[2]*University of Liverpool, Liverpool, UK;* [3]*Conway Institute for Biomedical Research, Dublin, Ireland*

MP 579 **The Use of Relative Quantification Mass Spectrometry Procedures to Extend Observations Derived from Large Microarray Datasets**; Yvonne Connolly[1]; Claire L Wilson[1]; Robert Clarke[1]; Crispin J Miller[1]; Stuart D Pepper[1]; Richard Unwin[2]; Anthony D Whetton[2]; [1]*Paterson Institute for Cancer Research, Manchester, UK;* [2]*University of Manchester at Christie Hospital, Manchester, UK*

MP 580 **Localization of Organelle Proteins by Isotope Tagging (LOPIT)**; Tom PJ Dunkley[1]; Rod Watson[2]; Jules Griffin[1]; Paul Dupree[1]; Kathryn S Lilley[1]; [1]*University of Cambridge, Cambridge, UK;* [2]*Applied Biosystems, Warrington, UK*

MP 581 **Mass Spectrometric Proteome Analysis Of Murine Embryonal Fibroblasts - Comparison of MLL Knock Out Cell Lines with Wild Type Lines**; Martin Hampel[1]; Carsten Corvey[1]; Rolf Marschalek[1]; Michael Karas[1]; Jian-Ru Stahl-Zeng[2]; [1]*Johann Wolfgang Goethe Universität, Frankfurt, Germany;* [2]*Applied Biosystems , Darmstadt, Germany*

PROTEOMICS: QUANTITATION (SILAC)

MP 582 **Synthesis/Degradation Ratio Mass Spectrometry: A Method for Whole Proteome Profiling of Dynamic Protein Turnover**; Joel R Sevinsky[1]; Benjamin J Cargile[1]; Jonathan L Bundy[1]; Amy M Grunden[2]; James L Stephenson Jr. [1]; [1]*Research Triangle Institute, Research Triangle Park, NC;* [2]*NC State University, Raleigh, NC*

MP 583 **Absolute Quantification in Proteomics via QCAT: using Artificial Proteins of Concatenated Peptides as Multiplexed Internal Standards**; Mary K Doherty[1]; Jenny Rivers[1]; Julie M Pratt[1]; Deborah Simpson[1]; Claire Eyers[2]; Simon J Gaskell[2]; Robert J Beynon[1]; [1]*University of Liverpool, Liverpool, UK;* [2]*University of Manchester, Manchester, UK*

MP 584 **Accounting for Metabolic Processes that Affect *In vivo* Labeling of Cell Culture using Isotopic Forms of Amino Acids in Media**; Xiquan Liang; Mahbod R. Hajivandi; John F. leite; Evangeline Gonzalez; Marshall Pope; *Invitrogen, Carlsbad, CA*

MP 585 **Proteomic Analysis of Leaf Senescence in Arabidopsis Thaliana by Metabolic Labeling and Mass Spectrometry**; Romano Hebeler[1]; Kai A. Reidegeld[1]; Paul P. Dijkwel[2]; Marcel J. G. Sturre[2]; Helmut E. Meyer[1]; Bettina Warscheid[1]; [1]*Medical Proteom-Center, Ruhr-University, Bochum, Germany;* [2]*Dept. Molecular Biology of Plants, Groningen, Netherlands*

MP 586 **Quantitative Proteomics in Human Primary Cell Cultures using SILAC**; Zohra Olumee-Shabon; Kristy Brown; Jessica Flippin; Chenguang Fan; Pinghu Liu; Karl Csaky; Yertrib Hathout; *Children's National Medical Center, Washington , DC*

MP 587 **Quantitative Phosphoproteome Analysis using Stable Isotope Labeling and Affinity Purification**; Sun-Il Hwang; Deborah Lundgren; Sung Hee Park; Viveka Mayya; Karim Rezaul; David K. Han; *University of Connecticut School of Medicine, Farmington, CT*

MP 588 **Comparison of Two Methods of Quantitative Proteomics by Mass Spectrometry**; Qiangwei Xia; Tiansong "Tony" Wang; Fred Taub; Andrew Haydock; John A. Leigh; Murray Hackett; *University of Washington, Seattle, WA*

MP 589 **Quantitative Proteomics from the Top Down: Yeast Responses to Anaerobic Growth at the Level of Intact Proteins**; Yi Du[1]; Patricia V. Burke[1]; Kurt E. Kwast[1]; Christopher L. Hendrickson[2]; Alan G. Marshall[2]; Neil L. Kelleher[1]; [1]*University of Illinois at Urbana-Champaign, Urbana, IL;* [2]*National High Magnetic Field Laboratory, Tallahassee, FL*

MP 590 **Progress Toward a Quantitative Proteomic Profile of Auxin Response in *Arabidopsis thaliana* via ^{15}N Metabolic Labeling**; Adrian D. Hegeman; Edward L. Huttlin; Clark J. Nelson; Amy C. Harms; Michael R. Sussman; *University of Wisconsin, Madison, WI*

MP 591 **Stable Isotopic Labeling with Amino Acid in Cell Culture (SILAC) for the Identification, Quantitation and Dynamics of Histone H4 Acetylation**; Michael A. Freitas; Liwen Zhang; Xiaodan Su; Melanie E. Davis; Amy R. Sklenar; Marko Klisovic; Mark R. Parthun; David M. Lucas; Guido Marcucci; John C. Byrd; *The Ohio State University, Columbus, OH*

MP 592 **A Method for Characterization of Protein Concentration Changes using Metabolic Incorporation of Stable Isotopes and Mass Spectrometry**; Niklas Gustavsson[1]; Boris Greber[2]; Thomas Kreitler[2]; Heinz Himmelbauer[2]; Hans Lehrach[2]; Christer Larsson[1]; Johan Gobom[2]; [1]*Plant Biochemistry, Lund, Sweden;* [2]*Max Planck Institute for Molecular Genetics, Berlin, Germany*

MP 593 **An Evaluation of Reproducibilities of SILAC method for Quantifications of Protein Expression and Posttranslational Modification with Different Mass Spectrometric Techniques**; Xinzhao (Grace) Jiang; Yinsheng Wang; *University of California, Riverside, CA*

TUESDAY POSTERS

ANTITERRORISM MS

TP 004 **Comprehensive Assignment of Mass Spectral Signature of Individual Bacillus Spores using Bio-Aerosol Mass Spectrometry (BAMS)**; Abneesh Srivastava[1]; Sue I. Martin[1]; Paul T. Steele[1]; Maurice E. Pitesky[2]; Herb J. Tobias[1]; David P. Fergenson[1]; Erica L. McJimpsey[2]; Carlito Lebrilla[1]; Gregg Czerwieniec[2]; Scott Scott [2]; Eric E. Gard[1]; Matthias Frank[1]; [1]*Lawrence Livermore National Laboratory, Livermore, CA;* [2]*University of California, Davis, CA*

TP 005 **Factors Affecting the Quantification of Protein Toxins in Food**; John H. Callahan; Kevin J. Shefcheck; Tracie L. Williams; Steven M. Musser; *Center for Food Safety and Applied Nutrition/FDA, College Park, MD*

TP 006 **Direct Sampling of Water for Chemical Weapons by Photoionization Mass Spectrometry**; Jack A. Syage; Matthew D. Evans; Jianwei Li; Victor Cai; *Syagen Technology, Inc., Tustin, CA*

TP 007 **Reproducibility of MALDI MS Peptide Profiles for the Forensic Analysis of *Bacillus* Spores**; April L. Jue[1]; Danielle N. Dickinson[1]; Brian A. Eckenrode[2]; [1]*ORISE, Oak Ridge, TN;* [2]*FBI Counterterrorism and Forensic Science Research, Quantico, VA*

TP 008 **Rapid Analysis of Viral Pathogens on a Field Portable MALDI-TOF Mass Spectrometer System**; Miquel D. Antoine; Jason J. Quizon; Tim J. Cornish; Scott A. Ecelberger; Plamen A. Demirev; *The Johns Hopkins University Applied Physics Lab, Laurel, MD*

TP 009 **Investigations of Ionization Techniques for the Analysis of Biological Agents by High Field Asymmetric Waveform Ion Mobility (FAIMS) Mass Spectrometry**; Alisha C. Mitchell-Roberts; Richard A. Yost; *University of Florida, Gainesville, FL*

TP 010 **Identification of Bacteria in Bioaerosols using MALDI Tandem Mass Spectrometry**; Alton J Dugas; Jae-Kuk Kim; Kermit K Murray; *Louisiana State University, Baton Rouge, LA*

TP 011 **Detection of Some Explosives from Solid Surfaces by Thermal Desorption and chemical ionization in corona discharge and Ambient Ion/Molecule Reactions**; Igor A. Popov[1]; Hao Chen[2]; Oleg N. Kharybin[1]; Eugene N. Nikolaev[1]; R. Graham Cooks[2]; *[1]Institute of Energy Problem of Chemical Physics, Moscow, Russia; [2]Purdue University, West Lafayette, IN*

TP 012 **Trace Analysis of Explosives by Ultra Fast Modular GC using Time of Flight Mass Spectrometry**; STEPHEN DIXON[1]; BRYAN WHITE[2]; *[1]DSTL, Sevenoaks, UK; [2]Thermo-Corporation, Hemel Hemstead, UK*

TP 013 **Development of high resolution LC-ESI-MS/MS methodology for the determination of chemical warfare agents and related compounds in an office environment**; Paul A. D'Agostino; Claude L. Chenier; James R. Hancock; *DRDC Suffield, Medicine Hat, Canada*

TP 014 **Mycotoxin and proteic toxin detection and identification in environmental samples by LC/ESI/ITMS**; Anne Bossée[1]; Huguette Renault[1]; Arlette Bégos[1]; Stéphane Morel[2]; Anne Caudron[2]; Bruno Bellier[1]; *[1]CEB, Vert Le Petit, France; [2]Thales Industrial Systems, Meudon, France*

TP 015 **Identification of Gram-negative bacteria using on-slide trypsin digestion and MALDI-TOF mass spectrometry;** Patrick A. Pribil; Catherine Fenselau; *University of Maryland, College Park, MD*

TP 016 **Genomic and Proteomic Identification of MALDI-TOF-MS Protein Biomarkers of Campylobacter**; Clifton K. Fagerquist; William G. Miller; Leslie A. Harden; Anna H. Bates; Guilin Wang; Sekou Heath; Robert E. Mandrell; *Western Regional Research Center, ARS, USDA, Albany, CA*

TP 017 **Quantification of Five Botulinum Neurotoxins by MALDI-TOF MS and LC-ESI-MS/MS**; Adrian R Woolfitt[1]; Anne E Boyer[1]; Hercules Moura[1]; Suzanne R Kalb[1]; Lisa G McWilliams[1]; Michael C Goodnough[2]; Carl J Malizio[2]; John R Barr[1]; *[1]Centers for Disease Control, Atlanta, GA; [2]Metabiologics, Wisconsin, WI*

TP 018 **Effect of Environmental Conditions on Identification of Clostridium botulinum Neurotoxin Type A using AP-MALDI Mass Spectrometry**; Nelli I. Taranenko[1]; Gavin E. Black[1]; Robert M. Serino[2]; Vladimir M, Doroshenko[1]; *[1]MassTech, Columbia, MD; [2]SESI, Columbia, MD*

ENVIRONMENTAL ANALYSIS

TP 019 **Evaluating a Method for the Rapid Analysis of Multiple Pesticide Residues**; Catherine S Ryan; Gordon C Kearney; *Waters Corporation, Manchester, United Kingdom*

TP 020 **Determination of Spectinomycin in Liquid Hog Manure by LC/MS/MS using HILIC Separation and Weak Cation Exchange Sample Extraction**; Kerry M. Peru[1]; Sandra L. Kuchta[2]; John V. Headley[1]; Allan J. Cessna[1]; *[1]National Water Research Institute, Saskatoon, SK, Canada; [2]University of Saskatchewan, Saskatoon, SK, Canada*

TP 021 **Determination of Pesticides in Environmental and Food Samples by SPME Coupled to Gas Chromatography-Chemical Ionization Mass Spectrometry**; Nieves Sarrión[1]; Josep M. Gibert[1]; Jordi Reverter[1]; Ariadna Galve[2]; Roger Gibert[3]; *[1]konik-Tech, Sant Cugat del Vallés, Spain; [2]IKAI, Institut d'Analítica Industrial, Sant Cugat del Vallés, Spain; [3]konik Instruments, Inc., Miami, Florida*

TP 022 **GC/MS/MS Characterization of Steroids and their Metabolites in Alligators**; John A. Bowden; Mark P. Gunderson; Louis J. Guillette, Jr; Richard A. Yost; *University of Florida, Gainesville, Fl*

TP 023 **Microcystin Analysis in Water using a Highly Sensitive LC/MS/MS Technique**; Bernd Luckas[1]; André Schreiber[2]; Jens Dahlmann[2]; *[1]Friedrich-Schiller University of Jena, Jena, Germany; [2]Applied Biosystems Germany, Darmstadt, Germany*

TP 024 **On-line Enrichment HTLC/MS/MS Assay for Multiple Classes of Antibiotics in Environmental Water Sources**; Kevin J. McHale[1]; Chris Esposito[2]; Francois A. Espourteille[2]; *[1]Thermo Electron, Somerset, NJ; [2]Cohesive Technologies, Franklin, MA*

TP 025 **Analysis of Mycotoxins and Fungal Metabolites in the Indoor Environment by LC/MS/MS**; Kristine S. Kurtz; John M. Neville; *Clayton Group Services, Novi, MI*

TP 026 **Tandem GCMS Analysis of Pesticides in Food Oils by Large Volume Injection with a Back-flush Option**; Jessie C Butler; Matt A Lasater; Meredith Conoley; *ThermoElectron, Austin, TX*

TP 027 **Development of a Rapid in-Tube SPME Method for the Determination of Microcystins**; Ambrose Furey; Orla Allis; Brett Hamilton; Mary Lehane; Kevin J. James; *Cork Institute of Technology, Cork, Ireland*

TP 028 **Monitoring and Purification of Marine Biotoxins using a Combined LC/MS-System for Analytical and Semi-Preparative Work**; Norbert Helle[1]; Sebastian Lippemeier[2]; Juergen Wendt[3]; *[1]TeLA GmbH, Bremerhaven, Germany; [2]BlueBioTech Mircoalgen Biotechnologie, Ellerbek, Germany; [3]Agilent Technologies Sales und Support GmbH, Waldbronn, Germany*

TP 029 **Environmental Wastewater Screening and Contaminant Analysis Utilizing LC/MS/MS**; Mark D. Cross; Tania A. Sasaki; Elliott B. Jones; Loren Y. Olson; *Applied Biosystems, Foster City, CA*

TP 030 **Detection of Estrogens in Aqueous and Solid Environmental Matrices with the API5000TM LC/MS/MS System**; Dirk Loeffler[1]; Thomas Ternes[1]; Jens Dahlmann[2]; Axel Besa[2]; *[1]Bundesanstalt für Gewässerkunde, D-56068 Koblenz, Germany; [2]Applied Biosystems, D-64293 Darmstadt, Germany*

TP 031 **Determination of Neutral Pharmaceuticals in Municipal Wastewater by Liquid Chromatography with Atmospheric Pressure Chemical Ionization Tandem Mass Spectrometry**; Xiaoming Zhao; Chris D. Metcalfe; *Trent University, Peterborough, ON, Canada*

TP 032 **Identification of the Photolytic Transformation Products of Aldrin in water by GC/Ion trap MS**; Do-Gyun Kim[1]; Ki-Jung Paeng[2]; Jongki Hong[1]; *[1]Korea Basic Science Institute, Seoul, South Korea; [2]Yonsei University, Wonju, South Korea*

TP 033 **Multi-Residue Analysis of Pesticides using LC/MS/MS with a Photospray Ionization Source;** Michel Cam[1]; Joaquim Soares-Granja[2]; Loic Beyet[2]; *[1]Laboratoire Central Coopagri, Landerneau, France; [2]Applied Biosystems, Courtaboeuf, France*

TP 034 **Detection and Characterization of Photocatalytic Degradation Products of Triazophos using NanoESI-QqTOF High Resolution Tandem Mass Spectrometry**; Spiros Garbis[1]; Panagiota Mpourou[2]; Michael Fountoulakis[1]; Despina Tsipi[2]; *[1]Foundation for Biomedical Research of the Academy , Athens, Greece; [2]general Chemical State Laboratory, Athens, Greece*

TP 035 **Imaging Matrix Assisted Laser Desorption Ionisation - Mass Spectrometry for the Investigation of Dermal Absorption of Chlorpyrifos**; Brendan Prideaux[1]; Malcolm R Clench[1]; Vikki A Carolan[1]; Jackie Morton[2]; Bob Rajan-Sithamparanadarajah[3]; *[1]Sheffield Hallam University, Sheffield, UK; [2]Health and Safety Laboratory, Buxton, UK; [3]Health and Safety Executive, Bootle, UK*

TP 036 **Multiresidue Analysis of Pesticides in Drinking Water using LC/MS/MS with Ultra Performance LC™;**

Futoshi Sato; Michiko Kanai; Hideki Sasaki; *Nihon Waters K.K., Shinagawa-ku, Tokyo, Japan*

TP 037 **Analysis of Multi-Component Pesticides and Tetracycline Antibiotics on the Finnigan TSQ Quantum by LC-MS/MS to Monitor Cross-Talk**; Dipankar Ghosh; Eric Genin; *Thermo Electron, San Jose, CA*

SMALL MOLECULE ANALYSIS

TP 038 **Use of HPLC-Accurate Mass, Mass Spectromety Coupled with Profiler to Determine the Stability of Oral Suspensions in Drug Development**; David E. McKenzie; Marie C. Whittle ; *Pfizer, St. Louis, MO*

TP 039 **Detailed Investigation into the Factors Affecting Accuracy of Mass Measurements on a ToF instrument using Design of Experiments**; Alice M Laures; Jean-Claude Wolff; Christine Eckers; *GlaxoSmithKline, Stevenage, England*

TP 040 **Direct Tissue Analyses of Low Molecular-Weight Drugs by Matrix Assisted Laser Desorption / Ionization and Ion Mobility Mass Spectrometry**; Hay-Yan J. Wang[1]; Shelley N. Jackson[1]; Jonathan McEuen[1]; Michael V. Ugarov[2]; J. Albert Schultz[2]; Amina S. Woods[1]; *[1]NIDA-IRP, NIH, Baltimore, MD; [2]Ionwerks Inc., Houston, TX*

TP 041 **Multiple Probe Techniques with Improved Mass Measurement Accuracy in Microbore ESI and APCI TOF LC-MS of Kava-Kava Lactones**; Marketa Berkova; Craig M. Whitehouse; *Analytica of Branford, Inc., Branford, CT*

TP 042 **The Characterisation of Low Molecular Weight Surfactants by ESI-LCMS and MALDI Mass Spectrometry;** Stephen J Rumbelow; Kevin W Penfield; *Uniqema Technical Center, New Castle, DE*

TP 043 **Identifying Compounds using an Accurate Mass Triple Quadrupole Mass Spectrometer**; Andrew H. Grange[1]; Witold Winnik[2]; G. Wayne Sovocool[1]; *[1]U.S. EPA, ORD, NERL, ESD, Las Vegas, NV; [2]U.S. EPA, ORD, NHEERL, ECD, Research Triangle Park, NC*

TP 044 **Small Molecule Atmospheric Pressure MALDI oa-TOF by Suppression of the Matrix Signal**; Friedrich Mandel; Andreas Reimann; *Agilent Technologies, Waldbronn, Germany*

TP 045 **Qualitative and Quantitative Analysis of Small Molecules by LC-NALDI-MS/MS**; Phil Savickas[1]; Eugene Moskovets[1]; R. Hugh Daniels[2]; Robert S. Dubrow[2]; Veeral Hardev[2]; Barry L. Karger[1]; *[1]Barnett Institute, Boston, MA; [2]Nanosys, Inc., Palo Alto, CA*

TP 046 **A Novel, High-Throughput, Diatomaceous Earth Plate-Based Solid-Support Liquid:Liquid Extraction Technique for Bioanalytical Quantitative Analysis**; Michael J. Shapiro; Rosa Luo; Xu Zang; Ning Song; Ta-Kung Chen; Haig Bozigian; *Neurocrine Biosciences, Inc., San Diego, CA*

TP 047 **Development and comparison of LC/UV and LC/MS methods for permeability testing**; Vladimir Radic; *PLIVA-RESERACH AND DEVELOPMENT LTD., Zagreb, Croatia*

TP 048 **Generic Methods for Turbulent Flow Liquid Chromatographic Applications**; Sarah A Vannozzi; Chris Esposito; Francois A Espourteille; *Cohesive Technologies, Inc., Franklin, MA*

TP 049 **Flourous Based Affinity Mass Spectrometry**; Eden Go[1]; Anders Nordstrom[1]; Scott Brittain[2]; Wilasinee Urithboonthai[1]; Junefredo Apon[1]; Eric Peters[2]; Gary Siuzdak[1]; *[1]The Scripps Research Institute, La Jolla, CA; [2]The Genomics Institute of the Novartis Research , San Diego, CA*

TP 050 **Use of Methylation with Electrospray Ionization Mass Spectrometry to Assist in the Identification of Polyaminocarboxylate Impurities**; R. Randy Wilhelm[1]; Jill M. Johler[2]; Lisa D. Niebruegge[2]; Donald B. Miller[2]; *[1]Tyco Healthcare / Mallinckrodt Pharmaceutical R&D, St. Louis, MO; [2]Tyco Healthcare / Mallinckrodt Imaging R&D, Hazelwood, MO*

TP 051 **Automated LC/MS/MS High Throughput Multi-mode Ionization Quantification Protocol Applied for Microsome Stability Test in Drug Discovery and Development**; Kate Yu[1]; Peter Alden[1]; Rob Plumb[1]; Li Di[2]; Susan Li[2]; Edward Kerns[2]; Paul Chilvers[3]; *[1]Waters Corporation, Milford, MA; [2]Wyeth Research, Princeton, NJ; [3]Waters Micromass , Manchester, UK*

