L. Tabb<sup>1</sup>; Dale Pelletier<sup>1</sup>; Gregory B. Hurst<sup>1</sup>; J.T. Beatty<sup>2</sup>; Caroline S. Harwood<sup>3</sup>; Robert F. Tabita<sup>4</sup>; Robert L. Hettich<sup>1</sup>; Frank W. Larimer<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory, Oak Ridge, TN; <sup>2</sup>University of British Columbia, Vancouver, BC, CANADA; <sup>3</sup>The University of Iowa, Iowa City, IA; <sup>4</sup>Ohio State, Columbus, OH
- ThPT 383 **Proteom Analysis for Virulence of *Burkholderia cenocepacia* strains Isolated from Cystic Fibrosis Patients**; Kyu H. Park; John J. Lipuma; David M. Lubman; *University of Michigan, Ann Arbor, Michigan*
- ThPT 384 **Comprehensive Proteome Profiling of *Escherichia coli* Using Multidimensional HPLC Coupled to MALDI and ESI MS/MS**; Rui Chen; Xinlei Yu; Nan Zhang; Hui Dai; Liang Li; *University of Alberta, Edmonton, AB, Canada*
- ThPT 385 **Analytical and Informatics Approaches to the Study of the Trypanosome Flagellar Proteome**; Sarah R Hart<sup>1</sup>; Neil Portman<sup>2</sup>; Richard Broadhead<sup>3</sup>; Paul McKean<sup>2</sup>; Keith Gull<sup>3</sup>; Simon J Gaskell<sup>1</sup>; <sup>1</sup>UMIST, Manchester, UK; <sup>2</sup>University of Oxford, Oxford, UK; <sup>3</sup>University of Lancaster, Lancaster, UK
- ThPT 386 **Comparative Proteome Analysis of *Saccharomyces Cerevisiae* Grown in Well-Controlled Chemostat Cultures Limited for Glucose or Ethanol**; Annemieke Kolkman<sup>1</sup>; Maurien MA Olsthoorn<sup>2</sup>; Carola E Heeremans<sup>2</sup>; Albert JR Heck<sup>1</sup>; Monique Slijper<sup>1</sup>; <sup>1</sup>Utrecht University, Utrecht, The Netherlands; <sup>2</sup>DSM Food Specialties, Delft, The Netherlands
- ThPT 387 **De novo Characterization Bio-Depollution Agent by Mass Spectrometry: Nitroreductase from *Bacillus sp***; Ana-Paula Ventura<sup>1</sup>; Philippe Chaignon<sup>2</sup>; Sylvie Cortial<sup>2</sup>; Sylvie Lazereg<sup>1</sup>; Jamal Ouazzani<sup>2</sup>; Thierry Doan<sup>3</sup>; Stephane Aymerich<sup>3</sup>; Frederic Halgand<sup>1</sup>; Olivier Laprevote<sup>1</sup>; <sup>1</sup>ICSN-LSM, Gif-sur-Yvette, France; <sup>2</sup>ICSN-LMA, Gif-sur-Yvette, France; <sup>3</sup>INRA-LMGM, Thiverval-Grignon, France
- ThPT 388 **Analysis of Protein Complexes from *Rhodospseudomonas palustris* by Mass Spectrometry**; Gregory B Hurst; Dale A Pelletier; Robert L Hettich; Keiji G Asano; Michael B Strader; David L Tabb; Nathan C VerBerkmoes; Trish K Lankford; Linda J Foote; Yisong Wang; Stephen J Kennel; Frank W Larimer; *Oak Ridge National Laboratory, Oak Ridge, TN*
- ThPT 389 **The Identification of *Trypanosoma cruzi* Surface Proteins Using Bioanalytical Mass Spectrometry**; Cameron F. Cavola; James Atwood; Todd Minning; Brent Weatherly; Rick Tarleton; Ron Orlando; *The University of Georgia, Athens, GA*
- ThPT 390 **MALDI-TOF-MS identification of myxoma virus major structural proteins**; Alicja Zachertowska<sup>1</sup>; Dyanne Brewer<sup>1</sup>; David H Evans<sup>2</sup>; <sup>1</sup>University of Guelph, Guelph, ON Canada; <sup>2</sup>University of Alberta, Edmonton, AB Canada
- ThPT 391 **A Proteomic Approach to the Study of Genomic Change Associated with Adaptive Evolution in Bacteria**; David W. Robinette; Kevin Ramkissoon; Eric Hamlett; Ming Yu; Michael C. Giddings; *University of North Carolina, Chapel Hill, NC*
- THPT 392 **Proteomic Mapping of the Trypanosoma Cruzi Lifecycle by Multidimensional Chromatography and LC-MS/MS**; James A Atwood III<sup>1</sup>; Brent Weatherly<sup>2</sup>; Todd Minning<sup>2</sup>; Cameron Cavola<sup>1</sup>; Rick Tarleton<sup>2</sup>; Ron Orlando<sup>1</sup>; <sup>1</sup>CCRC University of Georgia, Athens, Ga; <sup>2</sup>CTEGD University of Georgia, Athens, Ga
- ThPT 393 **Effects of Sample Workup and Data Acquisition on Bacterial Identification by Capillary LC-ESI MS/MS**



- Rui Chen<sup>1</sup>; Xinlei Yu<sup>1</sup>; Jacek Dworzanski<sup>2</sup>; Peter Snyder<sup>2</sup>; Liang Li<sup>1</sup>; <sup>1</sup>University of Alberta, Edmonton, Canada; <sup>2</sup>US Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD
- ThPT 394 **Rapid Detection of *Yersinia pestis* by Bacteriophage Amplification MALDI-MS**; Leah G. Doan<sup>1</sup>; Jon C. Rees<sup>1</sup>; Kent J. Voorhees<sup>1</sup>; Robert Crawford<sup>2</sup>; <sup>1</sup>Colorado School of Mines, Golden, CO; <sup>2</sup>Armed Forces Institute of Pathology, Washington, DC
- ThPT 395 **Prediction and Identification of Novel Proteins from the Marine Cyanophage S-PM2**; Konstantinos Thalassinou; Susan E. Slade; James H. Scrivens; Martha R. Clokie; Nicholas H. Mann; University of Warwick, Coventry, UK
- ThPT 396 **Assignment of Proteomic Data to Predicted ORFs for an Environmental Bacterium with Sequenced Genome**; Peter Hufnagel<sup>1</sup>; Ulrike Schweiger-Hufnagel<sup>1</sup>; Carsten Baessmann<sup>1</sup>; Detlev Suckau<sup>1</sup>; Catherine Stacey<sup>1</sup>; Ralf Rabus<sup>2</sup>; <sup>1</sup>Bruker Daltonik GmbH, Bremen, Germany; <sup>2</sup>Max-Planck-Institut fuer Marine Mikrobiologie, Bremen, Germany
- ThPT 397 **Proteome Analysis of Cyanobacteria *Synechocystis* sp. PCC6803**; Hitomi Okada<sup>1</sup>; Yoko Ishino<sup>1</sup>; Masahiko Ikeuchi<sup>2</sup>; Hisaaki Taniguchi<sup>3</sup>; <sup>1</sup>RIKEN, Sayo, Japan; <sup>2</sup>University of Tokyo, Tokyo, Japan; <sup>3</sup>University of Tokushima, Tokushima, Japan
- ThPT 398 **MALDI TOF Method for Differentiation of Salmonella Enterica Serovar Enteritidis Strains**; M. Alejandra Rodriguez; Laura Betancor; Marinela Pereira; Jose A. Chabalgoity; Universidad de la Republica, Uruguay, Montevideo, Uruguay
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- PROTEOMICS: MEDICAL APPLICATIONS**
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- ThPU 399 **Proteome Profiling of Osteoblast Differentiation Using ICAT Methods in Combination With SDS-PAGE and LC/MS/MS Analysis**; Takako Miyamoto; Emiko Yamauchi; Shinsuke Kido; Daisuke Inoue; Toshio Matsumoto; Hisaaki Taniguchi; University of Tokushima, Tokushima, Japan
- ThPU 400 **Novel Protein-Protein Interactions in *Candida albicans* using Tandem Affinity Purification (TAP)**; Carsten Corvey<sup>1</sup>; Peter Kötter<sup>2</sup>; Torsten Stein<sup>2</sup>; Karl-Dieter Entian<sup>2</sup>; Michael Karas<sup>1</sup>; <sup>1</sup>Institute for Pharmaceutical Chemistry, Frankfurt/Main, Germany; <sup>2</sup>Institute for Microbiology, Frankfurt/Main, Germany
- ThPU 401 **Investigation of the Ubiquitin-Proteasome Pathway in Muscle Atrophy**; Kristy J. Brown; Eric P. Hoffman; Children's National Medical Center, Washington, DC
- ThPU 402 **Rapid Plasma Extraction Exhibits Personal Proteome Profiles That Are Sensitive to Health Challenges**; Raj S. Kasthuri<sup>1</sup>; Yan Zhang<sup>1</sup>; Nigel S. Key<sup>1</sup>; Bernd Jilma<sup>2</sup>; Gary L. Nelsestuen<sup>1</sup>; <sup>1</sup>University of Minnesota, Minneapolis, MN; <sup>2</sup>Medical University of Vienna, Vienna, Austria
- ThPU 403 **Proteomic Profiling of Bone Marrow Mesenchymal Stem Cells Upon TGF- $\beta$  Stimulation**; Daojing Wang<sup>1</sup>; Jennifer Park<sup>2</sup>; Julia Chu<sup>2</sup>; Ari Krakowski<sup>2</sup>; Kunxin Luo<sup>2</sup>; David J. Chen<sup>1</sup>; Song Li<sup>2</sup>; <sup>1</sup>Lawrence Berkeley National Laboratory, Berkeley, CA; <sup>2</sup>University of California, Berkeley, CA
- ThPU 404 **Characterization of the Albuminome by MALDI-TOF MS and MS/MS**; Rebekah L. Gundry; Todd G McDonald; Shijun Sheng; Jennifer E VanEyck; Robert J Cotter; Johns Hopkins University School of Medicine, Baltimore, MD
- ThPU 405 **The Differential Proteomic Analysis of SARS-CoV infected Vero E6 cells: Investigate the Mechanism of SARS-CoV Pathogenesis and Virulence**; Xiao-Sheng Jiang; Liu-Ya Tang; Jie Dai; Hu Zhou; Quan-Hu Sheng; Lei Zhang; Qi-Chang Xia; Jia-Rui Wu; Rong Zeng; Shanghai Institutes for Biological Sciences, Shanghai, China
- ThPU 406 **Agr-and sar-Regulated Extracellular Proteins of *Staphylococcus aureus***; Richard C. Jones; Ricky D. Edmondson; Jonna D. Moody; Mark E. Hart; NCTR/FDA, Jefferson, AR
- ThPU 407 **Identification of Biomarkers in Ventilator-Associated Lung Injury (VALI) using ICAT and DIGE**; Yurong Guo; Marina Laiko; Roberto Diez; Tatiana Boronina; Joe GN Garcia; Johns Hopkins University, Baltimore, MD
- ThPU 408 **Myeloperoxidase-Mediated Oxidative Modification of Apolipoprotein A-1: Localization of Nitration and Chlorination Sites and Association With Impaired ABCA1-Dependent Cholesterol Efflux**; Lemin Zheng<sup>1</sup>; Megan Settle<sup>1</sup>; Gregory Brubaker<sup>1</sup>; Stanley Hazen<sup>1</sup>; Jonathan Smith<sup>1</sup>; Michael Kinter<sup>1</sup>; <sup>1</sup>Cleveland Clinic Foundation, Cleveland, OH; <sup>2</sup>Cleveland State University, Cleveland, OH; <sup>3</sup>Case Western Reserve University, Cleveland, OH
- ThPU 409 **Profiling of Diabetic Rat Serum by SELDI-TOF Mass Spectrometry**; Avalyn E. Lewis; Charles R. Iden; State University of New York at Stony Brook, Stony Brook, NY
- ThPU 410 **Microscale Protein Fractionation and Orthogonal MALDI TOF MS Facilitates Detection of Differentially Expressed Proteins in Alzheimer's Brain**; Mary F Lopez<sup>1</sup>; Simon Melov<sup>2</sup>; David Bennett<sup>3</sup>; Alvydas Mikulskis<sup>1</sup>; Eva Golenko<sup>1</sup>; Alex Cherkasskiy<sup>1</sup>; Scott Kuzdzal<sup>4</sup>; Susan Kramer<sup>1</sup>; Dan Sissors<sup>1</sup>; <sup>1</sup>PerkinElmer Life and Analytical Sciences, Boston, MA; <sup>2</sup>Buck Institute for Age Research, Novato, CA; <sup>3</sup>Rush Alzheimers Center, Chicago, IL; <sup>4</sup>Perkin Elmer Life and Analytical Sciences, Shelton, CT
- ThPU 411 **A New Approach Using LCMS-MS/MS for the Characterization of Proteins from the Urine of Patients Diagnosed with Primary Amyloidosis**; Roger Theberge; Lawreen H Connors; Tatiana Prokaeva; Mark McComb; Martha Skinner; Catherine E Costello; Boston University School of Medicine, Boston, MA
- ThPU 412 **Proteomics of the Injured Rat Sciatic Nerve Reveals Protein Expression Dynamics During Regeneration**; Connie R Jimenez<sup>1</sup>; Floor J Stam<sup>1</sup>; Fred De Winter<sup>2</sup>; Ka Wan Li<sup>1</sup>; Roel Van der Schors<sup>1</sup>; Martin Hornshaw<sup>3</sup>; Joost Verhaagen<sup>2</sup>; August B Smit<sup>1</sup>; <sup>1</sup>Vrije Universiteit, Amsterdam, The Netherlands; <sup>2</sup>Netherlands Institute for Brain Research, Amsterdam, The Netherlands; <sup>3</sup>Applied Biosystems, Warrington, UK
- ThPU 413 **Mapping the Antemortem Cerebrospinal Fluid Proteome**; Erin J Finehout; Zsofia Franck; Kelvin H Lee; Cornell University, Ithaca, NY