TP 052 **Development of a Sensitive and Rapid LC/MS/MS Based Multiplexed Amine and Amino Acid Analysis Method**; Subodh Nimkar[1]; Charles Liu[1]; Scott Daniels[2]; Michael Donegan[2]; Babu Purkayastha[2]; *[1]Applied Biosystems, Foster City, CA; [2]Applied Biosystems, Framingham, MA*

TP 053 **The use of Mass Frontier 4.0 for the Generation of Searchable MSn Libraries from Various Types of Instruments;** Katerina Klagkou; Iain Kay; *Thermo Electron, Hemel Hempstead, UK*

TP 054 **Rapid Determination of Binding Constants of Host/Guest Complexes using Affinity CE/ESI-MS Interface**; Nicole Green-Mower; Mehdi Moini; *University of Texas, Austin, TX*

TP 055 **The Use of Conventional LC/MS/MS for in-vivo Microdosing Studies**; Mark G. Qian; Suresh Balani; Arnold Costa; Raj Nagaraja; Jing-tao Wu; Frank Lee; Lawrence Gan; Kym Cardoza; Gerald Miwa; *Millennium Pharmaceuticals, Inc., Cambridge, MA*

TP 056 **Analysis of Biological Molecules and Interface Effects by Surface Assisted Laser Desorption / Single Photon Ionization Mass Spectrometry**; Yanfeng Chen; Alexandr Aleksandrov; Thomas Orlando; *Georgia Institute of Technology, Atlanta, GA*

TP 057 **High Throughput Identification of Reaction and Degredation Products using LC and Exact Mass**; Michael A McCullagh[1]; Lena M Von Sydow[2]; *[1]Waters Corporation, Manchester, UK; [2]AstraZeneca, Mölndal, Sweden*

TP 058 **Ortho Effect in Mass Spectrometric Fragmentation of Even-Electron Negative Ions**; Attygalle Athula; Josef Ruzicka; Deepu Varughese; Jafri Sayed; *Stevens Institute of Technology, Hoboken, NJ*

TP 059 **Open Access Analysis of Pharmaceutical Compounds using Accurate Mass and True Isotopic Pattern**; Carsten Baessmann[1]; Anneke Lubben[2]; Malte Vahlenkamp[1]; Michael Biernacki[1]; Ian Sanders[2]; Jackie Jarvis[2]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]Bruker Daltonics Ltd, Coventry, United Kingdom*

TP 060 **Studying the adsorption of drugs to the plastic surfaces during cell culture permeability experiments by utilizing LC/MS/MS methods**; Joni Palmgrén; Jukka Mönkkönen; Seppo Auriola; *University of Kuopio, Kuopio, FINLAND*

TP 061 **Exact Mass Measurement of Small Molecules by FT-ICRMS: Defined Confidence of Measurement and Calibration Protocols**; G John Langley[1]; Julie M Herniman[1]; Tony W T Bristow[2]; Gavin O'Connor[2]; *[1]University of Southampton, Southampton, UK; [2]LGC Limited, Teddington, UK*

TP 062 **Identification and Characterization of Extracts/Leachables from Bufferbags using LC-MS and LC-MS/MS;** Claire J Bramwell-German[1]; Elliot Jones[2]; Suzanne Weck[1]; Victor T Ling[1]; *[1]Genentech, Inc, South San Francisco, CA; [2]Applied Biosystems, Foster City, CA*

REACTIVE DRUG METABOLITES

TP 063 **Regioselectivity of 4-Hydroxyequilenin Methylation by COMT Determined using LC-MS/MS and Molecular Modeling**; Xiaofeng Yang; Yan Li; Dahua Pan; Hong Liu; Judy L. Bolton; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*

TP 064 **Bioactivation of 8-Prenylnarignenin and Isoxanthohumol, Prenylated Flavonoids from Hops (Humulus lupulus L.), by Human Liver Microsomes**; Dejan Nikolic; Lucas R Chadwick; Guido F Pauli; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*

TP 065 **Analysis of "*in vivo*" Metabolite Samples using a Hybrid Triple Quadrupole/Linear Ion Trap Mass Spectrometer;** Elliott B. Jones[1]; Ji Ma[2]; Shichang Miao[2]; *[1]Applied Biosystems, Foster City, CA; [2]Amgen, Inc., South San Francisco, CA*

TP 066 **Identification of Electrophilic Metabolites of 10-Gingerol from Zingiber officinale Roscoe (Zingiberaceae)**; Yi Tao; Dejan Nikolic; Wenzhong Liang; Richard B. van Breemen; *University of Illinois College of Pharmacy, Chicago, IL*

TP 067 **Screening and Characterization of Reactive Drug Metabolites *in vitro* and *in vivo* by Automated Nanoelectrospray and Quadrupole Linear Iontrap MS/MS**; Axel Pähler[1]; Karoline Scholz[2]; Ruth Haas[1]; Wolfgang Völkel[2]; *[1]F. Hoffmann-La Roche Ltd, Basel, Switzerland; [2]University of Würzburg, Würzburg, Germany*

TP 068 **Verapamil: Identification of a Putative New Reactive Metabolite *in vitro* using LC-MS^n and Stable Isotope Trapping**; Markus Walles; Pierre-Emmanuel Morin; Pascale Grude; Julie Ducharme; *AstraZeneca R&D Montreal, Ville St. Laurent, QC, Canada*

TP 069 **Metabolic Bioactivation of kavalactone, Methysticin, in CD1 mice**; Aarti D Sawant; Cassia R Overk; Dejan Nikolic; Daniel Lantvit; Judy L Bolton; Richard B. van Breemen; *University of Illinois, Chicago, IL*

TP 070 **The Uses of Immobilized Streptavidin Surfaces for On-Chip Purification and Concentration of Biotinylated Analytes for MALDI-MS**; Douglas P. Greiner[1]; Christopher M. Belisle[1]; Irene Y. Chen[1]; John D. Kohler[1]; John A. Walker II[1]; Michael Mariani[2]; Mark S. Baker[2]; *[1]LCI, Fremont, CA; [2]Australian Proteomics Analysis Facility, Ltd*

TP 071 **Glucuronide Analysis Utilizing a Hybrid Quadrupole Linear Ion Trap**; Fiona Anthes[1]; Robert Campbell[2]; Elliott B. Jones[3]; Tania A. Sasaki[3]; *[1]Applied Biosystems/MDS Sciex, Concord, ON, Canada; [2]Theravance, South San Francisco, CA; [3]Applied Biosystems, Foster City, CA*

TP 072 **Reactive Metabolism and New Screening Methodology with LC-MS-MS using Exact Mass Neutral Loss**; Jose Castro-Perez; Michael McCullagh; *Waters (MS Technologies), Manchester, United Kingdom*

TP 073 **In vivo Enantiometabolism for the Hydroxylation of FK778 to the Metabolite M3 Through CYP 2C9 Studied by Chiral LC-MS/MS**; Yu-Luan Chen; Shahzad Akhtar; Masakazu Kobayashi; *Fujisawa Research Institute of America, Evanston, IL*

TP 074 **Selective and Sensitive Detection of GSH Adducts in Complex Biological Samples using High Resolution LC/FTMS with Mass Defect Filtering**; Li Ma; Haiying Zhang; W Griff Humphreys; Mark Sanders; Mingshe Zhu; *Bristol-Myers Squibb, Princeton, NJ*

DRUG QUANTITATION

TP 075 **On-line Extraction LC/MS/MS Determination of Ciprofibrate in Human Plasma using a Novel Polymeric Solid Phase Extraction Cartridge**; Brad A Roadcap; Don G. Musson; Jamie J. Zhao; *Merck Research Labs, West Point, PA*

TP 076 **Liquid Chromatography Mass Spectrometric Method for Quantitation of TX-67, Succinic Acid Analog of Paclitaxel in Mouse Plasma and Brain Matrics**; Karl S. Schorno; Brandon Turunen; Roger A. Rajewski; Gunda I. Georg; Michelle P. McIntosh; *University of Kansas, Lawrence, KS*

TP 077 **Simultaneous Bioanalysis of Glyburide and Metformin from K3EDTA Human Plasma**; Klaus P Adam; Christopher J Bugge'; Melvin S Tan; Michael P Sullivan; *CEDRA Corporation, Austin, Tx*

TP 078 **LC-MS/MS Analysis of Biomarker 1-Hydroxypyrene in Human Urine with Sensitivity Enhancement by Derivatization Technology**; Yinghe Li[1]; Haihong Shi[1]; Heiko Junga[1]; Shaolian Zhou[1]; Naidong Weng[1]; John Lauterbach[2]; *[1]Covance Labs, Madison, WI; [2]Brown & Williamson Tobacco, Macon, GA*

TP 079 **Sensitive Liquid Chromatographic–Tandem Mass Spectrometric Method for the Determination of Simvastatin and its Metabolite Beta-Hydroxy Acid in Human Plasma**; L.H. Pao[1]; B.P.C. Kuo[1]; P.W. Huang[1]; O.Y.P. Hu[1]; K. Lam[2]; *[1] National Defense Medical Center,, Taipei, Taiwan; [2]Applied Biosystems, Taiwan, Taipei, Taiwan*

TP 080 **A Combined LC-MS/MS Method for Misoprostol Acid/Diclofenac in Human Plasma: An Application of High Sensitivity, Selectivity and Broad Linear Range**; Nicola Hughes; Jinlin Shen; Juan Fan; Dezhong Liu; Nick Peng; Chrysantha Xavier; Justine Lam; *Biovail Contract Research, Toronto, ON, Canada*

TP 081 **A Chiral Method for the Determination of S-Levetiracetam in Human Plasma**; Fleur Gaudette; John Simpson; Rudolf Guilbaud; *MDS Pharma Services, Montreal, QC Canada*

TP 082 **Comparison of Selective-Reaction Monitoring (SRM) Scan Methods for LC/MS/MS Determination of Norbuprenorphine in Human Plasma**; Shen-Nan Lin; Lolita Lamm; David E. Moody; Rodger L. Foltz; *University of Utah, Salt Lake City, UT*

TP 083 **Development and Validation of an LC/MS/MS Method for Simultaneous Determination of Compound A and its Three Metabolites in Dog Plasma**; Ming Wang; Danny Choo; Irina Miksa; Helengrace Schuck; Larry Mallis; *Merck & Co., Inc., West Point, PA*

TP 084 **A Rapid and Sensitive LC MS/MS Method for the Determination of C-1311 (Symadex) and its Glucuronide Metabolite in Rat Plasma**; Keith J Goodman; MyDoanh Chau; Charles K Grieshaber; Alfred M Ajami; *Xanthus Life Sciences, Cambridge, MA*

TP 085 **A New Approach to Determine Nucleoside Triphosphates (NTP) in Whole Liver and Hepatocyte of Different Species by LC/MS/MS**; Hong Luo; Ting Wang; Samantha Koo-McCoy; Konnie Pham; Cynthia West; Natalia Daytkina; Christopher Roberts; Lillian Lou; Ronald Griffith; Wenbao Li; *Genelabs Technologies, Inc., Redwood City, CA*

TP 086 **An LC-MS Bio-Analytical Method and Validation for JPC-2056, a New Third Generation Antifolate**; Damaris S Diaz[1]; Raynard Forte[1]; Constance O Asher[1]; Guy A Schiehser[2]; David P Jacobus[2]; Dennis E Kyle[1]; Todd W Shearer[1]; Michael Kozar[1]; Kirsten S Smith[1]; Charles A DiTusa[1]; *[1]Walter Reed Army Institute of Research, Silver Spring, MD; [2]Jacobus Pharmaceutical Co Inc, Princeton, NJ*

TP 087 **The On-Line Determination of Pioglitazone, an Oral Antidiabetic Agent, and Two Metabolites in Human Plasma by LC/MS/MS**; Paule Emilie Groleau; Lynda Letarte; Dino Cicci; Genevieve Plante; John Simpson; Rudolf Guilbaud; *MDS Pharma Services, Montreal, QC Canada*

TP 088 **Development of a Novel HILIC HPLC/MS/MS Bioanalytical Method for the Quantitative Analysis of Carboplatin from the Plasma of Mouse**; Chad D Christianson; Shane R Needham; *Alturas Analytics, Inc., Moscow, ID*

TP 089 **A Novel LC-MS/MS Method for the Determination of Pramipexole in Human Plasma**; Juan Fan; Ernest Wong; Navgeet Bajaj; Anita Towers; Nicola Hughes; *Biovail Contract Research, Toronto, ON, Canada*

TP 090 **Quantification of Morphine, Morphine-3-glucuronide, Morphine-6-glucuronide, Codeine, and Codeine-6-glucuronide in Human Urine by LC-ESI-MS/MS**; Constance M. Murphy; Marilyn A. Huestis; *Chem & Drug Metabolism, IRP, NIDA, Baltimore, MD*

HIGH THROUGHPUT FOR PLASMA AND BODY FLUIDS ANALYSES

TP 091 **Automated Liquid-Liquid Extraction of Azithromycin and Subsequent Quantitation by LC/MS/MS**; Melissa J. Meyer; Gabriel R. Hardmeyer; Laura V. Baum; Dan J. Aufman; *PRACS Institute, Ltd., Fargo, ND*

TP 092 **High Throughput Analysis of Galantamine in Human Plasma by LC-MS-MS**; Dan J. Aufman[1]; Gabriel R. Hardmeyer[1]; Kevin O. Turner[2]; Missy L. Berrry[1]; Jessie S. Lindemann[1]; *[1]PRACS Institute, Fargo, ND; [2]Lake Erie College of Osteopathic Medicine, Erie, PA*

TP 093 **Comparison of Off-Line High-Throughput Sample Preparation Methods for Peptide Profiling of Body Fluids using MALDI-TOF Mass Spectrometry**; Connie R Jimenez[1]; Elena Marchiori[1]; Zineb El Filali[2]; Laurine E Wedekind[2]; Peter Sminia[2]; Charlotte Teunissen[2]; Klaas Hoekman[2]; Frank A Kruyt[2]; Giuseppe Giaccone[2]; Cornelis E Verweij[2]; August B Smit[2]; *[1]Vrije Universiteit Amsterdam, Amsterdam, The Netherlands; [2]VU University Medical Center, Amsterdam, The Netherlands*

TP 094 **Method Development and Validation of A GLP Assay by using Automated On-line SPE and LC/MS/MS Analysis**; John Yu[1]; Yan Mao[1]; Helen Luo[1]; Bailuo Ren[1]; Mark Castles[1]; Martin Sibum[2]; *[1]Boehringer Ingelheim Pharm , Ridgefield, ct; [2]Spark Holland Inc, Plainsboro, nj*

TP 095 **Integrated Software and Hardware Platform for Fast LC-MS/MS Pharmacokinetic Screening**; Fangbiao Li; Tom Lloyd; Douglas Whitstone; Chunqi Zhu; Jianyao Wang; Vikram Patel; Rasmy Talaat; *Wyeth Research, Collegeville, PA*

TP 096 **Simultaneous On-line Determination of Mycophenolic Acid and Mycophenolic Acid Glucuronide in Serum/Plasma by High Turbulence-Flow Liquid Chromatography Tandem Mass Spectrometry**; Qibo Jiang; Sum Chan; Richard Reitz; *Questdiagnostics Nichols Institute, San Juan Capistrano, CA*

TP 097 **Large-Scale Proteomic Analysis of Human Seminal Plasma**; Bartosz J. Pilch; Matthias Mann; *University of Southern Denmark, Odense, Denmark*

TP 098 **Higher-Throughput Analysis of Dextromethorphan and Dextrorphan in Human Plasma using On-line Turbulent Flow Extraction Combined with Monolithic Column LC/MS/MS**; Shaolian Zhou[2]; Huiyu Zhou[1]; Eric Oliver[1]; Mike Larson[1]; Dennis L. Miller[1]; Dunmin Mao[1]; Xiangyu Jiang[1]; Naidong Weng [1]; *[1]Covance Laboratories Inc., Madison, WI; [2]Novartis Institutes for Biomedical Research, Cambridge, MA*

IMMUNOLOGY

TP 099 **Characterization and Stability Monitoring of Recombinant Tobacco Mosaic Virus Immunogens Displaying Papillomavirus Epitopes for use in a Preclinical Animal Study**; Kathleen M. Hanley; Tiffany Bliss; Jason Thornton; Terri I. Cameron; Michael McCulloch; Sarah A. Venneman; Kenneth Palmer; Alison A. McCormick; Gregory P. Pogue ; Earl L. White; *Large Scale Biology Corp., Vacaville, CA*

TP 100 **The Use of FT-ICR for Top-Down Sequencing of Monoclonal Antibodies, Application to Preparations Used in Diagnostics and Therapeutics**; Richard D. Burton; Darlene A. Cothron; Laura J. Miesbauer; Christian Wagner; Robert W. Johnson, Jr; *Abbott Laboratories, Abbott Park, IL*

TP 101 **Tandem Mass Spectrometry-Based Identification of Transcription Factors Binding to a Polymorphic Cis-Regulatory Element in the Human IL13 Promoter**; Patricia Ortiz; Paul Haynes; Vicki Wysocki; Donata Vercelli; *University of Arizona, Tucson, AZ*

TP 102 **Accurate Mass Analysis of Intact IgG1 and IgG2 Antibodies using ESI-Q-TOF Mass Spectrometers**; Andrew C. Nichols; Scott Corley; James H Bourell; *Abgenix, Inc., Fremont, CA*

TP 103 **A Post-Translationally Modified Autoantigen in Type 1 Diabetes**; Nicholas A Williamson[1]; Stuart I Mannering[2]; Leonard C Harrison[2]; Anthony W Purcell[1]; *[1]University of Melbourne , Parkville, Australia; [2]Walter Eliza Hall Institute, Parkville, Australia*

TP 104 **Determination of Drug Distribution and Assignment of Conjugation Sites in a Maytansinoid-Monoclonal Antibody Immunoconjugate**; Wei Zhang; Lintao Wang; Godfrey Amphlett; John Lambert; *ImmunGen, Inc., Cambridge, MA*

TP 105 **Top-Down Sequencing of Terminal Sequences of Monoclonal Antibodies by CID MS/MS**; Lintao Wang; Alexandru C. Lazar; Wei Zhang; Godfrey Amphlett; John M. Lambert; *ImmunoGen, Cambridge, MA*

TP 106 **Effects of Bacterial Quorum Sensing on Human Macrophages**; Rashi Iyer[1]; Fadi Abdi[2]; Srinivas Iyer[1]; *[1]Los Alamos National Laboratory, Los Alamos, NM; [2]Applied Biosystems, Framingham, MA*

TP 107 **Determination of interleukin-4 induced differentially expressed proteins in CD4+ cell microsomes using isotope coded affinity tags with tandem mass spectrometry**; Robert Moulder; Jan-Jonas Filén; Mikko Katajamaa; Tuula A Nyman; Riitta Lahesmaa; *Turku Centre for Biotechnology, Turku, Finland*

TP 108 **Mapping the proteome in HIV-1 infected primary human monocyte-derived macrophages with 2DE followed by mass spectrometry identification**; Elizabeth R. Zheng; Joseph N. Brown; Ming H. Jia ; Scott McClung; Maureen M. Goodenow; Stanley M. Stevens; *University of Florida, Gainesville, FL*

TP 109 **LC-MS/MS Method for the Determination of Neopterin, A Sensitive Marker of Immune System Activation**; George N. Henderson; Hanno B. Richards; Westley H. Reeves; *University of Florida, Gainesville, FL*

TP 110 **Epitope Mapping by Ultrafiltration and Mass Spectrometry**; Gejing Deng; Anne-Marie Deslauriers; Peter Doig; *AstraZeneca R&D Boston, Waltham, MA*

TP 111 **Improving Mass Accuracy of Reversed-Phase LC/MS Analysis on ESI Orthogonal-TOF for Analysis of Intact Monoclonal Antibodies**; Himanshu S Gadgil; Gary Pipes;

Thomas M Dillon; Douglas Rehder; Michael J Treuheit; Pavel V Bondarenko; *Amgen, Thousand Oaks, CA*

TP 112 **Identification of Autoantigens in Rheumatoid Arthritis by Mass Spectrometry**; Leticia Cano[1]; Susan Kovats[1]; Daniel G. Arkfeld[2]; Terry D Lee[1]; *[1]City of Hope, Duarte, CA; [2]USC, Los Angeles, CA*

TP 113 **Sequence Analysis of HLA-B7 Peptides by ETD Mass Spectrometry: Comparative Analysis of Phosphopeptides on Cancer and Non-Cancer Cells**; Leann M. Hopkins; Joy M. Polefrone; Angela L. Zarling; Victor H. Engelhard; Jeffrey Shabanowitz; Donald F. Hunt; *University of Virginia, Charlottesville, VA*

TP 114 **Automated Motif Determination of Antigenic Peptides**; Ilan Vidavsky; Jim J. Walters; Michael L. Gross; *Washington University, St. Louis, MO*

TP 115 **Differential Expression Analysis of Immunosuppressed versus Normal Neutrophil Proteome**; John D. Lippolis; Timothy A. Reinhardt; *NADC/ARS/USDA, Ames, IA*

TP 116 **An *in vivo* Dual-tagging Proteomic Approach in Studying Signaling Pathways in Immune Response**; Tianyi Wang[1]; Sheng Gu[1]; Tapani Ronni[2]; Yu-Chun Du[1]; Xian Chen[1]; *[1]Los Alamos National Lab, Los Alamos, NM; [2]University of California, Los Angeles, CA*

TP 117 **Multiplex Amino Acid Coded Mass-tagging for Quantitative Proteomic Analysis of TLR4-Mediated Immune Response**; Sheng Gu; Tianyi Wang; Xian Chen; *Los Alamos National Laboratory, Los Alamos, NM*

TP 118 **Identification/Characterization of the Predominant Elicitor for Type I Allergy to Elderberry Blossoms by Low Energy CID-MS^2 Experiments (MALDI-QIT/RTOF and nESI-QIT)**; Martina Marchetti[1]; Jasmin Hirschmann[1]; Martin Zehl[1]; Emmanuel Raptakis[2]; Elisabeth Foerster-Waldl[3]; Guenter Allmaier[1]; *[1]Vienna University of Technology, Vienna, Austria; [2]Kratos Analytical, Manchester, United Kondom; [3]Medical University of Vienna, Vienna, Austria*

TP 119 **Human vs. Mouse: Comparison of the Peptides Presented by the Diabetes Associated MHC Alleles HLA-DQ8 and I-Ag7**; James J Walters; Anish Suri; Emil R. Unanue; Michael L. Gross; *Washington University, St. Louis, MO*

TP 120 **Identification of B-Lymphocyte Transcription Factors using MudPIT**; Fiona M. McCarthy; Amanda M. Cooksey; G. Todd Pharr; Shane C. Burgess; *Mississippi State University, Starkville, MS*

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TP 121 **Use of Automated Nano Electrospray Tandem Mass Spectrometry for Analysis of Complex Proteomes**; Ambrosius P Snijders[1]; Chee-Sian Gan[1]; Poh-Kuan Chong[1]; Alistair Stirling[2]; Mark Baumert[2]; Philip J Jackson[3]; Kenneth F Reardon[4]; Phillip C Wright[1]; *[1]University of Sheffield, Sheffield, UK; [2]Advion Biosciences, Norwich, UK; [3]Applied Biosystems, Warrington, UK; [4]Colorado State University, Fort Collins, CO*

TP 122 **Functionalized Monolithic Surfaces for Single Droplet Sample Handling**; Mohammed Kajjout; Cécile Cren; Christian Rolando; Séverine Le Gac; *Université des Sciences et Technologies de Lille, Villeneuve d'Ascq, France*

TP 123 **Integrated Microfluidic Devices using Multi-Dimensional Separations; Applications to Proteomics Analyses of Biological Cell Extracts**; Mihaela Ghitun[1]; Marie-Helene Fortier[1]; Eric Bonneil[1]; Hongfeng Yin[2]; Kevin Killeen[2]; Pierre Thibault[1]; *[1]Université de Montréal, Montreal, QC Canada; [2]Agilent Technologies, Palo Alto, CA*

TP 124 **Chip-based Liquid Chromatography Systems for Electrospray and MALDI MS Analyses**; Yunan Miao[1]; Jason Shih[2]; Jun Xie[2]; Nhu-Nguyen Dinh[1]; Yu-Chong Tai[2]; Terry D. Lee[1]; *[1]City of Hope, Duarte, CA; [2]California Institute of Technology, Pasadena, CA*

TP 125 **Accelerating Metabolomic Analyses by Combining Micro-scale Liquid Chromatography with Time-of-Flight Mass Spectrometry**; Phillip H. DeLand[1]; David J. Rakestraw[1]; Phillip H. Paul[1]; Tung Chau[2]; Gary Kruppa[2]; *[1]Eksigent Technologies, Livermore, CA; [2]Bruker Daltonics, Fremont, CA*

TP 126 **Microfluidic LC System for the Analysis of Proteomic Constituents in Cancerous Cell Lines**; Iuliana M. Lazar; Hetal Sarvaiya; Phichet Trisiripisal; Yoon Jung Hae; *Virginia Bioinformatics Institute, Blacksburg, VA*

TP 127 **Sample Purification for Static Nanospray MS using Wall-Coated Pipette Tips**; Christopher J. Toher[1]; Adam W. Perala[1]; Ashok K. Shukla[2]; Gary A. Valaskovic[1]; *[1]New Objective, Inc., Woburn, MA; [2]Glygen, Inc., Columbia, MD*

TP 128 **Determination of Low Femtogram Drug Levels in Serum by HPLC-Chip MS**; Friedrich Mandel[12]; Linda Côté[12]; Martin Vollmer[12]; *[1]Agilent Technologies, Waldbronn, Germany; [2]Agilent Technologies, St. Laurent, Canada*

TP 129 **Determination of Calcium via the Detection of Ca(II)-EDTA Complex by using a Pulled Bare Fused-Silica Capillary as the Nanospray Emitter**; Yi-Ting Wu; Yu-Chie Chen; *National Chiao Tung University, Hsinchu , Taiwan*

TP 130 **Variable Flow Rate Microscale Flow Injection Nanospray**; Carla J. Waggett[1]; Gary A. Valaskovic[1]; Karen M. Hahnenberger[2]; *[1]New Objective Inc., Woburn, MA; [2]Eksigent Technologies LLC., Livermore, CA*

TP 131 **Implementation of Sample-Stacking Techniques for Off-Line CE-MALDI**; Brad J. Williams; William K. Russell; David H. Russell; *Texas A&M University, College Station, TX*

TP 132 **Direct Coupling of a Polymer Microchip to MALDI MS using a Rotating Ball Inlet**; Harrison K. Musyimi; Jason Guy; Steven A. Soper; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*

TP 133 **Monolithic Column Plastic Microfluidic Device for Peptide Analysis using Electrospray From a Channel Opening on the Edge of the Device**; Jian Liu; Kyung-Won Ro; Daniel R. Knapp; *Medical University of South Carolina, Charleston, SC*

TP 134 **Rapid, Accurate and Precise Quantitative Drug Analysis: comparing LC-MS/MS and Chip-Based NanoESI Mass Spectrometry**; Louisa Alfazema[1]; Louisa Alfazema[2]; Don Richards[2]; Sylvie Gélébart[2]; Jon Mitchell[1]; Martin Snowden[1]; *[1]Medway Science, University of Greenwich, Chatham, Kent, United Kingdom; [2]Pfizer Global Research & Development, Sandwich, Kent, United Kingdom*

TP 135 **Utra-rapid Desalting of Protein Solutions for ESI-MS using a Novel Microfluidic Device**; Derek J. Wilson; Lars Konermann; *University of Western Ontario, London, ON*

TP 136 **An Improved Capillary LC-MS/MS and Its Application to High sensitivity and High Throughput Small Molecule Quantitation**; Charles C Liu[1]; Ling Chen[1]; Thomas R Covey[2]; *[1]Applied Biosystems, Foster City, CA; [2]MDS Sciex, Concord, Ontario, Canada*

TP 137 **Study of Derivatization of Peptides and Proteins for Fluorescence Detection using Capillary Electrophoresis and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry**; Patrik Vrabel; Jan Preisler; Marketa

Ryvolova; Helena Rehulkova; Petr Taborsky; *Masaryk University, Faculty of Science, Brno, CZ, Europe*

MALDI SAMPLE PREPARATION

TP 138 **An Aptamer Based Affinity MALDI-MS System**; Lawrence W. Dick Jr. [1]; Linda B. McGown[2]; [1]*Duke University, Durham, NC;* [2]*Rensselaer Polytechnic Institute, Troy, NY*

TP 139 **Fe3O4/TiO2 core/shell particles as affinity probes for the analysis of phosphopeptides in TiO2 surface-assisted laser desorption/Ionization mass spectrometry**; Cheng-Tai Chen; Yu-Chie Chen; *National Chiao Tung University, Hsinchu, Taiwan*

TP 140 **Biomarker Discovery using Magnetic Beads and MALDI-TOF**; Linda I. Nagore[1]; Conor Mullens[1]; Won I. Kim[3]; John E. Kalns[2]; Rober J. Christy[2]; Cole M. Zimmerman[2]; Stephan B. H. Bach[1]; [1]*University of Texas, San Antonio, TX;* [2]*Hyperion Biotechnology, San Antonio, TX;* [3]*WIlford Hall Medical Center, San Antonio, TX*

TP 141 **Comparison of Sample Deposition Techniques for MALDI Mass Spectrometry: Dried-Droplet, Air-Spray and Electrospray**; Seksan Dheandhanoo[1]; Scott D. Hanton[1]; Kevin G. Owen[2]; William J. Erb[2]; Rocco DelConte[2]; [1]*Air Products and Chemicals Inc., Allentown, PA;* [2]*Drexel University, Philadelphia, PA*

TP 142 **Optimizing the Formation of Multiply Charged Ions in MALDI**; Jody C. May; David H. Russell; *Texas A&M University, College Station, TX*

TP 143 **Exploring Direct Analysis using Ionic Matrices**; Remi Lemaire[1]; Jean-Claude Tabet[1]; Michel Salzet[2]; Isabelle Fournier[1]; [1]*UMR-CNRS 8017, USTL, Villeneuve d'Ascq, France;* [2]*UMR 7613, Université P. et M. Curie, Paris , France*

TP 144 **Application of Non-Covalently Bound Trypsin on Chromatographic Material for Digestion of Proteins**; Ashok K. Shukla[1]; Mukta M Shukla[1]; Alexis A. Oetting[1]; Nelli I. Taranenko[2]; Vladimir M. Doroshenko[2]; [1]*Glygen Corp, Columbia, MD;* [2]*Mass Tech Inc, Columbia, MD*

TP 145 **Development of a High-Throughput MALDI method for Characterization and Quantitation of Small Molecules in Plasma;** Rosa Viner; Huy Bui; Ken Miller; *Thermo Electron, San Jose, CA*

TP 146 **Sensitivity Enhancement of MALDI MS for the Analysis of Low Molecular Weight Biological and Synthetic Polymers via Surfactant Addition**; Patricia M. Peacock; *Dupont, Wilmington, DE*

TP 147 **MALDI-MS Analysis of Light-Sensitive Acridinium-Protein Conjugates**; Yan Chen; Huaiqin Wu; *Abbott Laboratories, Abbott Park, IL*

TP 148 **The Effect of Matrix-to-Analyte Ratio on the Cationization of Polymers in MALD/I TOFMS**; Kevin G. Owens[1]; Andrew J. Hoteling[2]; [1]*Drexel University, Philadelphia, PA;* [2]*Eastman Kodak Co, Rochester, NY*

TP 149 **Optimized Sample Preparation in MALDI Mass Spectrometry as a Strategy to Enhance Detection of Phosphopeptides**; Grace M. Credo; Weibin Chen; John C. Gebler; *Waters Corporation, Milford, MA*

TP 150 **A New Modification of MALDI Matrix and its Application on Identification of Proteins from Escherichia Coli**; Suping Zheng[1]; David M. Lubman[1]; Albert F. Bennett[2]; [1]*University of Michigan, Ann Arbor, MI;* [2]*University of California, Irvine, CA*

TP 151 **MALDI Matrix Derived Molecules as the Affinity Probes for Gram-Positive Bacteria**; Ya-Shiuan Lin; Yu-Chie Chen; *National Chiao Tung University, Hsinchu , Taiwan*

TP 152 **Polymer Surface Modification for MALDI Sample Preparation**; Hong Yu; Richard A. Yost; *University of Florida, Gainesville, FL*

TP 153 **Template Synthesis of Size-Specific Quantum Dot MALDI Matrices**; James T. Watkins; Katherine A. Stumpo; John A. McLean; David H. Russell; *Texas A&M University, College Station, TX*

TP 154 **Long-Term Archiving of Proteomic Samples on Disposable Prespotted AnchorChip MALDI Targets**; Christine Luebbert[1]; Christian Ziegmann[2]; Martin Schuerenberg[1]; [1]*Bruker Daltonik GmbH, Bremen, Germany;* [2]*Eppendorf Polymere GmbH, Oldenburg, Germany*

TP 155 **Study of Physicochemical Parameters influencing the Sample Preparation for MALDI-MS Analysis in Proteomics**; Marianne Gallardo-Andre; Michael Karas; *J.W. Goethe University, Frankfurt am Main, Germany*

TP 156 **Improved Technique for Robotic Spotting and Detection of Low Abundance Proteins by MALDI-TOF/TOF Mass Spectrometry**; Alberto Nunez; Darrell Bayles; Laurie Fortis; *USDA-ARS-ERRC, Wyndmoor, PA*

TP 157 **Selective Sampling of Phosphopeptides Based on Isoelectric Point (pI) for Ultra-Sensitive MALDI MS Analysis**; Haixia Zhang; Cunjie Zhang; Gilles A. Lajoie; Ken K.-C. Yeung; *The Unviersity of Western Ontario, London, ON, Canada*

TP 158 **Taguchi Optimization for MALDI Mass Spectrometry**; Jae-kuk Kim; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*

TP 159 **Fabrication of Nitrilotriacetic Acid Self-Assembled Monolayer Surfaces for Analysis of Proteins and Peptides by MALDI-TOF Mass Spectrometry**; Jianwei Shen; Tanveer Ahmed; Andrew Vogt; Richard Smith; Sally Dorwin; Jieyi Wang; Robert Johnson; John Harlan; Tom Holzman; *Abbott Laboratories, Abbott Park, IL*

TP 160 **MALDI-TOF Mass Spectrometry of DNA Oligonucleotides with Polylysine-Coated Diamond Nanocrystals as Solid-Phase Extraction Supports**; Xianglei Kong; L. C. Lora Huang; S.-C. Vivian Liau; Chau-Chung Han; Huan-Cheng Chang; *Institute of Atomic and Molecular Sciences, Taipei, Taiwan*

TP 161 **Improving Hydrophobic Peptide Recovery in MALDI MS using a Novel Desalting and Concentrating Method**; Kevin Chen[1]; Tony Murawski[1]; Guannan Kuang[2]; Dan Sexton[2]; Bill Galbraith[1]; Charles Crespi[1]; [1]*BD Biosciences, Bedford, MA;* [2]*Dyax Corp, Cambridge, MA*

TP 162 **Alternate Matrix Deposition Methods for Sample Spotting In LC-MALDI**; Robert S. Brown; *Utah State University, Logan, UT*

TP 163 **On-Target Fluorous Surface Affinity Enrichment for MALDI Mass Spectrometry**; Scott M. Brittain; Eric C. Peters; Ansgar Brock; *GNF/Novartis, San Diego, CA*

TP 164 **Removal of Monovalent Cation Adducts using a Matrix Additive during MALDI-TOF-MS Analysis of Peptides**; John F. Leite; Mahbod R. Hajivandi; Thomas Diller; Marshall Pope; *Invitrogen life technologies, Carlsbad, CA*

TP 165 **Preparation of Complex Protein and Peptide Samples for Mass Spectrometry Analysis using Magnetic Bead Technology;** David Gillooly; Elisabeth Breivold; Kristine Evensen; Anne Keiserud; Geir Fonnum; Dag Lillehaug; *Dynal Biotech ASA, Oslo, Norway*

TP 166 **2,5-Dihydroxyacetophenone: A matrix for Highly Sensitive MALDI-TOF Analysis of Proteins, Glycoproteins and Serum Profiling on AnchorChip Targets**; Thomas Wenzel[1]; Katrin Sparbier[1]; Mark Flocco[2]; Catherine Stacey[2]; Markus Kostrzewa[1]; [1]*Bruker*

Daltonik GmbH, Leipzig, Germany; [2]Bruker Daltonics Inc., Billerica, MA

TP 167 **Applications of a Multi-Zone SAM-NTA Biochip for the Purification and Concentration of Engineered or Phosphorylated Proteins with Detection by MALDI-MS**; Douglas P. Greiner[1]; Christopher M. Belisle[1]; Irene Y. Chen[1]; John D. Kohler[1]; John A. Walker II[1]; Michael Mariani[2]; Mark S. Baker[2]; *[1]LCI, Fremont, CA; [2]Australian Proteomics Analysis Facility, Ltd*

TP 168 **Surface Morphology Effects in Laser Desorption/Ionization**; Yong Chen[1]; Guanghong Luo[1]; Gary Siuzdak[2]; Robert Dubrow[3]; Akos Vertes[1]; *[1]The George Washington University, Washington, DC; [2]The Scripps Research Institute, La Jolla, CA; [3]Nanosys, Inc, Palo Alto, CA*

TP 169 **Fractionation of Neutral and Sialylated N-linked Glycans on a Micro Scale HILIC SPE for MALDI-Tof MS Analysis**; Ying Qing Yu; Jennifer Kaska; Martin Gilar; John C. Gebler; *Waters Corporation, Milford, MA*

TP 170 **Optimization of Matrices for the Characterization of Biomolecules using the 4700 Proteomics Analyzer**; Steven C Pomerantz; Jennifer F. Nemeth; *Centocor, Inc., Radnor, PA*

TP 171 **Nanowire-Assisted Laser Desorption Ionization Mass Spectrometric Analysis**; Heon-Jin Choi[1]; Jae-Chul Pyun[2]; Min-Jung Kang[3]; Jung-Chul Lee[3]; Young-Jin Choi[3]; Jae-Hwan Park[3]; June-Gunn Lee[2]; *[1]Yonsei University, Seoul, Korea; [2]KIST-Europe, Saarbruecken, Germany; [3]KIST, Seoul, Korea*

TP 172 **Analysis of Polyamidoamine (PAMAM) Dendrimer-Polyhedral Oligosilsesquioxane (POSS) Nanohybrids by Matrix Assisted Laser Desorption Ionization-Time of Flight (MALDI-TOF) Mass Spectrometry**; Eric J Hill[1]; Petar R. Dvornic[2]; Claire Hartmann-Thompson[2]; Steven E. Keinath[2]; *[1]Impact Analytical, Midland, MI; [2]Michigan Molecular Institute, Midland, MI*

TP 173 **Depth Profiling of CHCA Matrix Spots for the Investigation of Sensitivity and Dynamic Range of Peptide Analysis by MALDI-TOF MS**; Holger Roehl[1]; Sven Goethel[1]; Karsten Reihs[1]; Jutta Pickartz[2]; Joachim Wesener[2]; *[1]SuNyx GmbH, Cologne, Germany; [2]Bayer Industry Services, Leverkusen, Germany*

TP 174 **Disposable Aluminum Plates with Hydrophobic Coating for MALDI/TOF by Photolithography**; Kisoo Park[1]; Miyoung Ha[2]; Namgu Cha[2]; Hyun Woo Lim[2]; Eun Kyu Lee[2]; Yangsun Kim[1]; *[1]Proteonik Inc. Lab, Ansan, Kunjggi-do, Korea; [2]Microbiochip Ct., Hanyang University, Ansan, Kyunggi-do, Korea*

ION MOBILITY MS

TP 175 **Fast FAIMS Separations: Fundamentals and Applications to Proteomics using LC-FAIMS/MS**; Fumin Li; Keqi Tang; Alexandre A. Shvartsburg; Konstantinos Petritis; Eric F. Strittmatter; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 176 **Infrared MALDI Ion-Mobility TOF MS**; Michael Ugarov[1]; Thomas Egan[1]; Denis Langlais[1]; J. Albert Schultz[1]; Jae-Kuk Kim[2]; Kermit K. Murray[2]; Shelley Jackson[3]; Amina S. Woods[3]; *[1]Ionwerks, Houston, TX; [2]Louisiana State University, Baton Rouge, LA; [3]NIDA IRP, Baltimore, MD*

TP 177 **The Use of LC-APCI-FAIMS-MS for the Quantitative Analysis of Taxol in Mouse Plasma**; Elizabeth A. Mahan; Richard King; *Dept. of Drug Metabolism, Merck Research Labo, West Point, PA*

TP 178 **MALDI Ion Mobility Time-of-Flight Mass Spectrometry for Biological Agent Identification**; Jae-kuk Kim[1]; Michael V. Ugarov[2]; J. Albert Schultz[2]; Kermit K. Murray[1]; *[1]Louisiana State University, Baton Rouge, LA; [2]Ionwerks, Houston, TX*

TP 179 **Fragmentation of Mobility Selected Ions using Ion Trap Mass Spectrometry**; Brian H. Clowers; William F. Siems; Herbert H. Hill; *Washington State University, Pullman, WA*

TP 180 **A novel Ion Mobility Device for the Separation of Peptides and Proteins in a Modified Hybrid Quadrupole oa-ToF Mass Spectrometer**; Jonathan P. Williams[1]; James H. Scrivens[1]; Kevin Giles[2]; Robert H. Bateman[2]; Michael T. Bowers[3]; *[1]University of Warwick, Coventry, United Kingdom; [2]Waters MS Technologies, Manchester, United Kingdom; [3]University of California, Santa Barbara, CA*

TP 181 **Enhancement of Precursor Ion Scanning on a Q-TOF Instrument using a Travelling Wave Ion Mobility Separator**; Steve Bajic; Robert H Bateman; Kevin Giles; Steven D Pringle; Jason L Wildgoose; *Waters Corporation, Manchester, UK*

TP 182 **The Use of Ion Mobility Mass Spectrometry (IMMS) Approaches to Characterise Protein-Misfolding and Protein Aggregation Processes;** James H. Scrivens[1]; Jonathan P. Williams[1]; Kevin Giles[2]; Robert H. Bateman[2]; Michael T. Bowers[3]; *[1]University of Warwick, Coventry, United Kingdom; [2]Waters MS Technologies, Manchester, United Kingdom; [3]University of California, Santa Barbara, CA*

TP 183 **Interplay between Cooperative Binding and Coulombic Repulsion in Metal-Metallothionein Complexes Revealed by Collision Cross-Sectional Measurements**; Yuzhu Guo[1]; Bruce A. Thomson[2]; Alan C. Hopkinson[1]; K.W. Michael Siu[1]; *[1]York University, Toronto, ON, Canada; [2]MDS SCIEX, Toronto, ON, Canada*

TP 184 **Orientation of Macromolecular Ions in Strong Electric Fields and the Case for Ion Mobility Spectrometry with Alignment of Dipole Direction**; Alexandre A. Shvartsburg[1]; Randy Purves[2]; Koblar A. Jackson[3]; Keqi Tang[1]; Richard D. Smith[1]; Roger Guevremont[2]; *[1]Pacific Northwest National Laboratory , Richland , WA; [2]Ionalytics Corporation, Ottawa, Canada; [3]Central Michigan University, Mt. Pleasant, MI*

TP 185 **Experimental/Modeling Study of the Effect of Mechanical and Operational Parameters on the Sensitivity and Resolution of FAIMS**; Govindanunny Thekkadath; Roger Guevremont; *Ionalytics Corporation, Ottawa, Canada*