- ThPU 414 **Extension of Proteomic Technology to Study Brain-related Diseases**; Richard C. Barry<sup>1</sup>; Heather M. Mottaz<sup>1</sup>; Desmond J. Smith<sup>2</sup>; Daniel M. Sforza<sup>2</sup>; Eric A. Livesay<sup>1</sup>; David G. Camp II<sup>1</sup>; Richard D. Smith<sup>1</sup>; <sup>1</sup>Pacific Northwest National Laboratory, Richland, WA; <sup>2</sup>UCLA, Los Angeles, CA
- ThPU 415 **An Analysis of Human Pituitary Proteome Micro-Heterogeneity**; Xianquan Zhan; Dominic M. Desiderio; University of Tennessee Health Science Center, Memphis, TN
- ThPU 416
- ThPU 417 **Proteomic Analysis of Rat-Brain Microvessels in an in vivo Stroke Model Using Laser-Capture-Microdissection Coupled With ICAT and nanoLC-MS and MS/MS**; Arsalan S. Haqqani; Kenneth Chan; Philippe Valade; Brandon Smith; Momir Nesic; John F. Kelly; Danica B. Stanimirovic; Institute for Biological Sciences, NRC, Ottawa, Canada

- ThPU 418 **Urine Protein Profiling With the Molecular Scanner and MALDI-TOF MS;** Alireza Vaezzadeh<sup>1</sup>; Catherine Zimmermann-Ivol<sup>1</sup>; Veronique Converset<sup>1</sup>; Solange Moll<sup>2</sup>; Garry L. Corthals<sup>1</sup>; Carla Pasquarello<sup>1</sup>; Denis F. Hochstrasser<sup>1</sup>; <sup>1</sup>*Biomedical Proteomics Research Group-BPRG, Geneva, Switzerland*; <sup>2</sup>*Clinical Pathology, Geneva University Hospital, Geneva, Switzerland*
- ThPU 419 **Secreted Proteins of the Human Pathogenic Fungus *Aspergillus fumigatus*;** Charisa Cottonham<sup>1</sup>; James L. Kerwin<sup>1</sup>; Jean-Paul Latge<sup>2</sup>; Richard A. Calderone<sup>3</sup>; Joseph A. Loo<sup>1</sup>; <sup>1</sup>*University of California, Los Angeles, CA*; <sup>2</sup>*Institut Pasteur, Paris, France*; <sup>3</sup>*Georgetown University, Washington, DC*
- ThPU 420 **Directed MS-MS Approach for Identifying Biomarkers from the Effects of Two Drugs in a Rat Model for Inflammation;** Joseph P. M. Hui; Sylvie Plante; Sylvain Tessier; Heather Butler; Eric Thibaudeau; Marc Pinard; Alain Carrier; Pierre Thibault; *Caprion Pharmaceuticals, Montreal, Canada*
- ThPU 421 **Molecular Classification of Ovarian Serous Carcinoma Using Differential Mapping Method;** Yanfei Wang; David M. Lubman; *University of Michigan, Ann Arbor, MI*
- ThPU 422 **Characterization of Posttranslationally Modified Superoxide Dismutase in Amyotrophic Lateral Sclerosis;** Jeff Agar<sup>1</sup>; Miranda Tradewell<sup>1</sup>; Heather Durham<sup>1</sup>; Robert Masse<sup>2</sup>; Bernard F. Gibbs<sup>2</sup>; <sup>1</sup>*McGill University, Montreal, Canada*; <sup>2</sup>*MDS Pharma Services, Montreal, Canada*
- ThPU 423 **Understanding Disease Progression in Rheumatoid Arthritis using Quantitative Protein Profiling by 1D and 2D/LC-MS techniques;** Hua Lin; Weixun Wang; Sushmita Roy; Jeffery Satkofsky; Praveen Kumar; Markus Anderle; Aaron Kantor; Christopher H. Becker; *SurroMed, Inc., Menlo Park, CA*
- ThPU 424 **Proteomic Analysis of Albumin-bound Proteins in Serum;** Lisa J. Zimmerman; Daniel C. Liebler; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*
- ThPU 425 **2D-DIGE and ICAT Mass Spectrometry Analysis of Frontotemporal Dementia With Motor Neuron Disease (FTD-MND);** Thomas T. Chou; Deepak M. Sampathu; Ian A. Blair; John Q. Trojanowski; Virginia M.-Y. Lee; *University of Pennsylvania, Philadelphia, PA*
- ThPU 426 **Characterization Of Low Abundance Proteins in Human Blood Plasma by Reversed Phase Liquid Chromatography and Advanced FTICR Tandem Mass Spectrometry;** Bogdan Bogdanov; Andrey Vilkov; Christophe D. Masselon; Ljiljana Paša-Tolic; Nikola Tolic; Wei-Jun Qian; David C. Prior; Gordon A. Anderson; David G. Camp II; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*
- ThPU 427 **Interactions of Chlorisondamine and Chlorisondamine Acetyls with an Epitope of the  $\alpha$ -2 Neuronal Acetylcholine Nicotinic Receptor Subunit;** Hay-Yan J. Wang<sup>1</sup>; Andrew Taggi<sup>2</sup>; Jerrold Meinwald<sup>2</sup>; Roy Wise<sup>1</sup>; Amina S. Woods<sup>1</sup>; <sup>1</sup>*NIDA-IRP, NIH, DHHS, Baltimore, MD*; <sup>2</sup>*Cornell University, Ithaca, NY*
- ThPU 428 **Identification of a Protein Expression Profile for ARDS by MALDI-TOF Mass Spectrometry;** Charlotte D. Mobarak<sup>1</sup>; R. P. Baughman<sup>3</sup>; Steven I. Rennard<sup>4</sup>; Rogene F. Henderson<sup>2</sup>; <sup>1</sup>*University of New Mexico, Albuquerque, NM*; <sup>2</sup>*Lovelace Respiratory Research Institute, Albuquerque, NM*; <sup>3</sup>*University of Cincinnati, Cincinnati, OH*; <sup>4</sup>*University of Nebraska Medical Center, Omaha, NE*
- ThPU 429 **Proteomic Analysis of Postmortem Amyloid Plaques Isolated by Laser Capture Microdissection;** Lujian Liao; Dongmei Cheng; Jian Wang; Duc M. Duong; Tatyana Losik; Marla Gearing; Howard D. Rees; James J. Lah; Allan I. Levey; Junmin Peng; *Emory University, Atlanta, GA*
- ThPU 430 **Characterization of the Human Cerebrospinal Fluid Proteome by LC-MALDI/TOF-TOF;** Eric Eccleston; Adeline Vanderver; Yatrib Hathout; *Children's National Medical Center, Washington, DC*
- ThPU 431 **Complementary Proteomic Strategies Reveal a Global Picture of Toxoplasma Proteins that Participate in Parasite Invasion and Survival During Infection;** Xing W Zhou<sup>1</sup>; Björn F Kafsack<sup>1</sup>; Robert N Cole<sup>2</sup>; Rong F Shen<sup>3</sup>; Vern B Carruthers<sup>1</sup>; <sup>1</sup>*Johns Hopkins Bloomberg School of Public Health, Baltimore, MD*; <sup>2</sup>*Johns Hopkins School of Medicine, Baltimore, MD*; <sup>3</sup>*National Heart, Lung, and Blood Institute, NIH, Bethesda, MD*