TP 186 **Ionization of Explosives using a Dielectric Barrier Discharge as an Ion Source for Mass Spectrometry and Ion Mobility Spectrometry**; Melanie J Crawford[1]; Robert G Ewing[1]; William C Blanchard[2]; *[1]New Mexico Tech, Socorro, NM; [2]Blanchard and Co, Inc., Phoenix, MD*

TP 187 **Hadamard Transform Electrospray Ionization Atmospheric Pressure Ion Mobility Spectrometry**; Brian H. Clowers[1]; Steve Massick[2]; William F. Siems[1]; Herbert H. Hill[1]; *[1]Washington State University, Pullman, WA; [2]Southwest Sciences, Inc., Santa Fe, NM*

TP 188 **Direct Electrospray Ionization-Ion Mobility-Time-of-Flight Mass Spectrometry (DESI/IMS/ToF-MS) for Rapid Analysis of Pharmaceutical and Biological Samples**; Daniel J. Weston[1]; Colin S. Creaser[1]; Robert Bateman[2]; Tim R. Wood[3]; Ian D. Wilson[4]; *[1]Nottingham Trent University, Nottingham, UK; [2]Micromass UK, Manchester, UK; [3]GlaxoSmithKline, Stevenage, UK; [4]Astra Zeneca, Cheshire, UK*

TP 189 **Novel Mobility - Time of Flight Mass Spectrometer**; Alexander V. Loboda; *PerkinElmerSciex, Concord, ON, Canada*

TP 190 **An ESI-Ion Trap-Ion Mobility-q-TOF to Study Ion-Ion Reactions of Intact Biopolymers**; Ethan R. Badman; Xiaowen Fang; Gregg M. Schieffer; Matthew W. Soyk; Qin Zhao; Tim J. Anderson; *Iowa State University, Ames, IA*

TP 191 **Investigation of the Secondary Structures of Peptides using a Novel Travelling Wave Ion Mobility Separator Coupled to an oa-ToF**; Dalila Bensadek[1]; Isabel Riba-Garcia[1]; Simon J. Gaskell[1]; Neil Errington[1]; Andrew J. Doig[1]; Kevin Giles[2]; Steven D. Pringle[2]; *[1]University of Manchester, Manchester, UK; [2]Waters Corporation, Manchester, UK*

TP 192 **Analytical Treatment of Ion Motion in Differential Mobility Analyzer**; Erkinjon G Nazarov[1]; Raanan A Miller[1]; Alexander A Vedenov[2]; Eugene N Nikolaev[3]; *[1]Sionex Corporation, Waltham, MA; [2]Kurchatov Institute for Atomic Energy, Moscow, Russia; [3]The Institute for Energy Problems of Chemical Phys, Moscow, Russia*

TP 193 **Coupling of Ion Mobility Spectrometry to Mass Spectrometers**; Carsten Rowolt; Uwe Eggers; Michael Carstens; Juergen Grotemeyer; *Inst.Phys.Chem. University of Kiel, Kiel, Germany*

TP 194 **Monolithic Atmospheric Pressure micro-Electrospray Ion Mobility Spectrometer**; Mark Kwasnik[1]; Ignacio Zuleta[2]; Katrin Fuhrer[3]; Marc Gonin[3]; Richard Zare[2]; Facundo Fernandez[1]; *[1]Georgia Institute of Technology, Atlanta, GA; [2]Stanford University, Stanford, CA; [3]TOFWERK AG, Thun, Switzerland*

TP 195 **Rapid Quantitative Analysis of Acetaminophen in CYP 1A2 Marker Assays by FIA-FAIMS-MS**; John T. Mehl; Susan Crathern; Richard King; *Merck & Co, West Point, PA*

TP 196 **Multidimensional Proteomic Analysis of Escherichia Coli Whole Cell Lysates by HPLC-MALDI-Ion Mobility-MS: Extending Dynamic Range in Protein Analysis**; John A. McLean; Samuel Perkins; David H. Russell; *Texas A&M University, College Station, TX*

TP 197 **Peptide Structures Investigated by High-Field Asymmetric Waveform Ion Mobility Spectrometry Coupled to Electrospray Ionisation-Mass Spectrometry;** Alison E Ashcroft[1]; Rebecca J Rose[1]; Sarah A Harris[2]; Paul Read[3]; Robert H Bateman[3]; *[1]School of Biochemistry, University of Leeds, Leeds, UK; [2]School of Physics & Astronomy, University of Leeds, Leeds, UK; [3]Waters Corpn., MS Technologies Centre, Manchester, UK*

INSTRUMENTATION: FTMS

TP 198 **Development of a Novel Ion Guide for Improved Ion Transmission in FTICR Mass Spectrometry**; Nathan K. Kaiser[1]; Si Wu[1]; Kia Zhang[1]; Gordon A. Anderson[2]; James E. Bruce[1]; *[1]Washington State University, Pullman, WA; [2]Pacific Northwest National Laboratory, Richland, WA*

TP 199 **Efficient Ion Transmission through a Quadrupole Mass Filter and into a Linear Octopole Trap**; Tanner M Schaub[1]; Steven C Beu[2]; Christopher L Hendrickson[1]; C Logan Mackay[1]; Alan G Marshall[1]; *[1]National High Magnetic Field Laboratory, Tallahassee, FL; [2]S.C. Beu Consulting, Austin, TX*

TP 200 **Development of New Calibration Laws to Improve Mass Measurement Accuracy in Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Linhong Jing; David C Muddiman; Ann L Oberg; *Mayo Clinic College of Medicine, Rochester, MN*

TP 201 **Physical Characterization and Optimization of Electron Capture Dissociation in Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Yury O. Tsybin[1]; Christopher L. Hendrickson[1]; John P. Quinn[1]; Steven C. Beu[2]; Alan G. Marshall[1]; *[1]National High Magnetic Field Laboratory, Tallahassee, FL; [2]S.C. Beu Consulting, Austin, TX*

TP 202 **Analysis Gas Mixtures Important in Fuel Cell Analysis**; Dean V. Davis; Dan W. Phelps; Ken L. Gallaher; *Siemens Applied Automation, Bartlesville, OK*

TP 203 **Probing ligand &#45 Protein Complex Interactions with Automated Hydrogen-Deuterium Exchange FT-ICR Mass Spectrometry**; Michael J Chalmers[1]; Scott A Busby[1]; Christopher L Hendrickson[2]; Alan G Marshall[2]; Patrick R Griffin[1]; *[1]Scripps Florida, Jupiter, FL; [2]NHMFL, Tallahassee, FL*

TP 204 **A Novel Design FTMS Data Station for High-Speed. High-Resolution LC/MS**; Richard L. Hunter; *IonSpec Corporation, Lake Forest, CA*

TP 205 **Selective Accumulation and Enrichment of Ions in a Hybrid Q-FTMS Mass Spectrometer with an Improved ESI Source Design**; Michael Easterling[1]; Melvin A. Park[1]; Taeman Kim[1]; Christopher Thompson[1]; Michael Schubert[2]; J. Paul Speir[1]; *[1]Bruker Daltonics, Inc., Billerica, MA; [2]Bruker Daltonics, GmbH, Bremen, Germany*

TP 206 **Realistic Modeling of Ion Motion in an FT ICR Cell**; Eugene N Nikolaev[1]; Alexander M Popov[2]; Ron M.A. Heeren[3]; Marija S Sharova[2]; Alexander V Pozdneev[2]; Konstantin S Chingin[1]; Ioana M Taban[3]; *[1]The Institute for Energy Problems of Chemical Phys, Moscow, Russia; [2]Moscow State University, Moscow, Russia; [3]FOM Institute for Atomic and Molecular Physics, Amsterdam, The Netherlands*

TP 207 **Dynamic Range of Mass Accuracy in FTMS**; Stevan Horning; Alexander Makarov; Eduard Denisov; Andreas Wieghaus; Robert Malek; Oliver Lange; Michael Senko; *Thermo Electron Corporation, Bremen, Germany*

TP 208 **Design of the Cryogenic Fourier Transform Mass Spectrometer**; Peter B. O'Connor; *Boston University School of Medicine, Boston, MA*

TP 209 **Compensation Designs for Cylindrical Traps in FTMS that Permit Improved Coulombic Dynamic Range**; Don L. Rempel; Michael L. Gross; *Washington University, Saint Louis, MO*

TP 210 **Local Dynamic Coupling Effects in the Accurate Measurements of Masses in FTMS**; Adam M. Brustkern; Ilan Vidavsky; Henry W. Rohrs; D.L. Rempel; Michael L. Gross; *Washington University, Saint Louis, MO*

TP 211 **Use of the Filter Diagonalization Method in the Study of Space Charge Related Frequency Modulation in FTMS;** Konstantin Aizikov; Peter O'Connor; *Boston University School of Medicine, Boston, MA*

TP 212 **Octopole Ion Guide Transmission Efficiency in a High Magnetic Field for FT-ICR MS**; Myung-Choul Choi[1]; Jong S. Yoo[1]; Steven C. Beu[2]; Christopher L. Hendrickson[3]; Alan G. Marshall[3]; Hyun S. Kim[1]; *[1]Korea Basic Science Institute, Deajeon, Republic of Korea; [2]S. C. Beu Consulting, Austin, TX; [3]National High Magnetic Field Laboratory, Tallahassee, FL*

TP 213 **Accurate Mass Proteomics Measurements using Capillary LC-FTICR Optimized for Sensitivity and Dynamic Range**; Aleksey V Tolmachev; Rui Zhang; Charley C Langley; Matthew E Monroe; Weijun Qian; Eric F Strittmatter; Tao Liu; Anil K Shukla; Harold R Udseth; Richard D Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 214 **Mass Accuracy Improvement by Minimizing Fluctuation of Space-Charge Effect in FT-ICR**; Richard

L Wong; I. Jonathan Amster; *University of Georgia, Athens, GA*

TP 215 **SIMION Modeling of Methods to Control Time-of-Flight Dispersion of Externally Generated Ions in High Field FT-ICR MS**; Steven C. Beu[1]; Christopher L. Hendrickson[2]; Alan G. Marshall[2]; *[1]S. C. Beu Consulting, Austin, TX; [2]National High Magnetic Field Laboratory, Tallahassee, FL; [3]Florida State University, Tallahassee, FL*

TP 216 **14.5 Tesla Hybrid Linear Ion Trap Fourier Transform Ion Cyclotron Resonance Mass Spectrometer**; Christopher L Hendrickson[1]; Greg T. Blakney[1]; Stevan R. Horning[3]; C. Logan Mackay[1]; John P. Quinn[1]; Tanner M. Schaub[1]; Michael W. Senko[3]; Alan G. Marshall[2]; *[1]National High Magnetic Field Laboratory, Tallahassee, FL; [2]Florida State University, Tallahassee, FL; [3]Thermo Electron Corporation, Bremen, Germany*

TP 217 **Quadrupolar Detection using an Octagonal ICR-cell**; Kim F. Haselmann[1]; Mads L. Haslund[2]; Roman A. Zubarev[3]; *[1]University of Southern Denmark, Odense, Denmark; [2]Copenhagen Muscle Research Centre, Copenhagen, Denmark; [3]Uppsala University, Uppsala, Sweden*

TP 218 **Design of a Preamplifier for Cryogenic Fourier Transform Mass Spectrometry using GaAs High Electron Mobility Transistors**; Raman Mathur[1]; R. W. Knepper[2]; Peter B. O'Connor[1]; *[1]Boston University School of Medicine, Boston, MA; [2]Boston University, College of Engineering, Boston, MA*

TP 219 **Predator Data System Control of a Commercial FT-ICR Mass Spectrometer**; Seung Y. Kim[1]; Jong S. Yoo[1]; Greg T. Blakney[2]; Christopher L. Hendrickson[2]; Alan G. Marshall[2]; Hyun S. Kim[1]; *[1]Korea Basic Science Institue, Deajeon, Republic of Korea; [2]National High Magnetic Field Laboratory, Tallahassee, FL*

TP 220 **Predator: A PCI Data Station for FT-ICR Mass Spectrometry**; Greg T. Blakney[1]; Dana E. Robinson[2]; Ngan V. Ly[1]; Neil L. Kelleher[2]; Christopher L. Hendrickson[1]; Alan G. Marshall[3]; *[1]National High Magnetic Field Laboratory, Tallahassee, FL; [2]University of Illinois, Urbana, IL; [3]Florida State University, Tallahassee, FL*

TP 221 **A Mobile FTICR for Gas Analysis with External Ion Source**; Michel Héninger; Laurent Clochard; Pierre Boissel; Gérard Mauclaire; Hélène Mestdagh; Joël Lemaire; *Laboratoire de Chimie Physique, Orsay, France*

TP 222 **Acquisition Rate and Mass Accuracy on a Hybrid Linear Ion Trap/FTICR Mass Spectrometer: Optimization and Impact on Large-Scale Proteomics Experiments**; Wilhelm Haas; Scott A. Gerber; Judit Villen; Brendan K. Faherty; Sean A. Beausoleil; Corey E. Bakalarski; Joshua E. Elias; Steven P. Gygi; *Harvard Medical School, Boston, MA*

ION ACTIVATION

TP 223 **Electron Capture Dissociation in RF Quadrupole devices: A New Method to Trap Ions and Low-Energy Electrons**; Houle Wang; Yang Wang; David Kennedy; Yixin Zhu; Kerry Nugent; *Michrom BioResources, Auburn, CA*

TP 224 **Enhanced Infrared Multiphoton Dissociation of Derivatized Peptides in a Quadrupole Ion Trap**; Jeffrey J. Wilson; Jennifer S. Brodbelt; *University of Texas, Austin, Tx*

TP 225 **Collisional and Photo-Activation Studies on Singly and Doubly Charged Fullerenes Stored in a Penning Trap**; Noelle Walsh; Andreas Lassesson; Franklin Martinez; Alexander Herlert; Gerrit Marx; Lutz Schweikhard; *Univ. of Greifswald, Inst. of Physics, Greifswald, Germany*

TP 226 **Forcing Loss of -H2O in the LC-MS/MS Source to Increase Sensitivity and Reproducibility**; Yong Q. Tang[1]; Saber H. Maleki[1]; Brian D. Beato[1]; Naidong Weng[2]; *[1]Covance Bioanalytical, LLC , Indianapolis, IN; [2]Covance Laboratories Inc., Madison, WI*

TP 227 **Investigating the Origin of Asymmetric Dissociation of Multiprotein Complexes in Gas Phase**; Igor V. Sinelnikov; Elena N. Kitova; John S. Klassen; *University of Alberta, Edmonton, AB Canada*

TP 228 **Metastable-Activated Dissociation Mass Spectrometry (MAD-MS): a New Paradigm for Tandem Mass Spectrometry;** Olivier Collin; Glen P. Jackson; *Ohio University, Athens, OH*

TP 229 **Ligation-Dependent Fragmentation of [M(1,10-Phenanthroline)$_n$]$^{2+}$ Complexes with (n=1-3) for First-Row Transition-Metals;** Janna Anichina; Michael J. Y. Jarvis; Voislav Blagojevic; Tuba Gozet; Diethard Bohme; *York University, Toronto, ON, Canada*

TP 230 **Patching In-Source Fragmentation and In-Collision-Cell Dissociation to Improve Peptide Mass Spectra for Protein Identification**; Xudong Yao; *University of Connecticut, Storrs, CT*

TP 231 **Reactions of Multiply Protonated Polypeptides with Nitrobenzene Anions: Electron Transfer Dissociation and More**; Paul A Chrisman; Sharon J Pitteri; Jason M Hogan; Scott A McLuckey; *Purdue University, West Lafayette, IN*

TP 232 **Electron Transfer Dissociation in a Non-Linear Paul Ion Trap**; Hartmer Ralf; Ledertheil Thorsten; Brekenfeld Andreas; *Bruker Daltonik GmbH, Bremen, Germany*

TP 233 **Unusual MS/MS and MS^n Spectra of 4-[2-(6-Methylpyridin-2-yl)-5,6-Dihydro-4H-Pyrrolo[1,2-B]Pyrazol-3-Yl]Quinoline-6-Carboxamide using Quadrupole, Time Of Flight, and Fourier Transform Mass Spectrometers;** Gregory A. Rener; Phillip E. Sanders; Jeffrey J. Alberts; Thomas J. Lindsay; Robert J. Barbuch; *Eli Lilly and Company, Indianapolis, IN*

TP 234 **CID of Thallium(I) Cationized Peptides**; Sila Ochola[1]; Travis Cooper[1]; Peter Hamlet[2]; Mike Van Stipdonk[1]; *[1]Wichita State University, Wichita, KS; [2]Pittsburg State University, Pittsburg, KS*

TP 235 **Stereochemical Differentiation of Linear Peptides by ESI-MS/MS**; Scott V. Serafin; Rhonda Maranan; Kangling Zhang; Thomas H. Morton; *University of California, Riverside, CA*

TP 236 **Complementary use of [M+H]+ and [M+Na]+ Fragmentation Pattern for Identification of Unknown Organic Impurities**; Benita Forngren; *AstraZeneca, Södertälje, Sweden*

TP 237 **Infrared Spectroscopy of Complexes of Ag(I) and Zn(II) with Phenylalanine using the FELIX Free Electron Laser**; Robert C. Dunbar[1]; Nick Polfer[2]; David T. Moore[2]; Gert von Helden[3]; Gerard Meijer[3]; Jos Oomens[2]; *[1]Case Western Reserve Univ., Cleveland, OH; [2]FOM Institute for Plasma Physics, Nieuwegein, Netherlands; [3]Fritz Haber Institute, Berlin, Germany*

TP 238 **Electron Capture Dissociation in a Linear Radio-Frequency-Quadrupole Ion Trap within Chromatographic Time-Scale**; Hiroyuki Satake; Takashi Baba; Yuichiro Hashimoto; Hideki Hasegawa; Astumu Hirabayashi; Izumi Waki; *Central Research Laboratory, Hitachi, Tokyo, Japan*

TP 239 **IR spectroscopy of Mass-Selected Organometallic complexes : Structure and Spin-State Determination**; Luke Mac Aleese[1]; Fabrice Boyrie[1]; Joël Lemaire[1];

François Glotin[2]; Jean-Michel Ortega[2]; Barbara Chiavarino[3]; Maria E Crestoni[3]; Simonetta Fornarini[3]; Philippe Maître[1]; *[1]UMR 8000 CNRS - Universite Paris-Sud 11, Orsay, FRANCE; [2]UMR 130 CNRS - Universite Paris-Sud 11, Orsay, FRANCE; [3]Universita di Roma "La Sapienza", Roma, ITALY;*

TP 240 **Reagent Anions for Electron Transfer to Polypeptide/Protein Ions in the Gas Phase**; Harsha P. Gunawardena; Scott A. McLuckey; *Purdue University, West Lafayette, IN*

TP 241 **Theoretical Estimation of Peptide Internal Temperature during Collision Induced Dissociation in a Quadrupole Ion Trap**; Philip M. Remes; Gary L. Glish; Connell Cunningham Jr; *University of North Carolina, Chapel Hill, NC*

TP 242 **Sequential Top-Down Proteomics – Utilization of Preferential CID Dissociation for Characterization of Post-Translational Modifications in Proteins**; Shenheng Guan; Katalin F. Medzihradszky; Robert J. Chalkley; Xin Zhang; Al Burlingame; *UCSF, San Francisco, CA*

TP 243 **Isomerization and Fragmentation of Small Protonated Peptide Ions**; Zekeria Altug; Juergen Grotemeyer; *Inst.Phys.Chem., University of Kiel, Kiel, Germany*

TP 244 **Characterization of Slow Ion Heating in Multipole Storage Assisted Dissociation and Related Processes;** Takemichi Nakmaura[1]; Takae Takeuchi[2]; *[1]RIKEN, Wako, Japan; [2]Nara Women's Univ, Nara, Japan*

TP 245 **157 nm photodissociation of biomolecules on a linear ion trap mass spectrometer**; Tae-Young Kim; James P. Reilly; *Indiana University, Bloomington, IN*

TP 246 **Sequential Decays and Dianionic Clusters as studied in a Penning Trap**; Klavs Hansen[2]; Alexander Herlert[1]; Gerrit Marx[1]; Lutz Schweikhard[1]; Manuel Vogel[3]; *[1]Univ. of Greifswald, Inst. of Physics, Greifswald, Germany; [2]Chalmers University of Technology, Goeteborg Univ., Goeteborg, Sweden; [3]Univ. of Mainz, Inst. of Physics, Mainz, Germany*

TP 247 **Simulation of Internal Energy Distribution of Peptides in Electrospray Ionization**; Alireza PAK[1]; Jessie NABAN-MAILLET[1]; Denis Lesage[1]; Yves Gimbert[2]; Jean-Claude Tabet[1]; *[1]Université Pierre et Marie Curie, Paris, France; [2]LEDSS, Chimie Recherche UMR 5616, Grenoble, France*

TP 248 **The Gas-Phase Fragmentation Reactions of Protonated N-Methyl Lysine and Arginine Derivatives**; Junfang Zhao; P.Y. Iris Shek; Alan C. Hopkinson; K.W. Michael Siu; *York University, Toronto, ON, Canada*

TP 249 **ESI MS/MS Studies of 2,6-bis[N-a-(Methoxycarbonyl)-Histaminemethyl]-Pyridine**; Tuba Gozet[1]; John Stone[2]; Semih Durmus[3]; Wiley J. Youngs[3]; Diethard K. Bohme[1]; *[1]York University, Toronto, ON, CANADA; [2]Queen`s University, Toronto, ON, CANADA; [3]The University of Akron, Akron, OH*

TP 250 **Elucidation of Gas Phase Transition Metal Coordination Chemistry using IRMPD Spectroscopy**; David T. Moore[1]; Jos Oomens[1]; Nick Polfer[1]; Gert von Helden[3]; Gerard Meijer[3]; Robert C. Dunbar[2]; *[1]FOM Institute for Plasma Physics, Nieuwegein, The Netherlands; [2]Case Western Reserve University, Cleveland, OH; [3]Fritz-Haber Institute, Berlin , Germany*