- ThPU 432 **Identification of Intact Mycobacteria by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry;** Justin M. Hettick<sup>1</sup>; Paul D. Siegel<sup>1</sup>; Janet P. Simpson<sup>1</sup>; Gerald H. Mazurek<sup>2</sup>; David N. Weissman<sup>1</sup>; <sup>1</sup>*Nat. Inst. for Occupational Safety and Health, Morgantown, WV*; <sup>2</sup>*Centers for Disease Control and Prevention, Atlanta, GA*
- ThPU 433 **Optimization of Sample Preparation for the Analysis of Blood Serum by MALDI MS;** Anne Callesen<sup>1</sup>; Shabaz Mohammed<sup>1</sup>; Jakob Bunkenborg<sup>1</sup>; Per Jorgensen<sup>2</sup>; Torben Kruse<sup>2</sup>; Ole Mogensen<sup>2</sup>; Werner Vach<sup>2</sup>; Ole N. Jensen<sup>1</sup>; <sup>1</sup>*University of Southern Denmark, Odense, Denmark*; <sup>2</sup>*Odense University Hospital, Odense, Denmark*
- ThPU 434 **The Proteomic Analysis of Tracheo-Bronchial Mucus Gel: A Novel Approach to Analyse the Mucus Proteome Using Shotgun Proteomics;** Mehmet Kesimer; Raymond Pickles; Genevieve DeMaria; John Sheehan; *University of North Carolina, Chapel Hill, NC*
- ThPU 435 **Large-Scale Identification of Human Oral Fluid Proteins by Liquid Chromatography With Electrospray Ionization Quadrupole Time-of-Flight Mass Spectrometry;** Shen Hu; Yongming Xie; Rachel Loo; Joseph Loo; David Wong; *University of California, Los Angeles, CA*
- ThPU 436 **Biomarker Profiling of Spinal Cord Tissue After Spinal Cord Injury;** Jason B. Dunsmore; In-Su Hahn; Clement Echetebe; Michael Hughes; Linghui Nie; Anthony M. Haag; Alexander Kurosky; David J. McAdoo; *The University of Texas Medical Branch, Galveston, TX*
- ThPU 437 **Comparison of Fibromyalgia/Chronic Fatigue Syndrome, Persian Gulf Illness and Control Groups;** Begoña Casado<sup>1</sup>; Xiaoyu Yang<sup>2</sup>; Sonja Hess<sup>3</sup>; Gail Whalen<sup>1</sup>; Lewis K Pannell<sup>4</sup>; Daniel D Clauw<sup>2</sup>; James N Baraniuk<sup>1</sup>; <sup>1</sup>*Georgetown University, Washington, DC*; <sup>2</sup>*NIMH/NIH, Bethesda, MD*; <sup>3</sup>*NIDDK/NIH, Bethesda, MD*; <sup>4</sup>*University of South Alabama, Alabama, AL*; <sup>5</sup>*University of Michigan, Ann Arbor, MI*
- ThPU 438 **Proteomic Identification of Common Protein Targets of Different Dietary Polyphenols in a Transgenic Model of Neurodegeneration;** Jessy Deshane; Patti Hall; Landon Wilson; Marion Kirk; Stephen Barnes; Sreelatha Meleth; Helen Kim; *University of Alabama at Birmingham, Birmingham, AL*
- ThPU 439 **Toward Diagnostic Markers of Multiple Sclerosis: Protein Expression Profiling and Identification in Cerebrospinal Fluid and Serum;** Sushmita M. Roy<sup>1</sup>; Markus Anderle<sup>1</sup>; Hua Lin<sup>1</sup>; Praveen Kumar<sup>1</sup>; Jeffrey Satkofsky<sup>1</sup>; Kevin O'Connor<sup>2</sup>; David Hafler<sup>2</sup>; Aaron Kantor<sup>1</sup>; Christopher H. Becker<sup>1</sup>; <sup>1</sup>*SurroMed Inc., Menlo Park, CA*; <sup>2</sup>*Brigham and Womens Hospital, Boston, MA*
- ThPU 440 **Proteomics Analysis of the Rat Brain Synaptic Proteins;** Ka Wan Li<sup>1</sup>; Karl-Heinz Smalla<sup>2</sup>; Eckart D. Gundelfinger<sup>2</sup>; Rod Watson<sup>3</sup>; Martin P. Hornshaw<sup>3</sup>; August B. Smit<sup>1</sup>; <sup>1</sup>*Free University, Amsterdam, The Netherlands*; <sup>2</sup>*Leibniz*

*Institute for Neurobiology, Magdeburg, Germany;*<sup>3</sup>*Applied Biosystems, Warrington, UK*

- ThPU 441 **Application of a Novel Protein Chip Technology for Identification of Serum Markers for Early Detection of Severe Acute Respiratory Syndrome;** Chu-Ling Wen; Lu-Ping Chow; *College of Medicine, National Taiwan University, Taipei, Taiwan*
- ThPU 442 **Differential Protein Expression in Lung Cancer Metastasis;** King F. Kwong; Shabina Ali-Khan; Lindsay B. Cooper; Peter L. Gutierrez; *University of Maryland Greenebaum Cancer Center, Baltimore, MD*

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**PROTEOMICS: NEW & IMPROVED**

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- ThPV 443 **Rapid Sample Clean-up Procedure for Analysis of Cancer Cell Line Proteins Using Capillary Electrophoresis interfaced to Electrospray-IT-TOF Mass Spectrometry;** Chul S Yoo; David M Lubman; Steve J Parus; *University of Michigan, Ann Arbor, MI*
- ThPV 444 **Estimation of Protein Contents by Protein Abundance Index Approach Using LCMS Data;** Yasushi Ishihama<sup>1</sup>; Yoshiya Oda<sup>1</sup>; Norimasa Miyamoto<sup>1</sup>; Toshitaka Sato<sup>1</sup>; Takeshi Nagasu<sup>1</sup>; Juri Rappsilber<sup>3</sup>; Matthias Mann<sup>2</sup>; <sup>1</sup>*Eisai Co., Ltd., Tsukuba, Japan;* <sup>2</sup>*University of Southern Denmark, Odense, Denmark;* <sup>3</sup>*The FIRC Institute for Molecular Oncology, Milan, Italy*
- ThPV 445 **Capillary LC-AP/MALDI-Ion Trap Mass Spectrometry: a Comparison With LC-MALDI-TOF and LC-ESI-qTOF for the Identification of Tryptic Peptides;** Colin S. Creaser<sup>1</sup>; Philip S. Green<sup>2</sup>; Peter M. Kilby<sup>2</sup>; Lucy V. Ratchliffe<sup>1</sup>; <sup>1</sup>*Nottingham Trent University, Nottingham, UK;* <sup>2</sup>*Syngenta, Bracknell, UK*
- ThPV 446 **Automated ESI Control on Variable Flow Gradient Nanobore LC-MS;** James P. Murphy III<sup>1</sup>; Gary A. Valaskovic<sup>1</sup>; Karen M. Hahnenberger<sup>2</sup>; David W. Neyer<sup>2</sup>; <sup>1</sup>*New Objective Inc, Woburn, MA;* <sup>2</sup>*Eksigent Technologies, Livermore, CA*
- ThPV 447 **“Exact” Protein Identification Based on Accurate MW and pI Obtained from ESI-TOF and Chromatofocusing;** Jia Zhao<sup>1</sup>; Kan Zhu<sup>1</sup>; Fred Miller<sup>2</sup>; David Lubman<sup>1</sup>; <sup>1</sup>*University of Michigan, Ann Arbor, MI;* <sup>2</sup>*Wayne State university, Detroit, MI*
- ThPV 448 **Proteomics and Phosphoproteomics of Specific Human Brain Regions Using a Combination of High Resolution Biopolymer FTICR-MS and Elemental LA-ICP-MS;** Eugen Damoc<sup>1</sup>; J. Susanne Becker<sup>1</sup>; Myroslav Zoriy<sup>2</sup>; Gabor Juhacz<sup>2</sup>; Miklos Palkovits<sup>3</sup>; J. Sabine Becker<sup>2</sup>; Michael Przybylski<sup>1</sup>; <sup>1</sup>*University of Konstanz, Konstanz, Germany;* <sup>2</sup>*Research Center Juelich, Juelich, Germany;* <sup>3</sup>*Semmelweis University, Budapest, Hungary*
- ThPV 449 **The Application of Intact Protein Mass Spectrometry Using Ion-Ion Reaction to Top-Down Proteomics of Human Cancer Cell Lines;** Fang Yan; Min He; Jason M Hogan; Sandra R Rossie; Scott A McLuckey; *Purdue University, West Lafayette, IN*
- ThPV 450 **A Narrow Band pI Method for Interlysate Comparisons of Ovarian Cancers;** Yi Zhu *University of Michigan, Ann Arbor, Michigan*
- ThPV 451 **Millisecond H/D Exchange Combined with Electrospray Ionization Mass Spectrometry to Study Protein's Structure;** Ming-Wei Huang; Hsuan-Chung Lin; Cheng-Hui Yuan; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*
- ThPV 452 **Proteomic Study of Leukemia Cell Line (K562/CR3) Using Free Flow Electrophoresis (FFE) Coupled With LC/MS;** Yonghui Wang<sup>1</sup>; Darryl Palmer-Toy<sup>2</sup>; Gerhard Weber<sup>3</sup>; Christoph Eckerskorn<sup>3</sup>; William S. Hancock<sup>1</sup>; <sup>1</sup>*Barnett Institute, Northeastern University, Boston, MA;*
- <sup>2</sup>*Renal Unit, Massachusetts General Hospital, Boston, MA;* <sup>3</sup>*Tecan Munich, Kirchem, Germany*
- ThPV 453 **Soft-Landing on Active Liquid Chips: a New Approach to Protein Purification and Identification;** Bogdan Gologan; Zoltan Takats; Justin M. Wiseman; Justin Oliver; V. Jo Davison; R. Graham Cooks; *Purdue University, West Lafayette, IN*
- ThPV 454 **An Improved Automated 2D LC/MS Method Using Semi-Continuous Gradients for the Analysis of Proteome Samples of Highest Complexity;** Edgar Nägele; Martin Vollmer; Partic Höerth; *Agilent Technologies, Waldbronn, Germany*
- ThPV 455 **Comparative Proteomic Analysis of Human and Mouse Serum/Plasma by Gel-LC-MS/MS;** Vadira B. Bhat; Man Ho Choi; John S. Wishnok; Steven R. Tannenbaum; *Massachusetts Institute of Technology, Cambridge, MA*
- ThPV 456 **Protein Characterization by Online Capillary Isoelectric Focusing, Reverse Phase Liquid Chromatography and Mass Spectrometry;** Feng Zhou; Murray V. Johnston; *University of Delaware, Newark, DE*
- ThPV 457 **New Approach to LC/MS Analysis of Phosphotyrosine Peptides Using Immunoaffinity Enrichment;** Anne Zeck; Li Zang; Barry L. Karger; *Northeastern University, Boston, MA*
- ThPV 458 **Trypsin Auto-Proteolysis Products As a Source of False-Positive Assignments from LCMS/MS Analyses;** Ole Tang Sørensen; Vibeke Jørgensen; Dan B. Kristensen; Jan C. Brønd; Keiryn L. Bennett; Jacek R. Wisniewski; Alexandre V. Podtelejnikov; *MDS Inc. Denmark, Odense, Denmark*
- ThPV 459 **Solution Based Separation (IEF-LC) of Proteins for Top-Down vs. Bottom-Up Proteomics;** Joy M Ginter; Murray V Johnston; *University of Delaware, Newark, DE*
- ThPV 460 **Formaldehyde Cross-Linking Coupled to Mass Spectrometry-Based Protein Identification: A Novel Approach for Identifying Protein-Protein Interactions;** Julian Vasilescu; Kast Juergen; *University of British Columbia, Vancouver, BC, Canada*
- ThPV 461 **Nano-LC and Two-Dimensional Nano-LC-Nano-ESI-MS/MS Analysis by Using a Single Capillary LC System and Its Application in Human Plasma Proteome Characterization;** Liguo Song; Latif Kazim; Khin Marlar; Kyoung-Soo Choi; Yuanhong Wei ; Young-Mee Park; *Roswell Park Cancer Institute, Buffalo, NY*
- ThPV 462 **Using Computational and Chemical Derivatization Techniques with Mass Spectrometry to Characterize Protein-Protein Interactions;** Philip J Brownridge; Simon J Hubbard; Simon J Gaskell; *UMIST, Manchester, UK*
- ThPV 463 **Immobilization of an Enzyme Onto the Inner Wall of a Nanoelectrospray Emitter;** Cheng Zhao; Honghai Jiang; Douglas R. Smith; Stanley Bruckenstein; Troy D. Wood; *SUNY, Buffalo, Buffalo, NY*
- ThPV 464 **Throughput Enhancement in 2D Nano-LC/MS/MS for the Analysis of Caenorhabditis Elegans Proteome;** Viviane Tschäppät; Luca Signor; Emmanuel Varesio; Gérard Hopfgartner; *University of Geneva, Geneva, Switzerland*
- ThPV 465 **Interfacing Capillary Gel Microfluidic Chips with Laser Desorption Mass Spectrometry;** Mark W Little; Yichuan Xu; Kermit K Murray; *Louisiana State University, Baton Rouge, LA*
- ThPV 466 **Optimization of Peptide Coverage from Protein Tryptic Maps;** Terry D. Cyr; Diane Bertrand; Sylvie M. Fournier; Sophie D'Aoust; J.C. Ethier; Roger Sears; Mary A. Hefford; *Centre for Biologics Research, BGTD, HPFB, HC, Ottawa, ON, Canada*
- ThPV 467 **Identification of Saccharomyces Cerevisiae Low Abundance, Alkaline and Hydrophobic Proteins Using**