TP 251 **Comparison of the CAD and PD Spectra of Deprotonated Nucleotide Sugars and Their Metal Complexes**; Michael Pikulski; Jennifer S. Brodbelt; *The University of Texas, Austin, TX*

TP 252 **Collisions of Fullerenes with Inert Gases in a Tandem Time-of-Flight (TOF/TOF) Mass Spectrometer and Capture of Helium Atoms**; Serguei A. Iltchenko; Robert J. Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*

TP 253 **Liquid Chromatography Followed by Selective Dissociation of Phosphorylated Peptides in a Quadrupole Ion Trap with Infrared Multiphoton Dissociation (IRMPD)**; Matthew C. Crowe; Jennifer S. Brodbelt; *The University of Texas, Austin, TX*

MATERIALS SCIENCE

TP 254 **Characterization of TiO_2 Nanoparticles by MALDI-TOF Mass Spectrometry**; Bing Guan; Weigang Lu; Jiye Fang; Richard B. Cole*; *University of New Orleans, New Orleans, LA*

TP 255 **Desorption-Ionization MS on Mesoporous Silica Thin Films**; Srinivas Iyer; Andrew Dattelbaum; *Los Alamos National Laboratory, Los Alamos, NM*

TP 256 **Combinatorial Assembly of Heterometallic Double Helicates Monitored by ESI-MS**; Haiko Herschbach[1]; Annie Marquis[2]; Jean-Marie Lehn[2]; Alain Van Dorsselaer[1]; Emmanuelle Leize[1]; *[1]Lab. de Spectrométrie de Masse Bio-Organique, Strasbourg, France; [2]Inst. de Science et d'Ingénierie Supramoléculaires, Strasbourg, France*

TP 257 **Evolved Gas Analysis with Skimmer Interface and Ion Attachment Mass Spectrometry for Burnout Monitoring of Organic Additives in Ceramic Processing;** Takahisa Tsugoshi; Takaaki Nagaoka; Nanaka Ito; Koji Watari; *AIST, Nagoya, Japan*

TP 258 **Characterization of Iron(III)-Substituted, Dimeric Polyoxotungstates by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry;** Gregory A. Khitrov[1]; Li-Hua Bi[2]; Ulrich Kortz[2]; Alan G. Marshall[1]; *[1]National High Magnetic Fiel Lab, Tallahassee, FL; [2]International University Bremen, Bremen, Germany*

TP 259 **Mass Spectrometric and Theoretical Studies on Fragmentation Mechanism of (Trimethylsilyl)trimethylgermane Cation Radical in the Gas Phase**; Takae Takeuchi[1]; Yuko Shirai[1]; Masato Kiuchi[2]; Akinobu Naka[3]; *[1]Nara Women's Univ., Nara, Japan; [2]AIST, Ikeda, Japan; [3]Kurashiki Univ. Science and the Arts, Kurashiki, Japan*

LIPIDS: OXIDIZED AND SIGNALING

TP 260 **Covalent Modification of Glutathione by the Lipid Peroxidation Product 4-Oxo-2-Nonenal**; Wenying Jian; Tomoyuki Oe; Ian A Blair; *University of Pennsylvania, Philadelphia, PA*

TP 261 **Characterization of Lipid Modifications in Different Brain Areas in Alzheimer Disease: A Mass Spectrometry Study of Lipid Extract**; Benoit Colsch[1]; Carlos Afonso[2]; Françoise Fournier[2]; Jacques Portoukalian[3]; Jean-Claude Tabet[2]; Nicole Baumann[1]; *[1]INSERM UMR711 Neurochemistry laboratory, Paris, France; [2]University Pierre & Marie Curie, UMR 7613, Paris, France; [3]INSERM U346 Dermatology laboratory, Lyon, France*

TP 262 **Mediator-Lipidomics for Ischemic Acute Renal Failure: Biosynthesis and Protective-Actions of Resolvins and Neuroprotectins**; Song Hong; Yan Lu; Jeremy S Duffield ; Vishal S Vaidya; Gabrielle Fredman; Joseph V Bonventre; Charles N Serhan; *Brigham Women Hospital, Harvard Medical School, Boston, MA*

TP 263 **LC-Tandem Mass Spectrometry of Fatty Acyl-Coenzyme A Species from Cultured Cells**; Christopher A. Haynes; M. Cameron Sullards; Alfred H. Merrill, Jr; *Georgia Institute of Technology, Atlanta, GA*

TP 264 **Detection of Enantiomers of Epoxyeicosatrienoic Acids Derivatives by Chiral-Phase High Performance Liquid Chromatography/ Tandem Mass Spectrometry**; A.

Clementina Mesaros; Seon Hwa Lee; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*

TP 265 **Toward Biomarkers of Preeclampsia: Analysis of Placental Oxidized Lipid Content**; William C. Putnam[1]; Dinesh Rakheja[2]; Sarah M. Swenson[1]; *[1]Texas Tech University - Health Sciences Center, Dallas, TX; [2]UT Southwestern Medical Center, Dallas, TX*

TP 266 **Formation of Acrolein Adducts of Cytochrome c: Investigation of Aldehyde Modifications and the Impact on Protein Function**; Amanda L. Isom; Marion Kirk; Anita Pinner; Shannon Bailey; Stephen Barnes; *University of Alabama at Birmingham, Birmingham, AL*

TP 267 **A Comprehensive and Comparative Analysis for MALDI FTMS Lipid Profiles from Selected Organisms**; Jeffrey J. Jones; Charles L. Wilkins; *University of Arkansas, Fayetteville, AR*

TP 268 **Analysis of Saturated and Unsaturated Fatty Acids in Cell System by LC/ESI/MS**; Seon Hwa Lee; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*

TP 269 **Specific Identification Method of Oxidize Phospholipids using Tandem Mass Spectrometry**; Hiroki Nakanishi[1]; Toshiyuki Yamazaki[1]; Yasuhiro Iida[1]; Takao Shimizu[2]; Ryo Taguchi[1]; *[1]Dept. of metabolome, Graduate School of Medic, Tokyo, Japan; [2]Dept. of molecular Biology, Graduate School o, Tokyo, Japan*

TP 270 **Lipid Changes in Bovine Aortic Endothelial Cells upon Treatment with Ap4A**; Yonnie Wu[1]; Gary L. Powell[1]; Xi Wang[2]; Chun-Huai Cheng[2]; Chin-Fu Chen[2]; Richard Hilderman[2]; *[1]Proteomics Facility, Clemson U Genomics Institute, Clemson, SC; [2]Genetics, Biochemistry & Life Science Studies, Clemson, SC*

TP 271 **LC-MS Quantitation of F2-Isoprostanes: Is Slower Better?**; Alan W. Taylor; Richard S. Bruno; Maret G. Traber; Balz Frei; *Oregon State University, Corvallis, OR*

LIPIDS AND STEROIDS

TP 272 **Mass Spectrometric Lipid Profiling in Transgenic Mice with Perturbed ABCA Transporter**; Fred Bjørn Lih; Kenneth B. Tomer; Ronald E. Cannon; *NIEHS/NIH/DHHS, RTP, NC*

TP 273 **Analysis of Plasma 24S-Hydroxycholesterol**; Andrea E DeBarber; Robert Steiner; *Oregon Health and Science University, Portland, OR*

TP 274 **Steroidomic of Brain**; William J Griffiths[1]; Yuqin Wang[1]; Martin Hornshaw[2]; Suya Liu[3]; Karl Bodin[3]; Gunvor Alvelius[3]; Jan Sjovall[3]; *[1]School of Pharmacy, London, UK; [2]Applied Biosystems, Warrington, UK; [3]Karolinska Institutet, Stockholm , Sweden*

TP 275 **Age Related Changes in Rat Brain Sphingolipid Profile by ESI-MS/MS**; Steven W. Esch; Asma Zaidi; Todd D. Williams; *The University of Kansas, Lawrence, KS*

TP 276 **Metabolism of Dehydroepiandrosterone in Stem Cells *in vitro*: Metabolite Identification using LC-MS and Nanomolar Organic Synthesis**; Ashok Marwah; Padma Marwah; Masatoshi Suzuki; Lynda S. Wright; Henry Lardy; Clive N. Swendson; *University of Wisconsin, Madison, WI*

TP 277 **Measurement of Levels of Lyso Phosphatidylcholine Molecular Species in Human Airway Fluids via Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)**; Walter C. Hubbard; Mark C. Liu; *Johns Hopkins University School of Medicine, Baltimore, MD*

TP 278 **An Liquid Chromatographic-Mass Spectrometric Study of 7-oxo-DHEA Metabolites in Human Urine;** Ashok Marwah; Padma Marwah; Henry Marwah; Gary G. Girdaukas; *University of Wisconsin, Madison, WI*

TP 279 **Characterization of Sulfatide Molecular Species from Brain Extracts using Electrospray Ionization Tandem Mass Spectrometry from Arylsulphase A Deficiency Mice**; Giorgis Isaac[1]; Jan-Eric Månsson[2]; Jonas Bergquist[1]; *[1]Uppsala University, Uppsala, Sweden; [2]Göteborg University, Mölndal, Sweden*

NUCLEIC ACID

TP 280 **Ene-Diyne Drugs and DNA: Probing the Structure of Novel DNA-Drug Adducts with Tandem ESI-MS**; Courtney L. Sherman; Sarah E. Pierce; Jennifer S. Brodbelt; Bodin Tuesuwan; Sean M. Kerwin; *University of Texas, Austin, TX*

TP 281 **Evaluating the Activity of Candidate Bifunctional Probes for MS3D Investigations of Nucleic Acids Structures using ESI-FTMS**; Qingrong Zhang; Daniele Fabris; *University of Maryland Baltimore County, Baltimore, MD*

TP 282 **Formation of Intrastrand Crosslink Lesions between Cytosine and Adenine in Duplex DNA Induced by Reactive Oxygen Species**; Haizheng Hong; Yinsheng Wang; *University of California, Riverside, CA*

TP 283 **DNA Sequencing by MALDI-TOF Mass Spectrometry using Alkali Cleavage of RNA/DNA chimers**; Florence Mauger[1]; David Gelfand[2]; Rod Fuerst[2]; Sandy Calloway[2]; Keith Bauer[2]; Fred Richert[2]; Ivo G Gut[1]; *[1]CNG, Evry, France; [2]Roche Molecular Systems, Alameda, CA*

TP 284 **Sequence Analyses of Carcinogen-Modified Oligonucleotides by Liquid Chromatography and Time-of-Flight Mass Spectrometry**; M. Paul Chiarelli[1]; Lan Gao[1]; Yuyuan Li[2]; Li Zhang[2]; Srinivasa Meneni[2]; Bongsup Cho[2]; *[1]Loyola University, Chicago, IL; [2]University of Rhode Island, Kingston, RI*

TP 285 **Charge-State Dependence of Dissociation of Drug-DNA Complexes**; Junmei Zhang; Myles Gardner; Carolyn Mazzitelli; Karin Keller; Jennifer Brodbelt; *University of Texas, Austin, TX*

TP 286 **Simultaneous Quantitation of Mono-, Di-, and Triphosphates of Natural Ribonucleosides from Extracts of Various Cell Lines by Ion-Pair LC-MS/MS**; David C Delinsky; Raymond F Schinazi; *Emory University, Decatur, GA*

TP 287 **Targeting Quadruplex DNA: ESI-MS Characterization of Pyrrole-Inosine Nucleosides**; Courtney L. Sherman; Carolyn L. Mazzitelli; Jennifer S. Brodbelt; Janarthanan Jayawickramarajah; Jonathan L. Sessler; *University of Texas, Austin, TX*

TP 288 **Fragmentation Pathways of Oligodeoxy and Oligoribonucleotides in Electron Detachment Dissociation**; Jiong Yang; Kristina Håkansson; *University of Michigan, Ann Arbor, MI*

TP 289 **MLST Genotyping Campylobacter using High Throughput ESI-Mass Spectrometry**; James C Hannis[1]; Sheri M Manalili[1]; Thomas A Hall[1]; Steven A Hofstadler[1]; Robert E Mandrell[2]; Clifton K Fagerquist[2]; William G Miller[2]; *[1]Ibis Therapeutics, Carlsbad, CA; [2]U.S. Dept. of Agriculture, Albany, CA*

TP 290 **Using LC/MS to Detect Modified Nucleosides Isolated from Human Telomeric DNA**; J. Micah Wilcox[1]; Harald C. Koefeler[3]; Michael L. Gross[1]; Woodring E. Wright[2]; *[1]Washington University, Saint Louis, MO; [2]University of Texas Southwestern Medical Center, Dallas, TX; [3]Center for Fundamental Medical Research, Graz, Austria*

TP 291 **Behavior of β-Carboline with Monodeoxynucleotides and DNA in Electrospray**; Ying Xu[1]; Carlos Afonso[1]; Françoise Fournier[1]; Ren Wen[2]; Jean-Claude Tabet[1]; *[1]University Pierre & Marie Curie, UMR 7613, Paris, France; [2]University of Fudan, Shanghaï, China*

TP 292 **Characterization of Oligonucleotides/Polycation Complexes by Nanospray Q-TOF**; Peran Terrier;

William Buchmann; Jeanine Tortajada; *Universite d'Evry, EVRY, FRANCE*

TP 293 **In-Beam Mass Spectral Studies of Interactions of Electron and Nucleic Acid Compounds**; Hong Ji; Jeff Morre; Valery G Voinov; Max L Deinzer; Douglas F Barofsky; *Oregon State University, Corvallis, OR*

TP 294 **Determination of RNA Transesterification Kinetics by LC-MS**; William C. Putnam; Sarah M. Swenson; *Texas Tech University - Health Sciences Center, Dallas, TX*

TP 295 **Fragmentation Mechanisms of RNA Studied by Hydrogen/Deuterium Exchange and Matrix-Assisted Laser Desorption/Ionisation Tandem Mass Spectrometry**; Thomas Emil Andersen; Finn Kirpekar; *biochemistry and molecular biology, Odense, Denmark*

PEPTIDES: FRAGMENTATION AND SEQUENCING

TP 296 **Intramolecular Migration of Amide Hydrogens in Protonated Peptides upon Collisional Activation**; Thomas J.D. Jørgensen[1]; Nicolai Bache[1]; Peter Roepstorff[1]; Kenneth B. Jensen[3]; Henrik Gårdsvoll[2]; Michael Ploug[2]; *[1]Biochemistry and Molecular Biology, DK-5230 Odense M, Denmark; [2]Finsen Laboratory, DK-2100 Copenhagen Ø, Denmark; [3]Chemistry, DK-5230 Odense M, Denmark*

TP 297 **Negaive Ion Post-Source Decay Mass Spectrometry for Peptides Containing Asparagine, Aspartic acid, Glutamine and Glutamic acid**; Junjie Gao; Carolyn J. Cassady; *University of Alabama, Tuscaloosa, AL*

TP 298 **ABRF-PRG05: De Novo Peptide Sequence Determination**; Christoph W. Turck; Arnold M. Falick; Jeffrey A. Kowalak; William S. Lane; Thomas A. Neubert; Brett S. Phinney; Susan T. Weintraub; Karen A. West; *Association of Biomolecular Resource Facilities, Santa Fe, NM*

TP 299 **Selective Cleavage of Singly Charged Peptide Ions with Data-Dependent MS3 using a Linear Ion Trap Equipped with a MALDI source**; Anthony G Sullivan[12]; Scott Peterman[12]; Simon J Gaskell[3]; *[1]Thermo Electron, West Palm Beach, FL; [2]Thermo Electron, Somerset, NJ; [3]University of Manchester, Manchester, UK*

TP 300 **Ab initio Predictions of Peptide-Ion Fragmentation**; Christopher R. Kinsinger; Karl K. Irikura; *NIST, Gaithersburg, MD*

TP 301 **Circular Proteins: Discovery, Stability and Cyclization Mechanisms**; Michelle L. Colgrave; Bin Chen; David C. Ireland; Michael J. L. Korsinczky; Alun Jones; David J. Craik; *Institute for Molecular Bioscience, Brisbane, Qld, Australia*

TP 302 **Determination of Disulfide Bridges Position by 2-Methoxy-4,5-Dihydro-1H-Imidazole**; TINA CEPO; MARIO CINDRIC; ANA SKRLIN; *Pliva-Research and Development Ltd., Zagreb, Croatia*

TP 303 **Structure and Fragmentation Pathways of Protonated Leu-Enkephaline**; Bela Paizs[1]; Sandor Suhai[1]; Alex G. Harrison[2]; Alex B. Young[2]; *[1]German Cancer Research Center, Heidelberg, Germany; [2]University of Toronto, Toronto, Canada*

TP 304 **Fragmentation of Methylated Oligopeptides**; P. Y. Iris Shek; R. Natasha Grewal; Houssain El Aribi; Alan C. Hopkinson ; K. W. Michael Siu; *York University, Toronto, ON, Canada*

TP 305 **Comparative Fragmentation Study of Polypeptide Antibiotics by Low Energy-CID (ESI- and MALDI-ion trap) Multistage MS and High Energy-CID (MALDI-rTOF) MS/MS**; Ernst Pittenauer[1]; Martin Zehl[1]; Omar Belgacem[2]; Robert Mistrik[3]; Guenter Allmaier[1]; *[1]Vienna University of Technology, Vienna, Austria; [2]Kratos Analytical, Manchester, United Kingdom; [3]HighChem, Bratislava, Slovakia*

TP 306 **Internal Energies of Peptide Ions in Collisional Dissociation, Calculated from Thermal Dissociation Kinetics**; Michael Meot-Ner (Mautner) [1]; Arpad Somogyi[2]; *[1]National Institute of Standards and Technology, Gaithersburg, MD; [2]University of Arizona, Tucson, AZ*

TP 307 **Modeling the Fragmentation Patterns of Tripeptides with Density Functional Theory**; Rebecca L. Hoenigman; Robert Brown; Katheryn A. Resing; Veronica M. Bierbaum; *University of Colorado, Boulder, CO*

TP 308 **Occurrence and Intensity of (b_{n-1}+18) Ions in MALDI-CID and MALDI-PSD spectra of Peptides**; Peter M Gehrig; Ralph Schlapbach; *Functional Genomics Center Zurich, Zurich, Switzerland*

TP 309 **Conformation and Reactivity of Gas-Phase Protonated and Metalated Peptide Ions**; James G. Slaton; David H. Russell; *Texas A&M University, College Station, TX*

TP 310 **Fragmentation Characteristics of b_n (n=2-15) Ions from Protonated Peptides**; Edgardo Rivera-Tirado; Michael J. Polce; Chrys Wesdemiotis; *The University of Akron, Akron, OH*

TP 311 **Strategies for *de novo* Interpretation of Peptide Sequence using MS/MS Data and Chemical Techniques**; Angela K Walker; Jayson A Falkner; Philip C Andrews; *University of Michigan, Ann Arbor, MI*

TP 312 ** Influence of Alternative Amino Acids on Formation of b_n and y_n Sequence Ions from Model Tetrapeptides **; Travis Cooper; Mike Van Stipdonk; *Wichita State University, Wichita, KS*

TP 313 **The Effect of Hydrophilic Amino Acid Side Chains on Peptide Fragmentation**; Qingfen Zhang; Guanhong Tan; Vicki H. Wysocki; *University of Arizona, Tucson, AZ*

TP 314 **Electron Transfer Ion/Ion Reactions: Increasing Peptide Sequence Information from Doubly Charged Peptides**; Sharon J. Pitteri; Paul A. Chrisman; Jason M. Hogan; Scott A. McLuckey; *Purdue University, West Lafayette, IN*

TP 315 **Identifying Translated Splice Variants of the Maxi-K Channel and their Relevance to Type 1 Diabetes;** Jinsook Chang[1]; Guozhong Xu[1]; Kelvin Davies [1]; George Christ[2]; Mark R. Chance[1]; *[1]Albert Einstein College of Medicine, Bronx, NY; [2]Wake Forest Medical School, Winston-Salem, NC*

TP 316 **A Simple Strategy for Structural Analysis of Blocked N-Terminal End of Protein**; Gaelle Coussot; David H. Hawke; John M. Koomen; Amanda Mularz ; Ryuji Kobayashi; *The University of Texas MD Anderson Cancer Center, Houston, TX*

TP 317 **A Data-Mining Scheme for Identifying Peptide Structural Motifs Responsible for Different MS/MS Fragmentation Intensity Patterns**; Yingying Huang[1]; George C. Tseng[2]; Shinsheng Yuan[3]; Ljiljana Pasa-Tolic[4]; Mary S. Lipton[4]; Richard D. Smith[4]; Vicki H. Wysocki[1]; *[1]University of Arizona, Tucson, AZ; [2]University of Pittsburgh, Pittsburgh, PA; [3]UCLA , Los Angeles, CA; [4]Pacific Northwest National Laboratory, Richland, WA*

TP 318 **Formation of Peptide Radical Cations *in vacuo* by Electron Transfer of CuII(Amine)Peptide Complexes**; Ivan K. Chu; Corey N.W. Lam; *The University of Hong Kong, Pokfulam Road, Hong Kong*

TP 319 **Tandem Mass Spectrometry Characteristics of Dilithiated Peptide Monocations**; Ping Wang; Chrys Wesdemiotis; *The University of Akron, Akron, OH*

TP 320 ***De novo* Sequencing of dsDNA Binding Modified Amino Acid Containing Peptides**; Jef Rozenski; Filip

Borgions; Arthur Van Aerschot; Piet Herdewijn; *K.U.Leuven, Rega Institute, Leuven, Belgium*

TP 321 **CID of Peptides Generates Informative Amino Terminal Neutral Loss Peaks Dependent on Inhibited Proton Mobility and Surrounding Residues**; Daniel M Martin[1]; Ruedi Aebersold[2]; Jimmy Eng[3]; *[1]Institute for Systems Biology, Seattle, WA; [2]Institute for Molecular Systems Biology, Zürich, Switzerland; [3]Fred Hutchenson Cancer Research Center, Seattle, WA*

TP 322 **Further Investigation of the Elimination of 45 u from $(b_3)^+$ Ions**; Mike Van Stipdonk; Travis Cooper; Erach Talaty; *Wichita State University, Wichita, KS*

PROTEINS: GENERAL

TP 323 **A New Strategy for Drug Discovery - the Role of Non-Covalent Fourier Transform Mass Spectrometry in the Process;** Jennifer K Mitchell[1]; Bernadette Mcardle[2]; Ron J Quinn[2]; *[1]Eskitis Institute for Cell and Molecular Therapies, Brisbane, QLD, Australia; [2]Natural Product Discovery, Griffith University, Brisbane, QLD, Australia*

TP 324 **Capillary Electrophoresis Off-Line Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Intact and Digested Proteins using Cationic Coated Capillaries**; Aida Zuberovic[1]; Sara Ullsten[1]; Ulf Hellman[2]; Karin Markides[1]; Jonas Bergquist[1]; *[1]Analytical Chemistry, Uppsala, Sweden; [2]Ludwig Institute for Cancer Research, Uppsala, Sweden*

TP 325 **Mass spectral Determination of the Mechanism of Thioester Hydrolysis by Arthrobacter 4-Hydroxybenzoyl-Coenzyme A Thioesterase**; Feng Song[1]; Zhihao Zhuang[1]; Yan Wu[1]; Michael Trujillo[2]; John R Engen[1]; Debra Dunaway-Mariano[1]; *[1]University of New Mexico, Albuquerque, NM; [2]New Mexico Dept. of Health, Albuquerque, NM*

TP 326 **Differential Expression of Proteins in Mitochondria of Mice Expressing Mutant Cu,Zn-Superoxide Dismutase**; Thomas J. Lukas; Wei W. Luo; Teepu Siddique; *Northwestern University, Chicago, IL*

TP 327 **Top Down Proteomics Experiments using µLC-ESSI-LTQFTMS**; Andreas F. R. Hühmer; Roger G. Biringer; Julie A. Horner; *Thermo Electron, 355 River Oaks Pkwy, CA*

TP 328 **Under what Photochemical Oxidation Conditions Does Apomyoglobin Remain in a Folded State?**; David M Hambly; Rachel A Reuther; Michael L Gross; *Washington University, St. Louis, MO*

TP 329 **Identification of Evi5 Interacting Proteins by Linear Ion Trap Mass Spectrometry**; Craig P Dufresne[1]; Jeremy T.S. Dabbeekeh[2]; Silviu L. Faitar[2]; John K. Cowell[2]; *[1]Thermo Electron Corp, West Palm Beach, FL; [2]Roswell Park Cancer Institute, Buffalo, NY*

TP 330 **Towards the Characterization of Metal Binding Proteins in Yeast Nutritional Supplements**; Tamer Shoeib; Zoltan Mester; *National Research Council of Canada, Ottawa, ON, Canada*

TP 331 **Phenotyping Major Urinary Proteins (MUPs) from House Mice by FTICR-MS and High Throughput ESI-MS**; Duncan H. Robertson[1]; Stuart A. Armstrong[1]; Jane L. Hurst[1]; Simon J. Gaskell[2]; Mike D. Thom[1]; Sarah A. Cheetham[1]; Robert J. Beynon[1]; *[1]University of Liverpool, Liverpool, United Kngdom; [2]University of Manchester, Manchester, United Kngdom*

TP 332 **What We Can Learn from Small Molecule Bioanalytical Assays for the Analysis of Protein Analytes in Plasma Samples**; Qin C. Ji; Ramona Rodila; Tawakol A. El-Shourbagy; *Abbott Laboratories, Abbott Park, IL*

TP 333 **Manual Evaluation of Protein Identification**; Yue Chen; Sung Won Kwon; Sung Chan Kim; Yingming Zhao; *University of Texas Southwestern Medical Center, Dallas, TX*

TP 334 **Hydroxyl Radical-Mediated Oxidation of Amino Acid Side Chains for Quantitative Protein**; Guozhong Xu; Janna Kiselar; Qin He; Mark Chance; *Albert Einstein College of Medicine, Bronx, NY*

TP 335 **Observation of Waters Bound to a Protein using Cold-Spray Ionization Mass Spectrometry**; Yoshihisa Sei[1]; Mitsuru Tashiro[2]; Kentaro Yamaguchi[1]; *[1]Tokushima Bunri University, Sanuki, Japan; [2]Tokyo Metropolitan University, Hachioji, Japan*

TP 336 **Structure of Human Papillomaviruses Protein E7s using Mass Spectrometry Approaches**; Mingzhong Sun; Keiji Takamoto; Robert Burk; Mark Chance; *Albert Einstein College of Medicine, Bronx, NY*

TP 337 **Microbore Gradient Chromatofocusing-Mass Spectrometry**; James A. Hribar[1]; Xiang Zhou[1]; Lian Shan[2]; David J. Anderson[1]; *[1]Cleveland State University, Cleveland, OH; [2]LPL Technologies, Cleveland, OH*

TP 338 **Sensitive Multiplexed Amino Acid Analysis of Protein Hydrolysates by LC-MS/MS**; David Arnott[1]; Scott Daniels[2]; Michael Donegan[2]; Elizabeth S. Ingle[1]; Jennie R. Lill[1]; Subodh Nimkar[3]; *[1]Genentech, Inc., South San Francisco, CA; [2]Applied Biosystems, Framingham, MA; [3]Applied Biosystems, Foster City, CA*

TP 339 **Identification of Secreted Proteins during Muscle Cell Differentiation**; Chi Yuet Chan; *York university, Toronto, ontario, canada*

TP 340 **Top Down MS^n of Large (200kDa) Proteins**; Xuemei Han[1]; Kathrin Breuker[2]; Fred W. McLafferty[1]; *[1]Cornell University, Ithaca, NY; [2]University of Innsbruck, Innsbruck, Austria*

TP 341 **Strategies for Rapid Determination of C-terminal Peptide(s) in a Complex Mixture using O18 Water and MALDI-TOF MS**; Gary W Lange; William D Joy; Judy A Diaz-Collier; Wei Liao; Joseph W Leone; *Pfizer Inc, St. Louis, MO*

PROTEIN FOLDING

TP 342 **Maximum-Entropy Deconvolution Algorithms to Extract Segment-Specific Exchange Kinetics from HDX CAD MS Data**; Rinat R. Abzalimov; Igor A. Kaltashov; *University of Massachusetts, Amherst, MA*

TP 343 **Proteolytic Monitoring of Microwave-Denatured Segments of Ribonuclease A**; Charles O Ngowe; Anthonia Ifeanyi-Nwanze; Jack Throck Watson; *Michigan State University, East Lansing, MI*

TP 344 **Solution Phase H/D Exchange to Probe Binging Process of Hsp18.1 and Hsp16.9 with Their Substrates**; Guilong(Charles) Cheng; Vicki H. Wysocki; Elizabeth Vierling; *University of Arizona, Tucson, AZ*

TP 345 **Mapping HIV-1 Gag Interactions with Inositol Pentakisphosphate and Nucleic Acids**; Nick Shkriabai[1]; Siddhartha A. K. Datta[2]; Bindu Abraham[3]; Alan Rein[2]; Sonja Hess[3]; Mamuka Kvaratskhelia[1]; *[1]The Ohio State University Health Sciences, Columbus, OH; [2]NCI, NIH, DHHS, Frederick, MD; [3]NIDDK, NIH, DHHS, Bethesda, MD*

TP 346 **Localized Mutual Stabilization of Secondary Structure Elements as Probed by Hydrogen/Deuterium Exchange and Mass Spectrometry**; Xue Li; Robin J. Hood; William J. Wedemeyer; J. Throck Watson; *Michigan State University, East Lansing, MI*

TP 347 **A MS Method for the Analysis of Partially Folded Protein Conformations**; Susie Yuan Dai[1]; Kendall D Powell[2]; Xiaoye Yang[1]; Michael C Fitzgerald[1]; *[1]Duke*

University, Durham, NC; [2]Paradigm Genetics , Research Triangle Park, NC

TP 348 **Pulsed Hydrogen Exchange and ESI CSD as Complementary Probes of Protein Structure in Kinetic Experiments: Implications for Ubiquitin Folding**; Jingxi Pan; Derek J. Wilson; Lars Konermann; *The University of Western Ontario, London, ON, Canada*

TP 349 **Conformational Dynamics of Partially Denatured Proteins Studied by Rapid-Quench Hydrogen Exchange and Proteolytic Digestion/MS**; Mark C Kuprowski; Doug A Simmons; Lars Konermann; *University of Western Ontario, London, ON Canada*

TP 350 **Structural Characterization of RXR Unfolding Intermediate by Hydrogen Deuterium Exchange and Electrospray Time-of-Flight Mass Spectrometry**; Xuguang Yan; David Broderick; Michael I. Schimerlik; Max L. Deinzer; *Oregon State University, Corvallis, OR*

TP 351 **Unfolding Activity in Mitochondrial Tom20 & Tom22 Examined by HXMS**; Tamara Sibray; John R. Engen; *University of New Mexico, Albuquerque, NM*

PROTEINS: POSTTRANSLATIONAL MODIFICATIONS

TP 352 **Semi-Quantitative Analysis for Protein Characterization by MALDI-MS**; Wenzhu Zhang; Christina Stallings; Saul Silverstein; *Columbia University, New York, NY*

TP 353 **Monitoring Chemical and Oxidative Modifications in Human Estrogen Receptor Alpha Isoform**; Christian Atsriku[1]; Jose E Meza[2]; Gary K Scott[1]; Michael A Baldwin[3]; Bradford W Gibson[1]; Christopher C Benz[1]; *[1]Buck Institute for Age Research, Novato, CA; [2]Agilent technologies Inc, Santa Clara, CA; [3]University of California, San Francisco, CA*

TP 354 **Applications of Mass Spectrometry to the Determination of the Structure and Properties of Soybean Lipoxygenases**; Amber M. Pearlso[1]; R. Benjamin Jones[2]; Kari B. Green-Church[2]; Max O. Funk[1]; *[1]University of Toledo, Toledo, OH; [2]Ohio State University, Columbus, OH*

TP 355 **Protein Ozonolysis: Structure Elucidation of Oxidation Products by ESI-MS and ESI-MSMS**; Julie A. Lloyd; Murray V. Johnston; *University of Delaware, Newark, DE*

TP 356 **PMA Activation of Human Neutrophils Induces Thiolation of S100A9**; Mark J Raftery; Carolyn L Geczy; *University of New South Wales, Sydney, Australia*

TP 357 **Benefits of Combining Precursor Ion and MS/MS Scans in Characterizing Indole-Acyl Proteins**; Seijin Park; LeeAnn Higgins; Jerry D. Cohen; *University of Minnesota, Saint Paul, MN*

TP 358 **Tandem Mass Spectrometry for The Examination of Novel Post-Translational Modifications of High Mobility Group A1 Proteins**; Yan Zou; Yinsheng Wang; *University of California, Riverside, CA*

TP 359 **Bovine Heart NADH-Dehydrogenase: Subunit Analysis and Identification of Reactive Oxygen Species-Modified Sites by Mass Spectrometry**; Susan T. Weintraub; Eva Valušová; Andrej Musatov; Christopher A. Carroll; Neal C. Robinson; *Univ. of Texas Health Science Ctr. at San Antonio, San Antonio, TX*

TP 360 **Rapid Semi-Automated Analysis of Posttranslational Modifications: Adenylate Cyclase Toxin identified by GutenTag**; Tiansong Wang[1]; Qiangwei Xia[1]; Gina Donato[2]; Erik Hewlett[2]; Murray Hackett[1]; *[1]University of Washington, Seattle, WA; [2]Univeristy of Virginia Health System, Charlottesville, VA*

TP 361 **Methionine Oxidation and Auto-proteolytic Cleavage Contribute to the Inactivation of Cathepsin G by Hypochlorous Acid**; Baohai Shao[1]; Abderrazzaq Belaaouaj[2]; Christophe L.M.J. Verlinde[1]; Xiaoyun Fu[1]; Jay W. Heinecke[1]; *[1]University of Washington, Seattle, WA; [2]Washington University, St. Louis, MO*

TP 362 **Site-Selective Adduction of Keap1 by Electrophiles Triggers Keap1 Polyubiquitination and Nrf2 Activation**; Fei Hong[1]; Sekhar R. Konjeti[2]; Michael L. Freeman[2]; Daniel C. Liebler[2]; *[1]University of Arizona, Tucson, AZ; [2]Vanderbilt University, Nashville , TN*

TP 363 **Analysis of Phosphorylation and Methylation Sites of Human STAT1 Protein using Different MS Methods**; Clementine Klemm; Torsten Meissner; Uwe Vinkemeier; Eberhard Krause; *Forschungsinstitut für Molekulare Pharmakologie, Berlin, Germany*

TP 364 **Mass Spectrometry-Based Strategy for Identification of Reversibly Oxidized Endogenous Protein Tyrosine Phosphatase in Cancer Cell Lines**; Ren-Kun Chen[1]; Yi-Yun Chen[1]; Tzu-Ching Meng[2]; Kay-Hooi Khoo[1]; Andrew H.-J. Wong[1]; *[1]Core Facilities for Proteomics Research, Taipei, Taiwan; [2]Institute of Biological Chemistry,Academica Sinica, Taipei, Taiwan*

TP 365 **Selective Detection of Lipid Hydroperoxide-Derived Protein Modifications by Mass Spectrometry**; Tomoyuki Oe; Seon Hwa Lee; Jasbir S. Arora; Ian A. Blair; *University of Pennsylvania, Philadelphia, PA*

TP 366 **Identification of the Oxidation Products that May Involve in the Redox Regulation of iPLA$_2$β by LC/MS/MS**; Haowei Song; Fong-Fu Hsu; Sasanka Ramanadham; Shunzhong Bao; John Turk; *Washington University, St. Louis, MO*

TP 367 **Mass Spectrometric Identification of Specific Amino Acid Residues Involved in the Protein Radical Formation of Mitochondrial NADH Dehydrogenase**; Kari B. Green-Church; Liwen Zhang; Rhonda L. Pitsch; Nanette M. Kleinholz; Chwen-Lin Chen; Jay L. Zweier; Yeong-Renn Chen; *The Ohio State University, Columbus, OH*

TP 368 **Characterization of Redox Intermediates of Organic Hydroperoxide Resistance Protein**; Fabio C Gozzo[1]; Francisco J Medrano[1]; João A R G Barbosa[1]; José R R Cussiola[2]; Marcos A Oliveira[2]; Simone V A Alvesa[2]; Beatriz G Guimarães[1]; Luis E S Soares Neto[2]; *[1]Brazilian Synchrotron Light Laboratory, Campinas, SP Brazil; [2]University of São Paulo, São Paulo, SP Brazil*

TP 369 **Site-Specific Quantification of Cytochrome c Nitration by Liquid Chromatography/Electrospray Ionization Mass Spectrometry**; Chia-Ming Chang; Hauh-Jyun Candy Chen; *National Chung Cheng University, Ming-Hsiung, Taiwan*

TP 370 **Characterization of Intact Monoclonal Antibodies and Posttranslational Modification Products using RP-HPLC and Quadrupole Ion-Trap Mass Spectrometry**; John C. Le; Rahul Rajan; Kay Jing; Lueras Alexis; Grace Chu; Pavel Bondarenko; Tiansheng Li; Himanshu Gadgil; *Amgen Inc., Thousand Oaks, CA*

TP 371 **Mapping Sites of 4-Hydroxynonenal Protein Modifications by Solid-Phase Hydrazide Chemistry and Mass Spectrometry**; Mikel R. Roe; Paul A. Grimsrud; David A. Bernlohr; Timothy J. Griffin; *University of Minnesota, Minneapolis, MN*

TP 372 **Identification of Nuclear and Cytosolic Protein Targets of Biotin-Linked Thiol-Reactive Electrophiles**; Michelle K. Dennehy[1]; Karolyn A. Richards[2]; Daniel C. Liebler[1]; *[1]Vanderbilt University Medical Center, Nashville, TN; [2]University of Arizona, College of Pharmacy, Tucson, AZ*

TP 373 **Identifying Alkylated Proteins by Immunochemistry and Mass Spectrometry in Mouse Lung Tissues Exposed to Electrophilic Tumor Promoters**; Jose D.

Gomez; Brent W. Meier; John A. Thompson; *University of Colorado Health Sciences Center, Denver, CO*

TP 374 **Characterization of N-Terminal Modified Peptides for Doping Control of Hemoglobin-Based Oxygen Carriers (HBOCs)**; Maryline Gasthuys; Sandra Alves; Jean Claude Tabet; *Université Pierre et Marie Curie, Paris, France*

COMPUTER APPLICATIONS: PROTEINS

TP 375 **An Automated Pre-Filtering Method to Select Mono-Isotopic Ion Peaks from MALDI Mass Spectral Data**; JingWen Yao[1]; Mike May[1]; Shinichi Iwamoto[2]; Shigeki Kajihara[2]; *[1]Shimadzu Research Lab. (Europe) Ltd., Manchester, UK; [2]Shimadzu Corporation, Kyoto, Japan*

TP 376 **Real-Time Selection of MS^3 Precursor Ions using Newly Developed Software for High-Speed *De Novo* Sequencing Based on MS^2 Spectra**; Toshiyuki Yokosuka[1]; Kiyomi Yoshinari[1]; Kinya Kobayashi[1]; Atsushi Ohtake[1]; Atsumu Hirabayashi[2]; Yuichiro Hashimoto[2]; Izumi Waki[2]; Yasushi Terui[3]; Toshifumi Takao[4]; *[1]Hitachi Research Laboratory, Hitachi, Ltd., Hitachi, Ibaraki, Japan; [2]Central Research Laboratory, Hitachi, Ltd., Kokubunji, Tokyo, Japan; [3]Hitachi High-Technologies Corporation, Hitachinaka, Ibaraki, Japan; [4]Osaka University, Suita, Osaka, Japan*

TP 377 **A Novel Approach for Comparing LCMS Peptide Maps**; Robert Alecio[1]; Anthony G. Ferrige[1]; Lewis Pannell[2]; Stuart Ray[1]; *[1]Positive Probability Limited, Isleham, UK, CB7 5RX; [2]Cancer Research Institute, U. South Alabama, Mobile, AL 36688*

TP 378 **Information Based Acquisition Technique for the Analysis of Low-Abundant Peptide Ions**; Atsumu Hirabayashi[1]; Toshiyuki Yokosuka[2]; Kiyomi Yoshinari[2]; Atsushi Ohtake[2]; Kinya Kobayashi[2]; Yuichiro Hashimoto[1]; Hideki Hasegawa[1]; Izumi Waki[1]; Naomi Manri[1]; Masako Ishimaru[1]; *[1]Central Research Laboratory, Hitachi, Ltd., Kokubunji, Tokyo, Japan; [2]Hitachi Research Laboratory, Hitachi, Ltd., Hitachi, Ibaraki, Japan*

TP 379 **Pattern Matching of MALDI - PSD - MS Spectra using Neural Network and Stochastic Simulation Techniques**; Jennifer Broughton[1]; Sujeewa Alwis[2]; Michael P May[1]; Jim Austin[2]; *[1]Shimadzu Research Laboratory Ltd., Manchester, UK; [2]CybulaLtd, York, UK*

TP 380 **ANOVA-PCA Analysis in Mass Spectral Profiling of Amniotic Fluids**; Nancy E. Vieira[1]; Peter de B. Harrington[2]; Roberto Romero [1]; Alfred L Yergey[1]; *[1]NICHD, NIH, Bethesda, MD; [2]Ohio University , Athens, OH*

TP 381 **Protein identification via Tandem Mass Spectrometry using ProteinFinder; A Probabilistic Approach using All-vs-All Search Space and Parallel Architecture**; Aleksey A Nakorchevskiy; *University of Texas, Austin, TX*

TP 382 **Determination of Stochiometric Formulae from Accurately Measured Masses of Tryptic Peptides in High-Throughput Proteomics**; Robert Grothe; David Agus; Parag Mallick; *Cedars-Sinai Medical Center, Los Angeles, CA*

BIOINFORMATICS

TP 383 **A Software for Mass Spectrometry Based High Throughput Detection of Posttranslational Modifications in Proteomics**; Daniel C. Chamrad[1]; Heike Schäfer [2]; Gerhard Körting[1]; Ralf Reinhard[1]; Herbert Thiele[3]; Helmut E. Meyer[2]; Katrin Marcus[2]; Martin Blüggel[1]; *[1]Protagen AG, Dortmund, Germany; [2]Ruhr-Universität, Bochum, Germany; [3]Bruker Daltonik GmbH, Bremen, Germany*

TP 384 **Integrated Database Management Software for Large-Scale Proteomic Analysis**; Motoki Mori[1]; Shiho Hashimoto[1]; Hisaaki Taniguchi[2]; Satoshi Ohno[3]; *[1]NEC Soft Ltd., Tokyo, Japan; [2]tokushima University, Tokushima, Japan; [3]bio Solution Inc., Tokushima, Japan*

TP 385 **An Integrated Workflow Approach to Maximize Information from Shotgun Proteomics Data**; Wenyao Shi[1]; Anthony J. Makusky[1]; Xiaoyu Yang[1]; Dawn M. Maynard[2]; Ming Xu[3]; Lewis Y. Geer[3]; Sanford P. Markey[1]; Jeffrey A. Kowalak[1]; *[1]National Institute of Mental Health, Bethesda, MD; [2]National Human Genome Res Inst, Bethesda, MD; [3]National Library of Medicine, Bethesda, MD*

TP 386 **Characterisation of Peptides in the SwePep Database using Physico-Chemical Descriptors and Multivariate Data Analysis;** Mathias Norrman; Maria Falth; Karl Skold; Marcus Svensson; Anna Nilsson; Per E Andren; *Uppsala University, Uppsala, Sweden*

TP 387 **Polymorphism Prediction using Documented Codon Mutation Patterns to Enhance Protein Identification Success Rate**; Justin Paschall; Gerald Wyckoff; J. Andrew Keightley; *UMKC-School of Biological Sciences, Kansas City, MO*