**Off-Line Multidimensional Chromatography Mass Spectrometry;** Anabel Fandino; Martin Vollmer; Christian Wenz; Patric Hoerth; Helmuth Elgass; *Agilent Technologies, Waldbronn, Germany*

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**PROTEOMICS: SAMPLE PREPARATION**

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- ThPW 468 **Microwave-Assisted Enzyme Reaction in Various Solvent Systems;** Yen-Peng Ho; Chi-Hong Wu; San-San Lin; *National Dong Hwa Univ, Hualien, Taiwan, ROC*
- ThPW 469 **Ammonium Sulfate Precipitation As a Novel First Dimension in the Multidimensional Analysis of Complex Proteomes;** Allis S. Chien; Andrew W. Guzzetta; *Stanford University, Stanford, CA*
- ThPW 470 **Multi-Dimensional Analysis of Human Serum Proteins;** Patric Hoerth; Martin Vollmer; Christian Wenz; *Agilent Technologies, Waldbronn, Germany*
- ThPW 471 **Reproducible Multidimensional HPLC for Fractionation of Intact Proteins in Comparative Proteome Samples Prior to Analysis by NanoLC/MS/MS;** Peter Kent<sup>1</sup>; Jim Baker<sup>1</sup>; Lori Ann Upton<sup>1</sup>; Tina Guina<sup>2</sup>; Jinzhi Chen<sup>2</sup>; David R Goodlett<sup>2</sup>; <sup>1</sup>*Michrom Bioresources, Auburn, CA*; <sup>2</sup>*University of Washington, Seattle, WA*
- ThPW 472 **Immunoaffinity Depletion of high-abundant proteins from human serum;** Nina Zolotarjova; James Martosella; Gordon Nicol; Liang-Sheng Yang; Cory Szafranski; Barry Boyes; *Agilent Technologies, Wilmington, DE*
- ThPW 473 **Autosampler-Based Protein Identification from Silver Stained Gels by High Sensitivity, High Throughput Hybrid Linear Ion Trap-Fourier Transform Mass Spectrometry (LTQ-FT);** Brendan K Faherty; Ross M Tomaino; Scott A Gerber; Yan Shi; Steven P Gygi; *Harvard Medical School, Boston, MA*
- ThPW 474 **MALDI-TOF and Q-TOF Analysis of BSA Digests Purified On a High Volume Extraction Tip;** William C Hudson; Doreen Pippen; *Varian Inc, Lake Forest, CA*
- ThPW 475 **Improvement of MS/MS Fragment Ion Coverage of the Peptide Including Acidic Residues by Amidation With Amine Constituent Composed of <sup>15</sup>N;** Sadanori Sekiya<sup>1</sup>; Yoshinao Wada<sup>2</sup>; Koichi Tanaka<sup>1</sup>; <sup>1</sup>*Shimadzu Corporation, Kyoto, Japan*; <sup>2</sup>*Research Institute, Osaka MCH, Izumi, Osaka, Japan*
- ThPW 476 **Characterization of Antibodies and Chimeric Ligand/Fc Fusion Protein using Limited Proteolysis and Reversed-Phase HPLC/MS;** Jill Beierle; Andrew Nichols; Pavel Bondarenko; Gary Pipes; Tom Dillon; Gerd Kleemann; *Amgen, Thousand Oaks, CA*
- ThPW 477 **Rational Proteomics; Directed Approaches Towards Targeting Specific Protein Subsets of *Escherichia coli* K12 using heparin HPLC Chromatography;** Matthew M. Champion<sup>1</sup>; Samuel L. Perkins<sup>2</sup>; James C. Hu<sup>2</sup>; David H. Russell<sup>2</sup>; <sup>1</sup>*Applied Biosystems, Foster City, CA*; <sup>2</sup>*Texas A&M University, College Station, TX*
- ThPW 478 **Study of Glycoproteins in Human Serum and Plasma Using Multi-Lectin Affinity Chromatography Coupled with RPLC-MS/MS;** Ziping Yang; William S. Hancock; *Barnett Institute, Northeastern University, Boston, MA*
- ThPW 479 **Analysis of Proteins from Glioblastoma Cells Using Micro-Scale Solution IEF, Analytical 2-D Gels, NanoLC, MALDI-TOFMS and ESI-QTOFMS/MS;** Ann Westman-Brinkmalm; Rita Persson; Kristina Hedberg-Fogel; Lena Brive; Gosta Karlsson; Birgitta Dellheden; Rolf Ekman; Kaj Blennow; *Goteborg University, Molndal, Sweden*
- ThPW 480 **Proteomic Analysis of Human Cerebrospinal Fluid after Pre-Fractionation Using Automated 2D Nano HPLC/MS;** Junich Masuda<sup>1</sup>; Kuniaki Saito<sup>2</sup>; Xiaoyu Yang<sup>1</sup>; Masayuki Nishimura<sup>3</sup>; Teruhisa Ueda<sup>4</sup>; Jeffrey A Kowalak<sup>1</sup>; Sanford P Markey<sup>1</sup>; <sup>1</sup>*National Institute of Mental Health, Bethesda, MD*; <sup>2</sup>*Gifu University, Gifu, Japan*; <sup>3</sup>*Shimadzu Scientific Instruments, Inc., Columbia, MD*; <sup>4</sup>*Shimadzu Corporation, Kyoto, Japan*
- ThPW 481 **Organelle Enrichment for Protein Identification and Subcellular Localization in the Mouse Liver and Brain Tissues;** Randy J. Arnold; Chet Linson; Petra Hrcirova; Milos V. Novotny; *Indiana University, Bloomington, IN*
- ThPW 482 **Formic Acid Oxidation as an Alternative to Reduction and Alkylation of Cysteines during In-gel Digests;** Richard J Jacob<sup>2</sup>; Andrew Thompson<sup>1</sup>; Bertran Gerrits<sup>1</sup>; Rainer Cramer<sup>1</sup>; <sup>1</sup>*Ludwig Institute for Cancer Research, London, UK*; <sup>2</sup>*University College London, London, UK*
- ThPW 483 **Optimization of Reversed-Phase Separations of Immunodepleted Human Serum Proteins for Enhancing Protein Identification;** James Martosella<sup>1</sup>; Nina Zolotarjova<sup>1</sup>; Gordon Nicol<sup>1</sup>; Christine Miller<sup>2</sup>; Barry Boyes<sup>1</sup>; Hongbin Liu<sup>1</sup>; Robert Ricker<sup>1</sup>; <sup>1</sup>*Agilent Technologies, Wilmington, DE*; <sup>2</sup>*Agilent Technologies, Santa Clara, CA*
- ThPW 484 **Rapid Clean-Up, Simplification and Identification of Protein Mixtures using Fast Gradients with LC-MALDI Tandem TOF MS Analysis;** Sally Webb<sup>1</sup>; Matthew Willetts<sup>2</sup>; <sup>1</sup>*Applied Biosystems Foster City, Foster City, CA*; <sup>2</sup>*Applied Biosystems Framingham, Framingham, MA*
- ThPW 485 **Microwave-Assisted Protein Hydrolysis With Formic Acid As a Rapid Alternative to Enzymatic Digestion;** Gerald N. Rechberger<sup>1</sup>; Bimbisar Desai<sup>2</sup>; Oliver C. Kappe<sup>2</sup>; Manfred Kollroser<sup>3</sup>; <sup>1</sup>*Institute of Molecular Biology and Biochemistry, Graz, Austria*; <sup>2</sup>*Institute of Chemistry, Graz, Austria*; <sup>3</sup>*Institute of Forensic Medicine, Graz, Austria*
- ThPW 486 **Nanoliter Solid Phase Extraction (SPE) Using Chromatographic Hollow Fibers for Sample Preparation for the Mass Spectrometry;** Mukta M. Shukla<sup>1</sup>; Ashok K. Shukla<sup>1</sup>; Vladimir M. Doroshenko<sup>2</sup>; Nelli I. Taranenko<sup>2</sup>; <sup>1</sup>*Glygen Corp., Columbia, MD*; <sup>2</sup>*MassTech, Inc., Columbia, MD*
- ThPW 487 **Purification of Peptides from Serum and Plasma for Mass Spectrometry;** Sara Gutierrez<sup>1</sup>; Anja Dedeo<sup>1</sup>; Elena Chernokalskaya<sup>1</sup>; Alexander Lazarev<sup>2</sup>; Jack Leonard<sup>1</sup>; <sup>1</sup>*Millipore Corporation, Danvers, MA*; <sup>2</sup>*Proteome Systems, Ltd., Woburn, MA*
- ThPW 488 **Improved Digestion Efficiency and Peptide Recovery of Membrane Proteins with Iodoacetic Acid Pre-treatment;** Holly D. Coughenour; Charles M. Thompson; *University of Montana, Missoula, MT*
- ThPW 489 **A Comparison of N-Terminal Sequencing Using Different Sulphonation Reagents and PSD/CID-TOF/TOF Methodologies;** Mark D Mills; David J Evason; Vic Parr; Stephen Thompson; Alexis J Polley; *SAI, Manchester, UK*
- ThPW 490 **Analysis of Urinary Proteins Concentrated by Liquid Electrophoresis With or Without Mixture Simplification Prior to LC-MALDI and LC-ESI MS;** Jennifer A. Burgess; Carla Pasquarello; Jean-Charles Sanchez; Denis F. Hochstrasser; Garry L. Corthals; *Biomedical Proteomics Research Group, Geneva, Switzerland*
- ThPW 491 **IR and UV MALDI for Whole-organism Proteomics;** Gervas E. Assey; Mark W. Little; Yichuan Xu; Xia Zhang; Kermit K. Murray; *Louisiana State University, Baton Rouge, Louisiana*
- ThPW 492 **Reproducible Sample Preparation Methods: A Key Step for High-Resolution Proteome Analysis;** Sven Andrecht<sup>1</sup>; Afsaneh Abdolzade-Bavil<sup>1</sup>; Karen Witt

- Blease<sup>3</sup>; Scott Hayes<sup>2</sup>; Lothar Goretzki<sup>3</sup>; Maria Wehsling<sup>1</sup>; Doris Matheis<sup>1</sup>; Robertus Hendriks<sup>1</sup>; Jonas Anders<sup>1</sup>; <sup>1</sup>Merck KGaA, LSP R&D MDA, Darmstadt, Germany; <sup>2</sup>EMD Biosciences Inc., Novagen, Madison, WI; <sup>3</sup>EMD Biosciences Inc., Calbiochem, San Diego, CA
- ThPW 493 **Sample Preparation Methods for Enhanced Phosphopeptide Detection and Sequencing by IMAC and MALDI MS/MS;** Allan Stensballe; Ole Hoerning; Sven Kjellstrom; Ole N. Jensen; *University of Southern Denmark, Odense, Denmark*
- ThPW 494 **Dealing with the Plasma Proteome: A New Method Based on the Chromatographic Fractionation of Plasma Proteins;** Konstantinos Petritis<sup>1</sup>; JeongKwon Kim<sup>1</sup>; Jon M. Jacobs<sup>1</sup>; Wei-Jun Qian<sup>1</sup>; Andy Alpert<sup>2</sup>; Amanda G. Paulovich<sup>3</sup>; Heidi Zhang<sup>3</sup>; Christopher J. Kemp<sup>3</sup>; Karen S. Kelly-Spratt<sup>3</sup>; David G. Camp II<sup>1</sup>; Richard D. Smith<sup>1</sup>; <sup>1</sup>*Pacific Northwest National Laboratory, Richland, WA*; <sup>2</sup>*PolyLC Inc., Columbia, MD*; <sup>3</sup>*Fred Hutchinson Cancer Research Center, Seattle, WA*
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- TOXICOLOGY**
- ThPX 495 **LC-MS/MS Identification and Yeast Polymerase eta Bypass of a Novel gamma-Irradiation-induced Intrastrand Crosslink Lesion G[8-5]C;** Chunang Gu; Yinsheng Wang; *University of California, Riverside, CA*
- ThPX 496 **Charge Derivatization and Ion Trap LC/MS/MS with Library Matching for the Analysis of Glucuronide Conjugates;** Anna M. Przyborowska; David A. Cowan; John M. Halket; *King's College London, London, UK*
- ThPX 497 **Detection and Quantification of N-(deoxyguanosine-8-yl)-4-aminobiphenyl in Human Pancreas Samples using Capillary Liquid Chromatography/Microelectrospray/Mass Spectrometry;** Elaine M. Ricicki<sup>1</sup>; S. Dayana Argoti<sup>1</sup>; Fred Kadlubar<sup>2</sup>; Candee Teitel<sup>2</sup>; Robert Kane<sup>3</sup>; Jack Cunniff<sup>3</sup>; Paul Vouros<sup>1</sup>; <sup>1</sup>*Barnett Institute, Boston, MA*; <sup>2</sup>*National Center for Toxicological Research, Jefferson, AR*; <sup>3</sup>*Thermo Electron Corporation, San Jose, CA*
- ThPX 498 **Determination of Particulate Matter Toxicity Through Designing Particulate Matter, and the Monitoring the Acute Inflammation Response;** George Agnes Simon *Fraser University, Burnaby, Canada*
- ThPX 499 **On-line Electrochemical Oxidation Used with HPLC-MS for the Study of Reactive Drug Intermediates;** Richard King<sup>1</sup>; Christine Dieckhaus<sup>1</sup>; Nicole Nitkowski<sup>1</sup>; Paul Gamache<sup>2</sup>; <sup>1</sup>*Merck & Co., Inc., West Point, PA*; <sup>2</sup>*ESA, Inc., Chelmsford, MA*
- ThPX 500 **Quantitation of Aristolochic Acids I and II from *Aristolochia clematitis* and *Aristolochia manchuensis* by Negative Ion LC/MS/MS;** Robert A. Rieger; Andrea Fernandes; Mian Long; Arthur P. Grollman; Charles R. Iden; *State University of New York at Stony Brook, Stony Brook, N.Y.*