TP 388 **A Bioinformatics Strategy for the Characterization of Proteins versus Protein Identification**; Bruce A. Andrien, Jr; Adam Lucka; Rekha Patel; *Alexion Pharmaceuticals Inc., Cheshire, CT*

TP 389 **Visualization Tool for 2DGel and Mass Spec Analyzed Annotated Samples**; Balaji Rajagopalan[1]; Romesh Stanislaus[2]; Jian Li[1]; Dana Eckert[1]; *[1]Virginia Bioinformatics Institute, Blacksburg, VA; [2]Medical University of South Carolina, Charleston, SC*

TP 390 **Maximizing the Number of Peptide Identifications in LC-MS/MS of Complex Mixtures though Gradient and Acquisition Parameter Optimization**; Brian Carrillo[1]; Corey Yanofsky[1]; Kossi Lekpor[1]; Christian Beaudrie[1]; Jian Liu[1]; Alex Bell[2]; Daniel Boismenu[2]; Stephan Laperriere[2]; Robert E. Kearney[1]; *[1]McGill Univeristy, Montreal, QC, Canada; [2]RPMPN, Montreal, QC, Canada*

TP 391 **The Beauty of Gray: Enabling the Expert Biologist to Achieve Expert Protein Identification Results**; Sean L. Seymour; Ignat V. Shilov; Alpesh A. Patel; Alex Loboda; Sean P. Keating; Wilfred H. Tang; Lydia M. Nuwaysir; Daniel A. Schaeffer; *Applied Biosystems|MDS Sciex, Foster City, CA*

TP 392 **Proliferating High Throughput Data Analysis by using Service Oriented Clusters in Proteomics**; Ralf Reinhardt[1]; Michael Kuhn[2]; Jens Decker[2]; Gerhard Körting[1]; Helmut Meyer[1]; Martin Blüggel[1]; Herbert Thiele[2]; *[1]Protagen AG, Dortmund, NR Germany; [2]Bruker Daltonik GmbH, Leipzig, SA Germany*

TP 393 **Chromatographic Alignment of Multi-Dimensional Mass Spectra using Interpolated Dynamic Time Warping**; John T. Prince; Edward M. Marcotte; *University of Texas, Austin, TX*

TP 394 **Development of an Automated Software Tool for the Processing and Interpretation of Complicated Intact Protein LC/MS Data Sets**; Ignatius J. Kass[1]; Hongji Liu[2]; Kevin M. Millea[2]; John C. Gebler[2]; Scott J. Berger[2]; *[1]Waters, Beverly, MA; [2]Waters Corporation, Milford, MA*

TP 395 **Application of Data Mining Algorithms for Investigating the Role of Peptide Sequence on MS/MS Detection and Fragmentation**; Eric F Strittmatter; Lars J Kangas; Keqi Tang; Fumin Li; Joshua N Adkins; Richard D Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 396 **ProToPIQ: Proteomic Toolkit for Protein Identification and Quantitation: A Post- Processing Tool for Mining Proteomic Data Sets**; David A Lucas; Thomas P Conrads; Timothy D Veenstra; *SAIC-Frederick, Inc., Frederick, MD*

TP 397 **A New Proteomic Data Analysis Method: Applied to Human Blood Platelets;** Terry Cyr[1]; Marybeth Cameron[1]; Diane Bertrand[1]; Elisabeth Maurer-Spurej[2]; Cheryl Pittendreigh[2]; *[1]Centre for Biologics Research, Health Canada, Ottawa, Ontario, Canada; [2]Canadian Blood Services, UBC, Dept. of Pathology, Vancouver, B.C., Canada*

TP 398 **A Publicly Available Dataset of MALDI-TOF/TOF and LTQ Mass Spectra of Known Proteins**; John R Strahler[1]; Donna Veine[1]; Angela Walker[1]; Peter Ulintz[1]; Jason Falkner[1]; Brett Phinney[2]; Philip C Andrews[1]; *[1]University of Michigan, Ann Arbor, MI; [2]Michigan State University, E.Lansing, MI*

TP 399 **Protein Prospector as a Large Scale MS Proteomics Data Management Tool**; Aenoch J Lynn[1]; Peter R Baker[1]; Yinhe Chang[2]; Robert J Chalkley[1]; Alma L Burlingame[1]; *[1]University of California, San Francisco, CA; [2]IBM, Poughkeepsie, NY*

TP 400 **ProteomeCommons.org: A Community-Based Resource for Free, Public Proteome Informatics Software and Data**; Philip C Andrews; Jayson A Falkner; Pete Ulintz; *University of Michigan, Ann Arbor, MI*

TP 401 **Shotgun Collision-Induced Dissociation of Peptides using a Quadrupole / Time-of-Flight Mass Spectrometer**; Catalin E Doneanu[1]; Sunhee Jung[1]; Brian Pratt[2]; Greg Taylor[1]; Soyoung Ryu[1]; Scott Shaffer[1]; Eric Nilsson[2]; Dragan Radulovici[3]; David R Goodlett[1]; *[1]University of Washington, Seattle, WA; [2]Insilicos, Seattle, WA; [3]Florida Atlantic University, Boca Raton, FL*

TP 402 **MASSPIKE (Mass Spectrum Interpretation and Kernel Extraction) for Biological Samples**; Parminder Kaur; Konstantin Aizikov; Bogdan A Budnik; Peter B O'Connor; *Boston University, Boston, MA*

TP 403 **The Bioinformatics of Human Top Down Proteomics**; Richard D. LeDuc; Michael J. Roth; Michael T. Boyne II; Yong-Bin Kim; Andrew J. Forbes; Neil L. Kelleher; *University of Illinois, Urbana, IL*

TP 404 **Automated Determination of Molecular Structures by Precursor Ion Fingerprinting**; Robert Mistrik; *HighChem, Bratislava, Slovakia*

TP 405 **Mass-Spectrometry of the M. Smegmatis Proteome: Protein Expression Levels Correlate with Function, Operons, and Codon Bias**; Rong Wang[1]; John T. Prince[1]; Edward M. Marcotte[2]; *[1]Institute of Cellular and Molecular Biology, UT, Austin, TX; [2]Center for Systems and Synthetic Biology, UT, Austin, TX*

TP 406 **Data Mining Tools for the Classification and Identification of Bacteria using SEQUEST Outputs**; Jacek P. Dworzanski[1]; Samir V. Deshpande[2]; Rui Chen[3]; Rabih E. Jabbour[1]; A. Peter Snyder[4]; Liang Li[3]; Charles H. Wick[4]; *[1]Geo-Centers, Inc., Aberdeen Proving Ground, MD; [2]Science and Technology Corporation, Edgewood, MD; [3]University of Alberta, Edmonton, Canada; [4]U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD*

TP 407 **pProRep - php Proteome Repository: A Flexible Web-Based Tool for the Integration, Visualisation, Analysis and Administration of Proteome Data**; Kris Laukens[1]; Rune Matthiesen[2]; Allan Lind-Thomsen[2]; Peter Deckers[1]; Eddy Esmans[1]; Harry Van Onckelen[1]; Ole N. Jensen[2]; Erwin Witters[1]; *[1]University of Antwerp, Antwerp, Belgium; [2]University of Southern Denmark, Odense, Denmark*

TP 408 **Microorganism Identification and Biomarker Development Tool**; Fernando Pineda[1]; Nathan Edwards[3]; Sheng Luo[1]; Doug Ruderfer[2]; *[1]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; [2]Johns Hopkins University, Baltimore, MD; [3]University of Maryland, College Park , MD*

TP 409 **Motif building through Iterative Database Decomposition: Applications to Large-Scale MS/MS Generated Phosphorylation Datasets**; Daniel Schwartz; Steven P Gygi; *Harvard Medical School, Boston, MA*

PROTEOMICS: BIOMARKERS – DIFFERENTIAL EXPRESSION PROFILING

TP 410 **Identification of New Markers of Disease Progression and Therapeutic Targets by Proteome Analysis of Human Coronary Artery Atherosclerotic Lesions;** Carolina Bagnato; Jaykumar R Thumar; David K Han; *University of Connecticut Health Center, Farmington, CT*

TP 411 **High-Performance FTMS for the Determination of Unique Features in Complex Samples by Differential Mass Spectrometry**; Matthew T. Mazur[1]; Fanyu Meng[1]; Ekaterina G. Deyanova[1]; Cloud P. Paweletz[1]; Xuemei Zhao[1]; Anita Y. H. Lee[1]; Jayshree Mistry[1]; Matthew C. Weiner[2]; Jeffrey R. Sachs[2]; Nathan A. Yates[1]; Ronald C. Hendrickson[1]; *[1]Dept. of Molecular Profiling, Rahway, NJ; [2]Dept. of Applied Computer Science, Rahway, NJ*

TP 412 **Protein Quantification of Serum and Plasma using Stable Isotope Labeling and a New Solid Support Cysteine Capture Technique**; Jason Marchese[1]; Brian Williamson[1]; Kenneth Parker[1]; Shelagh Booth[1]; Stephen Hattan[2]; Babu Purkayastha[2]; *[1]MDS Sciex, Framingham, MA; [2]Applied Biosystems, Framingham, MA*

TP 413 **An Unbiased Differential Proteome Analysis of Lipid Raft of HeLa Cells during Vaccinia Virus Entry by Lysine-Specific Isotope Tagging**; Chung-Lin Liao; Chein-Hung Chen; Ming-Yi Ho; Che-Sheng Chung; Wen Chang; *Academia Sinica, Taipei, Taiwan*

TP 414 **Quantitative Human Serum Proteome Profiling using Isobaric i-PROT Labeling Technology in Combination with 2DGE and LC/MS/MS Analysis**; Edward S. Papacoda; Christian H. Michaelson; Li Feng; Stephen W. Powell; Cesar E. Guerra; Harish Krishnaswamy; Rixin Wang; Jennifer Weiss-Maloney; Darin R. Latimer; *Agilix Corporation, New Haven, CT*

TP 415 **The Effects of Osmotic Stress on Salmonella Enterica Serovar Typhi: A Quantitative Proteomic Study;** Mark A Ritchie[1]; James I Langridge[1]; Therese McKenna[1]; Paul Skipp[2]; David O`Connor[2]; Brian Cochrane[2]; *[1]Waters MS technologies centre, Manchester, UK; [2]University of Southampton, Southampton, UK*

TP 416 **Differantial Protein Expression in Macrophage Foam Cells**; James P. Conway[1]; Michael T. Kinter[2]; *[1]Case Western Reserve University, Cleveland, OH; [2]Cleveland Clinic Foundation, Cleveland, OH*

TP 417 **Large-Scale Analysis of Osteoblast Differentiation by Differential Expression Profiling**; Takako Miyamoto; Emiko Yamauchi; Shinsuke Kido; Daisuke Inoue; Toshio Matsumoto; Hisaaki Taniguchi; *University of Tokushima, Tokushima, Tokushima, Japan*

TP 418 **Evaluation of Off-line SCX Separation of Peptides Prior to Differential Expression Profiling by LC-MS**; Pascal Fex; Sylvain Tessier; Dmitri Sitnikov; Nathan Currier; Francois Denis; Gregory Opiteck; Joanna Hunter; *Caprion Pharmaceuticals, Montreal, Canada*

TP 419 **Quantitative Proteomic Analysis of Serum and Tissue from Transgenic Mouse Models of Prostate Cancer**; Thomas A. Shaler[1]; Weixun Wang[1]; Mirella Gonzalez Zulueta[1]; Howard Schulman[1]; Christopher H. Becker[1]; Kate Ellwood-Yen[2]; Shunyou Wang[2]; Evangelia Komisopoulou[2]; Tom Graeber[2]; Hong Wu[2]; Charles Sawyers[3]; *[1]Surromed-PPD, Inc., Menlo Park, CA; [2]UCLA, Los Angeles, CA; [3]HHMI/UCLA, Los Angeles, CA*

TP 420 **Differential Analysis of Pre-Diabetic Mouse Plasma for Biomarkers of Obesity and Early Diabetes**; Thierry Le Bihan; Ian I. Stewart; Moyez Dharsee; Yury Bukhman; Anne Marie Simmie; Rob Ewing; Guo Dong Mao; Henry S. Duewel; Peter Chu; Adrian Pasculescu; Thodoros Topaloglou; Nancy Ng; *Protana Inc., Toronto, Ontario, Canada*

TP 421 **Time-Resolved Identificaiton of Microbial Mixtures by LC-Selective Tandem Mass Spectrometry**; Alan A.-L. Lo; Yen-Peng Ho; *National Dong Hwa University, Hualien, Taiwan*

TP 422 **Protein Profiles of Pig Oocytes during Different Stages of *in vitro* Maturation**; Petr Man[1]; Zdenka Ellederova[2]; Hana Kovarova[2]; Petr Halada[1]; *[1]Institute of Microbiology, Prague, Czech Republic; [2]Institute of Animal Physiology and Genetics, Libechov, Czech Republic*

PROTEOMICS: BIOMARKERS IN SERUM

TP 423 **Application of a Novel Biomarker Discovery Pipeline to Proteomic Time Course Data from Human Plasma during a 'Controlled Myocardial Infarction'**; Manor Askenazi[1]; Leo Bonilla[1]; Robert Gerszten[2]; Emerson Liu[2]; Tori Richmond[1]; Jennifer Sutton[1]; Jennifer Woo[2]; Rory Weiner[2]; David Sarracino[3]; *[1]BRIMS center,Thermo Electron Corp., Cambridge, MA; [2]Mass. General Hospital and Harvard Medical School, Boston, MA; [3]Harvard-Partners Center for Genetics and Genomics, Cambridge, MA*

TP 424 **Quantitative Serum Protein Analysis using a Silica-Based Monolithic Microcapillary Column**; Eugene C. Yi; Hui Zhang; DaeHee Hwang; Xiaojun Li; Ruedi Aebersold; *Institue for Systems Biology, Seattle, WA*

TP 425 **A Novel Multi-Dimensional Strategy for Tandem Mass Spectrometric Identification of Low Abundance Proteins in Serum for Biomarker Discovery;** Hsin-Yao Tang; Lynn Echan; Nadeem Ali-Khan; WonA Joo; David W. Speicher; *The Wistar Institute, Philadelphia, PA*

TP 426 **A Comparison of Methods for the Refinement and Identification of Endogenous Peptides from Serum**; John Marshall[1]; Declan Williams[1]; Michael McDonell[2]; Catherine Stacey[2]; Paul Kowalski[2]; Jane Marie Kowalski[2]; *[1]Ryerson University, Toronto, Canada; [2]Bruker Daltonics, Billerica, Ma*

TP 427 **Quantitative Analysis of the Low Molecular Weight Serum Proteome using 18O Labeling in a Lung Tumor Xenograft Mouse Model**; Grace Kim[1]; Brian L. Hood[1]; David A. Lucas[1]; King C. Chan[1]; Pollet Ingrid[2]; Blonder Josip[1]; Haleem J. Issaq[1]; Aly Karsan[2]; Timothy D. Veenstra[1]; Thomas P. Conrads[1]; *[1]NCI-Frederick/SAIC-Frederick, Inc., Frederick, MD; [2]British Columbia Cancer Research Centre, Vancouver, BC, Canada*

TP 428 **Development of an Intact Protein Analytical Platform for Serum Proteomics;** Tetsuo Tanigawa [1]; Hirotaka Fujimoto[1]; Jun Takano[1]; Yasuhiko Takeda[2]; Mitsunori Hirano[2]; Kouji Meno[3]; Reiko Takano[3]; Takuya Katagiri[3]; Kazuhiko Uchida[4]; *[1]Shimadzu Corp., Tsukuba, Japan; [2]NTT Comware Corp., Chiba, Japan; [3]MCBI Inc., Tsukuba, Japan; [4]Univ. of Tsukuba., Tsukuba, Japan*

TP 429 **Disease Fingerprinting by MALDI Orthogonal-TOF MS**; Mary F Lopez[1]; Alvydas Mikulskis[1]; Joseph DiCesare[1]; Scott Kuzdzal[1]; Wayne F Patton[1]; Richard Ediger[1]; Lisa Sapp[1]; Chris Lynch[1]; Michael R Wall[1]; David P Mannion[2]; Guy della Cioppa[2]; Gershon M Wolfe[2]; *[1]PerkinElmer Life and Analytical Sciences, Boston, MA; [2]Predictive Diagnostics Inc, Vacaville, CA*

TP 430 **Clinical Studies of *in-vitro* Oxidation of Serum Lipoproteins using MALDI Analysis**; Christine L. Myers; Zachlyn N. Farwig; Ronald D. Macfarlane; *Texas A&M University, College Station, TX*

TP 431 **Novel Strategies for Expression Profiling of Low Abundance Proteins in Human Serum**; Lining Qi[1]; Rebecca Pitts[2]; Sao-Mei Leung[2]; Lifang Yang[1]; Xiangming Fang[3]; Richard Drake[1]; Oliver John Semmes[1]; *[1]Eastern Virginia Medical School, Norfolk, VA; [2]Bruker Daltonics Inc. , Billerica, MA; [3]GenWay Biotech, Inc, San Diego, CA*

TP 432 **Mass Spectrometric Assay for Specific Subtypes of IFN-Alpha in Human Serum**; Anita Izrael-Tomasevic; Racquel Corpuz; David Arnott; *Genentech, Inc., South San Francisco, CA*

TP 433 **The Development of a Platform to Enable Characterization of the Serum Peptidome**; Xiaoyang Zheng[1]; Haven Baker[1]; William S. Hancock[2]; *[1]Barnett Institute, Boston, MA; [2]Northeastern University, Boston, MA*

TP 434 **Application of a Novel Tag-Based Protein Identification Algorithm to Serum**; Alpesh A Patel[1]; Sean L Seymour[1]; Ignat V Shilov[1]; Wendy A Stanick[2]; Stephen J Hattan[2]; Wilfred H Tang[1]; Ken Parker[2]; Daniel A Schaeffer[1]; Babu Purkayastha[2]; *[1]Applied Biosystems|MDS Sciex, Foster City, CA; [2]Applied Biosystems, Framingham, MA*

TP 435 **A Comprehensive MALDI Analysis of Serum Amyloid A in Human Serum Lipoproteins**; Zachlyn N. Farwig[1]; Catherine J. McNeal[2]; Clinton E. Baisden[2]; E. Eugene Terry[2]; Ronald D. Macfarlane[1]; *[1]Texas A&M University, College Station, TX; [2]Scott & White Hospital, Temple, TX*

TP 436 **Conditioning of Serum for Proteomic Studies**; Susanne Schwonbeck; Diane Lebeau; Ivo G Gut; *CNG, Evry, France*

TP 437 **Monitoring of Alpha Galactosidase A, a Therapeutic Protein in Human Serum, using Liquid Chromatography Coupled with Electrospray Mass Spectrometry;** Hans Vissers[1]; Iain D Campuzano[2]; Therese McKenna[2]; James I Langridge[2]; Jans M Aerts[3]; *[1]Waters Corporation., Almere, The Netherlands; [2]Waters Corporation, Manchester, UK; [3]Academic Medical Centre, Amsterdam, The Netherlands*

TP 438 **Investigation of Multidimensional Strategies for Improving Dynamic Range for Shotgun Proteomics via Protein Fractionation**; Peter M Mrozinski; James Martosella; Gordon Nicol; Barry Boyes; Hongbin Liu; Nina Zolotarjova; Haiying Chen; *Agilent Technologies, Wilmington, DE*

PROTEOMICS: FUNDAMENTAL – 2D ELECTROPHORESIS

TP 439 **A Comprehensive Survey of Staining Methods in Two-Dimensional Gel Electrophoresis on their Mass Spectrometry Compatibility and Protein Detection by PMF**; Ryan T. Dow; Chau-Wen Chou; *Louisiana State University Health Sciences Center, New Orleans, LA*

TP 440 **Investigation of Protease and Chemical Fragmentation of Protein; The Impact on Sequence Coverage and Identification of Post Translational Modifications (PTM);** Alan J Barnes; Neil Loftus; Rachel L Martin; *Shimadzu Biotech, Manchester, UK*

PROTEOMICS: FUNDAMENTALS – OTHER NEW

TP 441 **Effects of Micorwave Irradiation on Digestion, Extraction and Conformational States of Proteins**; Urooj A. Mirza; Chuan-Chu Chao; Yan-Hui Liu; Catherine Smith; Birendra N. Pramanik; *Schering-Plough Research Institute, Kenilworth, NJ*

TP 442 **High-Throughput and Sensitive Method for N-Terminal Sequencing of Proteins by MALDI Mass Spectrometry**; Minoru Yamaguchi[1]; Takashi Obama[1]; Hiroki Kuyama[1]; Eiji Ando[1]; Taka-aki Okamura[2];

Norikazu Ueyama[2]; Takashi Nakazawa[3]; Shigemi Norioka[2]; *[1]Shimadzu Corporation, Kyoto, JP; [2]Osaka University, Osaka, JP; [3]Nara Women's University, Nara, JP*

TP 443 **Complementary Protein Characterization Studies Utilizing a Solution Based Separation (IEF-LC)**; Joy M. Ginter; Murray V. Johnston; *University of Delaware, Newark, DE*

TP 444 **Human Prostate Proteome Analysis by 2D-PAGE and In-Gel IEF-LC-MS/MS**; Bin Fang; Yingxin Zhao; Sarka Beranova-Giorgianni; *University of Tennessee Health Science Center, Memphis, TN*

TP 445 **Statistical Tools for Quantitative Proteomics that Circumvent Differential Stable Isotope Labeling Applied to Understand Phenotypic Diversity in Yeast;** David R. Goodlett[1]; Scott A Shaffer[1]; Soyoung Ryu[1]; Greg K Taylor[1]; Eric Foss[2]; Dragan Radulovic[3]; Leonid Kruglyak[4]; *[1]University of Washington, Seattle, WA; [2]Fred Hutchinson Cancer Research Center, Seattle, WA; [3]Florida Atlantic University, Boca Raton, FL; [4]Princeton University, Princeton, NJ*