- ThPX 501 **In vitro and In vivo Interactions of Oxaliplatin with Blood Proteins and Clinical Implications;** Xing-Fang Li<sup>1</sup>; Rupasri Mandal<sup>1</sup>; Robyn Kalke<sup>1</sup>; Michael Sawyer<sup>2</sup>; <sup>1</sup>*University of Alberta, Edmonton, AB, Canada*; <sup>2</sup>*Cross Cancer Institute, Edmonton, AB, Canada*
- ThPX 502 **Evaluation of NNAL in Rat Urine as a Biomarker for the Tobacco-Specific Nitrosamine NNK in Mainstream Tobacco Smoke Using LC-MS/MS;** Gary D. Byrd; Buddy G. Brown; Paul H. Ayres; Michael W. Ogden; *R. J. Reynolds Tobacco Company, Winston Salem, NC*
- ThPX 503 **Phosphoprotein Analysis of Mouse Liver Treated With Microcystin;** Susumu Imanishi; Masahiko Tachi; Ken-ichi Harada; *Meijo University, Nagoya, Japan*
- ThPX 504 **Quantitation of p-Cresol Sulfate in Prempro Tablets;** Benjamin M Johnson<sup>1</sup>; Aarti Sawant<sup>1</sup>; Judy L Bolton<sup>1</sup>; Richard B. Van Breemen<sup>1</sup>; <sup>1</sup>*University of Illinois College of Pharmacy, Chicago, IL*; <sup>2</sup>*UIC/NIH Center for Botanical Dietary Supplements, Chicago, IL*
- ThPX 505 **Application of LTQ-FTMS to Metabonomic Profiling;** Bethanne M. Warrack<sup>12</sup>; Serhiy Hnatyshyn<sup>12</sup>; Karl-Heinz Ott<sup>12</sup>; Kenneth Ray<sup>12</sup>; Adrienne Tymiak<sup>12</sup>; Haiying Zhang<sup>12</sup>; Mark Sanders<sup>12</sup>; <sup>1</sup>*Bristol-Myers Squibb PRI, Princeton, NJ*; <sup>2</sup>*Bristol-Myers Squibb PRI, Hopewell, NJ*
- ThPX 506 **Trace Level Analysis of Dichloroacetic Acid in Rat Blood and Tissues by LC/MS/MS;** Amy M Dixon; David C Delinsky; S Muralidhara; James V Bruckner; Jeffrey W Fisher; Michael G Bartlett; *University of Georgia, Athens, GA*
- ThPX 507 **Chlorpyrifos (CPF) Induced Protein Alterations in the SH-SY5Y Cell Line;** Jinchun Sun; Mark A Lovell; Bert C Lynn; *University of Kentucky, Lexington, KY*
- ThPX 508 **The Discovery and Identification of Potential Biomarkers of Drug-Induced Nephrotoxicity;** Ying Ge<sup>1</sup>; Hongshan Li<sup>2</sup>; Robert Masse<sup>1</sup>; Mike Aguiar<sup>1</sup>; Bernard F. Gibbs<sup>1</sup>; <sup>1</sup>*MDS Pharma Services, Montreal, Canada*; <sup>2</sup>*Ciphergen Biosystems Inc., Montreal, Canada*
- ThPX 509 **Quantitation of Substituted Etheno DNA-Adducts Derived from 4-Oxo-2-Nonenal by LC/MS;** Michael Pollack; Seon Hwa Lee; Wenying Jian; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*
- ThPX 510 **Study of Molecular Toxicity of Arsenic by Modern Mass Spectrometry;** Meiling Lu; Hailin Wang; Xingfang Li; Xiufen Lu; X. Chris Le; *University of Alberta, Edmonton, AB, Canada*
- ThPX 511 **Crosslink Lesion Formation upon Pyrex-filtered UV Irradiation of Dinucleoside Monophosphates and Duplex Oligodeoxynucleotides Containing 5-Br-dU or 5-Br-dC;** Yu Zeng; Yinsheng Wang; *University of California, Riverside, CA*
- ThPX 512 **A Metabonomics Strategy For The Analysis of Polar Compounds in Urine Using a Polymeric Cation Exchange Column and LC-MS(ToF);** Robert S. Plumb<sup>1</sup>; Jennifer H. Granger<sup>1</sup>; Jose Castro-Perez<sup>4</sup>; Ian D. Wilson<sup>2</sup>; Gordon Dear<sup>3</sup>; <sup>1</sup>*Waters Corporation, Milford, MA*; <sup>2</sup>*AstraZeneca R&D Alderley Park, Macclesfield, UK*; <sup>3</sup>*GSK, Ware, UK*; <sup>4</sup>*Waters Corporation UK, Manchester, UK*
- ThPX 513 **A Rapid Method to Determine Minimum Inhibitory Concentration of Antibiotics in *Staphylococcus aureus* by Bacteriophage Amplification MALDI-MS;** Lori K. Major; Leah G. Doan; Jon C. Rees; Kent J. Voorhees; *Colorado School of Mines, Golden, CO*
- ThPX 514 **Comparison of atmospheric Pressure Chemical Ionization, Photoionization and Electrospray Ionization for the Analysis of Dinitropyrene and Its Metabolites by LC-MS/MS;** Ellen A. Straube; Wolfgang Dekant; Wolfgang Voelkel; *Institute of Toxicology, University of Wuerzburg, Wuerzburg, Germany*
- ThPX 515 **Stable Isotope Labeling – HPLC-MS/MS Study of Sequence Specific Guanine Alkylation by 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK);** Mathur Rajesh<sup>1</sup>; Natalia Tretyakova<sup>2</sup>; <sup>1</sup>*University of Minnesota Cancer Center, Minneapolis, MN*; <sup>2</sup>*University of Minnesota - Dept Medicinal Chemistry, Minneapolis, MN*
- ThPX 516 **Analysis of Derivatized Biogenic Aldehydes by HPLC Tandem Mass Spectrometry;** Taufika Islam Williams; Mark A Lovell; Bert C Lynn; *University of Kentucky, Lexington, KY*
- ThPX 517 **Synthesis and LC/Tandem Mass Spectrometric Characterization of the Adducts of Bisphenol-A (BPA) o-quinone with Glutathione and Nucleotide Monophosphates;** Richard Z. Yang; Sheng-Xiang Qiu;

Michael L. Gross; *Washington University in St. Louis, St. Louis, MO*

ThPX 518 **Tandem LC/MS Identification of Protein:DNA Crosslinks Formed Between O<sup>6</sup>-Alkylguanine-DNA Alkyltransferase (AGT) and Single Stranded DNA by 1,2-Dibromoethane;** David L. Hachey<sup>1</sup>; Liping Liu<sup>2</sup>; Kevin M. Williams<sup>3</sup>; Anthony E. Pegg<sup>2</sup>; F. Peter Guengerich<sup>1</sup>; <sup>1</sup>*Vanderbilt University, Nashville, TN*; <sup>2</sup>*Pennsylvania State University College of Medicine, Hershey, PA*; <sup>3</sup>*Western Kentucky University, Bowling Green, KY*

ThPX 519 **Investigation of Reserpine Oxidation Using On-Line Electrochemistry/Electrospray Mass Spectrometry;** Vilmos Kertesz; Gary J Van Berkel; *Oak Ridge National Laboratory, Oak Ridge, TN*