TP 446 **Virus Proteogenomics by MudPIT: a Herpesvirus Example**; Dusan Kunec; Larry A. Hanson; Shane C. Burgess; *Mississippi State University, Starkville, MS*

TP 447 **Breast Cancer Protein Identified by Three-Dimensional Separation using Free-Flow Electrophoresis, Reversed-Phase High-Performance Liquid Chromatography, Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis**; Peter Hoffmann[1]; Monilola A. Olayioye[5]; Robert L. Moritz[4]; Geoffrey J. Lindeman[2]; Jane E. Vivader[2]; Richard J. Simpson[4]; Bruce E. Kemp[3]; *[1]Center of Biotechnology and Biomedicine (BBZ), Leipzig, Germany; [2]The Walter and Eliza Hall Institute of Medical Res, Melbourne, Australia; [3]St. Vincent's Institute of Medical Research, Melbourne , Australia; [4]Ludwig Institue fro Cancer Research, Melbourne, Australia; [5]University of Stuttgart, Stuttgart, Germany*

TP 448 **Analysis of the Human Plasma Proteome with Free-Flow Electrophoresis and LC-MS/MS Technologies**; Christian Albers; Sonja Hess; *NIDDK, NIH, DHHS, Bethesda, MD*

TP 449 **Characterization of Hemoglobin Posttranslational Modifications using Peptide-Based Isoelectric Focusing and Tandem Mass Spectrometry**; Marlene W. Clifton; Timothy R. Fennell; Amal S. Essader; James L. Stephenson, Jr; *Research Triangle Institute, Research Triangle Park, NC*

TP 450 **A Novel Two-Stage Mass Spectrometry Approach using PIR Cross-Linkers for Global Protein-Protein Interaction Profiling**; Xiaoting Tang[1]; Devi Adhikari[1]; Gerhard R. Munske[1]; M. Harry Zhu[1]; William F. Siems[1]; Gordon A. Anderson[2]; Nikola Tolic[2]; James E. Bruce[1]; *[1]Washington State University, Pullman, WA; [2]Pacific Northwest National Laboratory, Richland, WA*

TP 451 **Global Analysis of the Extracellular Matrix Vesicle Proteome from Differentiating Murine Osteoblasts**; Zhen Xiao[1]; Corinne E. Camalier[2]; David A. Lucas[1]; Timothy D. Veenstra[1]; George R. Beck Jr. [2]; Thomas P. Conrads[1]; *[1]NCI-Frederick/SAIC-Frederick, Inc., Frederick, MD; [2]NCI-Frederick, Frederick, MD*

PROTEOMICS: LOWER ORGANISMS

TP 452 **A Preliminary Mass Spectrometric Study of Light-Regulated Gene Expression in the Marine Bacterium Pelagibacter Ubique;** Sarah M Sowell[1]; Martha D Stapels[2]; Jeffrey W Finch[2]; Stephen J Giovannoni[1]; Douglas F Barofsky[1]; *[1]Oregon State University, Corvallis, OR; [2]Waters Corporation, Milford, MA*

TP 453 **Proteomic Detection of *Aeromonas salmonicida* Type III Secretion Proteins in Response to Elevated Growth Temperatures**; Roger O Ebanks; Leah Knickle; Michel Goguen; Michael Reith; Neil W Ross; Devanand M. Pinto; *National Research-Institute for Marine Biosciences, Halifax, Canada*

TP 454 **Differential Proteomics of Environmental Bacteria**; Peter Hufnagel[1]; Ulrike Schweiger-Hufnagel[1]; Stephanie Hahner[1]; Michael Schubert[1]; Ralf Rabus[2]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]Max-Planck-Institut für Marine Mikrobiologie, Bremen, Germany*

TP 455 **The Challenges of Protein Identification from Non/Under-Represented Species in Databases – The Sunfish and Lizard Proteomes**; Suma Kaveti[1]; Dongmei Zhang[1]; Sarah Edmonds[2]; Peter Niewiarowski[2]; Richard Londraville[2]; Michael Kinter[1]; *[1]Cleveland Clinic Foundation, Cleveland, OH; [2]University of Akron, Akron, OH*

TP 456 **Classification of BACT Group Bacteria using An LC-MS/MS Based Proteomic Approach to Reveal Relatedness between Microorganisms**; Danielle N. Dickinson[1]; Jacek P. Dworzanski[2]; Samir V. Deshpande[3]; A. Peter Snyder[4]; Brian A. Eckenrode[5]; *[1]ORISE, Oak Ridge, TN; [2]Geo-Centers, Inc., Aberdeen Proving Ground, MD; [3]Science and Technology Corporation, Edgewood, MD; [4]U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD; [5]FBI Counterterrorism and Forensic Science Research, Quantico, VA*

TP 457 **Non-Enzymatic Cell Digestion Procedure for Proteomic-Based Microorganism Biodetection**; Nick Hauser; Shaofeng Zhang; Mariah Lawrence; Kate Smetana; Franco Basile; *University of Wyoming, Laramie, WY*

TP 458 **The Membrane Proteome of Clostridium Thermocellum by MALDI-TOF-MS**; Taufika Islam Williams; Jennifer C. Combs; Herbert J. Strobel; Bert C. Lynn; *University of Kentucky, Lexington, KY*

TP 459 **Annotation of the Francisella Novicida Genome using Shotgun Proteomic Data from the LC-ESI-LTQ-FT MS and LC-MALDI-QIT-TOF MS**; Jinzhi Chen[1]; Byron Gallis[1]; Scott Shaffer[1]; Soyoung Ryu[1]; Greg Taylor[1]; Brook Nunn[1]; Mitch Brittnacher[1]; Tina Guina[1]; Richard Bonneau[2]; Leroy Hood[2]; Samuel Miller[1]; David R. Goodlett[1]; *[1] Univ. of Washington, Seattle, WA; [2]Institute for Systems Biology, Seattle, WA*

TP 460 **Detecting Mutation and Modification Events in Bacterial Ribosomal Protein Genes using Top-Down Based Proteomics**; David W. Robinette[1]; Eric D. Hamlett[1]; Kevin R. Ramkissoon[1]; Robert L Hettich[2]; Heather Connelly[2]; Morgan C. Giddings[1]; *[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]Oak Ridge National Laboratory, Oak Ridge, TN*

TP 461 **Syntrophic Microbes Examined with Virtual and Classical 2-D Gels**; Rachel R. Ogorzalek Loo[1]; Yanan Yang[1]; Housna Mouttaki[2]; Joseph A. Loo[1]; Robert Gunsalus[1]; Michael McInerney[2]; *[1]University of California, Los Angeles, CA; [2]University of Oklahoma, Norman, OK*

TP 462 **A Proteomic Approach to an Analysis of the Virion Structure of the Marine Bacteriophage S-PM2**; Julia E Jackson; Konstantinos Thalassinos; Susan E Slade; Martha R Clokie; Nick H Mann; James H Scrivens; *University of Warwick, Coventry, UK*

TP 463 **Evaluation of Liquid Chromatography and Top-Down ESI Mass Spectrometry to Detect Amino Acid Substitutions in Bacterial Proteins**; Eric D. Hamlett; David W. Robinette; Morgan C. Giddings; *University of North Carolina, Chapel Hill, NC*

TP 464 **Investigation of Large Microbial Proteomes and Sub-Proteomes by a High Coverage Shotgun Approach**; Gundula Bosch; Tony Wang; Qiangwei Xia; Kelly A. Fitzgerald; Mary E. Lidstrom; Paul deFigueiredo; Eugene W. Nester; Murray Hackett; *University of Washington, Seattle, WA*

TP 465 **Proteomics of the Microbial Community in an Acid Mine Drainage Biofilm**; Nathan C. VerBerkmoes[1]; Rachna Ram[2]; Michael P. Thelen[2]; Manesh Shah[1]; Gene W. Tyson[2]; Brett J. Baker[2]; Jillian F. Banfield[2]; Robert H. Hettich[1]; *[1]Oak Ridge National Laboratory, Oak Ridge, TN; [2]University of California, Berkeley, CA*

TP 466 **Comparative Proteomics using FT-ICR MS Abundance Values to Determine Organism Wide Protein Changes and Cytochrome C Location in Geobacter Sulfurreducens**; Harold R Udseth[1]; Kim K Hixson[1]; Yanhuai R Ding[2]; Derek R Lovley[2]; Mary S Lipton[1]; *[1]PNNL, Richland, WA; [2]University of Massachusetts, Amherst, MA*

TP 467 **Proteome Analysis of Monocyclic Aromatic Compounds Degradation Pathways in Pseudomonas Putida KT 2440**; Seung Il Kim; Young Hwan Kim; Kun Cho; Sung Ho Yun; *Korea Basic Scinece Institure, Daejeon, Korea*

TP 468 **Mass Spectrometric Analysis of the Schistosoma Mansoni Tegumental Proteome: Identification of Unique and Specific Proteins;** Bas W. M. van Balkom; Renske A. van Gestel; Jos F. H. M. Brouwers; Jeroen Krijgsveld; Aloysius G. M. Tielens; Albert J. R. Heck; Jaap J. van Hellemond; *Utrecht University, Utrecht, The Netherlands*

PROTEOMICS: MEDICAL APPLICATIONS

TP 469 **The Proteomics of Autophagy: the Effect of Interleukin 3 on Protein Expression in Bax$^{-/-}$Bak$^{-/-}$ Hematopoetic Cells**; M. Alexander Shaw[1]; Juliun J. Lum[2]; Craig B. Thompson[2]; Richard Fishel[3]; *[1]Thomas Jefferson University, Philadelphia, PA; [2]University of Pennsylvania, Philadelphia, PA; [3]The Ohio State University, Columbus , OH*

TP 470 ***In vitro* Proteomic Profile Analysis of Metastatic Prostate Cancer**; David J Evason[1]; Asim B Abdel-Mageed[2]; Anshiya Ramanitharan[2]; Liset Human[2]; *[1]Scientic Analysis Instruments, Manchester, U.K; [2]Tulane University, New Orleans, LA*

TP 471 **Analysis of Covalent Reactions of KDR Protein with Substituted Quinazoline Quinones by Electrospray- and MALDI-Mass Spectrometry**; Marshall M Siegel; Frank Loganzo; Allan Wissner; Heidi Fraser; Bernard Johnson; Russell Dushin; *Wyeth Research, Pearl River, NY*

TP 472 **Discrimination of Mycobacteria at the Strain Level by MALDI-TOF Mass Spectrometry**; Justin M. Hettick; Michael L. Kashon; James E. Slaven; Janet P. Simpson; Paul D. Siegel; David N. Weissman; *NIOSH, Morgantown, WV*

TP 473 **Comparative Proteomic Analysis of the Endothelial Plasma Membrane of Different Organs**; Eberhard Durr; Karolina Krasinska; Jingyi Yu; Lucy Carver; Phil Oh; Jan E Schnitzer; *Sidney Kimmel Cancer Center, San Diego, CA*

TP 474 **Multiple Affinity Removal Cartridge, iTRAQ Labeling and Tandem Mass Spectrometry: A Combined Approach to Plasma Proteome Analysis in Human Endotoxemia**; Raj S. Kasthuri[1]; Michael B. Martinez[1]; LeeAnn Higgins[1]; Bernd Jilma[2]; Nigel S. Key[1]; Gary L. Nelsestuen[1]; *[1]University of Minnesota, Minneapolis, MN; [2]Medical University of Vienna, Vienna, Austria*

TP 475 **MALDI-TOF MS of Normal versus Dry Eye Model Rabbit Tear Proteins**; Bryan M. Ham[1]; Jean T. Jacob[2]; Monica M. Keese[2]; Richard B. Cole[1]; *[1]University of New Orleans, New Orleans, LA; [2]LSU Health Sciences Center , New Orleans, LA*

TP 476 **High Mass Accuracy Peptide Mass Fingerprinting by MALDI-FTICR-MS: Application to the Proteomic Analysis of a Human Neurodegenerative Disease**; Eric D. Dodds; Hyun Joo An; Gregg A. Czerwieniec; Christine Iwahashi; Paul J. Hagerman; Carlito B. Lebrilla; *University of California, Davis, CA*

TP 477 **Proteome of Transcription Factors Bound to Promoter of Rat CYP3A Gene by Data Dependent Exclusion Measurement of Ion Trap MS**; Zenzaburo Tozuka[1]; Shohei Shioyama[1]; Hidetugu Murai[2]; Akira Kagayama[2]; Rieko Goto[1]; Naoe Yamane[1]; Kunio Momiyama[1]; *[1]JCL Bioassay Co. Ltd., Nishiwaki, Japan; [2]Fujisawa Pharm. Co. Ltd., Osaka, Japan*

TP 478 **High Sensitivity FTICR-MS Analyses of Human Liver Biopsies from Hepatitis C Virus (HCV)-Infected Patients after Liver Transplantation**; Deborah L Diamond[1]; Jon M Jacobs[2]; Eric Y Chan[1]; Marina A Gritsenko[2]; David G Camp, II[2]; Robert L Carithers, Jr. [1]; Richard D Smith[2]; Michael G Katze[1]; *[1]University of Washington, Seattle, WA; [2]Pacific Northwest National Laboratory, Richland, WA*

TP 479 **A Display Thiol-Proteomics Approach to Characterize Global Redox Modification of Proteins in Prostate Cancer Cells by Hypoxia**; Eun-Mi Park; Kyoung-Soo Choi; Soo-Yeon Park; James Mohler; James Marshall; Haitao Zhang; Clement Ip; Young-Mee Park; *Roswell Park Cancer Institute, Buffalo, NY 14263*

TP 480 **FTMS in Clinical Outcomes Projects: Automated High-Throughput Setup, Proteome Comparisons and Novel *in-vivo* Isotopic Labeling**; Katianna A. Pihakari[1]; David B. Agus[1]; Robert H. Williams[2]; Rick L. Hunter[2]; Robert T. McIver[2]; *[1]Cedars-Sinai Medical Center, Los Angeles, CA; [2]IonSpec Corporation, Lake Forest, CA*

TP 481 **The Potential of Bioaerosol Mass Spectrometry for Medical Diagnosis: Human Aerosol Effluent Analysis**; Michael J. Bogan[1]; Abneesh Srivastava[1]; Herb Tobias[1]; Sue Martin[1]; Paul Steele[1]; Erica McJimpsey[2]; Keith Coffee[1]; David Fergenson[1]; Eric Gard[1]; Carlito Lebrilla[2]; Matthias Frank[1]; *[1]Lawrence Livermore National Laboratory, Livermore, CA; [2]University of California, Davis, CA*

TP 482 **Identification of New Proteins in Xmrk-Signaling by a Differential Proteomics Approach**; Christiane Stuhlfelder[1]; Albert Sickmann[1]; Manfred Schartl[2]; *[1]Rudolf-Virchow-Center for Experimental Biomedicine, Wuerzburg, Germany; [2]Dept. of Physiological Chemistry I, Wuerzburg, Germany*

TP 483 **Investigation by LC-MALDI of the Proteomic Basis of a Novel Immuno-Adsorption Therapy for Rheumatoid Arthritis Patients**; Helen V. Montgomery[1]; Cornelia Koy[2]; Bruno Ringel[2]; Susanne Drynda[3]; Joern Kekow[3]; Koichi Tanaka[4]; Michael O. Glocker[2]; *[1]Koichi Tanaka MS reasearch Laboratory, Manchester, United Kingdom; [2]Proteome Centre Rostock, Rostock, Germany; [3]Rheumatology Clinics, University of Magdeburg, Vogelsang, Germany; [4]The Koichi Tanaka MS reasearch Laboratory, Kyoto, Japan*

TP 484 **Proteomic Analysis of Platelets and Platelet-Derived Microparticles by iTRAQ Labeling and Mass Spectrometry**; Silvia Perez-Pujol; Michael B. Martinez; LeeAnn Higgins; Gary L. Nelsestuen; Nigel S. Key; *University of Minnesota, Minneapolis, MN*

TP 485 **Proteomic Analysis of Rabbit Tears following an Experimental Corneal Wound Showed Defensin Levels Are Correlated with Re-Epithelization**; Lei Zhou[1]; Roger W Beuerman[1]; Li Qun Huang[2]; Shou Ping Liu[1]; Amutha Barathi[1]; M E Grigg[3]; Y H Foo[1]; Donald Tan[4]; *[1]Singapore Eye Research Institute, Singapore, Singapore; [2]Oncology Research Institute, Singapore, Singapore; [3]Applied Biosystems Asia Pte Ltd., Singapore, Singapore; [4]Singapore National Eye Centre, Singapore, Singapore*

TP 486 **Human Urine Proteome Analysis by Three Separation Approaches**; Wei Sun[1]; Linjie Wang[1]; Shuzhen Wu[1]; Xiaorong Wang[1]; Fuxin Li[2]; Jue Wang[2]; Youhe Gao[1]; *[1]Institute of Basic Medical Sciences , Beijing, China; [2]Institute of Automation, Beijing, China*

PROTEOMICS: NEW METHODS

TP 487 **Improved Peptide Identification and Protein Coverage for Proteomic Samples using Alternative 2D-HPLC MS/MS Approaches**; Petra Olivova; Martin Gilar; Craig A. Dorschel; John C. Gebler; *Waters Corp., Milford, MA*

TP 488 **An Integrated Approach to Improve Sequence Coverage and Protein Identification by Combining LC-MALDI MS/MS and nano-LC/MS/MS**; Ning Tang; Christine Miller; *Agilent Technologies, Santa Clara, CA*

TP 489 **Globally Mapping Protein-Protein Interactions and Protein Complex Composition in Bacillus subtilis using Size-Exclusion Chromatography and Proteome Analysis**; Shi-Sheng Li; Lucy M. Stols; Mark Donnelly; Andrzej Joachimiak; Carol S. Giometti*; *Argonne National Laboratory, Argonne, IL*

TP 490 **Complete Chemical and Enzymatic Treatment of Posttranslationally Modified Proteins on Chips**; Ying Ge[1]; Mike Aguiar[1]; Robert Masse[1]; Bernard F. Gibbs[1]; *[1]MDS Pharma Services, Montreal, Canada; [2]McGill University, Montreal, Canada*

TP 491 **Plastic Microchip HPLC-MALDI/MS using Monolithic Columns**; Kyung Won Ro; Jian Liu; Daniel R. Knapp; *Medical University of South Carolina, Charleston, SC*

TP 492 **Comparative Proteomics of Abundant Protein-depleted Plasma from Patients with Sickle Cell Disease-related Pulmonary Hypertension**; Claire Dauly; Adam Odhiambo; David H Perlman; Hua Huang; Bogdan A Budnik; Parminder Kaur; Peter B O'Connor; Martin H Steinberg; Harrison W Farber; Elizabeth S Klings; Mark E McComb; Catherine E Costello; *Boston University School of Medicine, Boston, MA*

TP 493 **Carbohydrate-Encapsulated Gold Nanoparticle for Rapid Target Protein Identification and Binding Epitope Mapping**; Yu-Ju Chen[1]; Shu-Hua Chen[2]; Yuh-Yih Chien[2]; Yu-Wan Chang[1]; Hsin-Kai Liao[1]; Chih-Yang Chang[1]; Mi-Dan Jan[1]; Ken-Tseng Wang[2]; Chun-Cheng Lin[1]; *[1]Academia Sinica, Taipei, Taiwan, R.O.C; [2]National Taiwan University, Taipei, Taiwan, R.O.C*

TP 494 **A NanoCapture Array Chip for Mass Spectrometry and Surface Plasmon Resonance Spectroscopy**; Heman Chao[1]; Baomin Tian[1]; Tim Londergan[2]; Dan Jin[2]; *[1]Sensium Technologies Inc, Aurora, ON Canada; [2]Lumera Coporation, Bothell, WA*

TP 495 **Statistical Classification from Ovarian Cancer Tissue by Proteomic Patterns**; Yi Zhu[1234]; Rong Wu[1234]; Kathleen R Cho[1234]; David M Lubman[1234]; *[1]University of Michigan, Ann Arbor, MI; [2]University of Michigan, Ann Arbor, MI; [3]University of Michigan, Ann Arbor, MI; [4]University of Michigan, Ann Arbor, MI*

TP 496 **The Utility of LC Peptide Elution Time Prediction in the Analysis of Complex Proteomes**; Konstantinos Petritis[1]; Lars J. Kangas[1]; Matthew E. Monroe[1]; Eric F. Strittmatter[1]; David C. Prior[1]; Steven M. Fischer[2]; Bryan D. Miller[2]; John C. Fjeldsted[2]; Richard D. Smith[1]; *[1]Pacific Northwest National Laboratory, Richland, WA; [2]Agilent Technologies, Santa Clara, CA*

TP 497 **A Complementary Protein Characterization by 2D-MicroLC/NSI-ITMS for both Intact Protein and Shotgun Analyses**; Kiyonaga Fujii[1]; Tomoyo Nakano[2]; Shoichi Kawasaki[2]; Fumihiko Usui[2]; Yasuhiko Bando[2]; Toshihide Nishimura[1]; *[1]Tokyo Medical University, Tokyo, Japan; [2]AMR Inc., Tokyo, Japan*

TP 498 **Fast Chromatographic Separation and Sequencing of Complex Peptide Mixtures using Disposable Columns and MALDI Tandem Mass Spectrometry;** Ole Hoerning[1]; Ole N. Jensen[1]; Ole Vorm[2]; *[1]University of Southern Denmark, Odense, DK; [2]Proxeon Biosystems A/S, Odense, DK*

TP 499 **Characterization of the Low Abundance Proteins in Plasma**; Florence Guerad; Severine Le Gac; Christian Rolando; Cecile Cren-Olive; *University of Sciences and Technologies of Lille, Lille, France*

TP 500 **The Need for Powerful Decomplexification Techniques for the Detection of Low Abundance Proteins in Plasma Samples;** Michael Schirm; Dmitri Sitnikov; Gregory Opiteck; Joanna Hunter; *Caprion Pharmaceuticals, Montreal, QC, Canada*

TP 501 **An Information-Added Peptide Separation Strategy using Free Flow Electrophoresis for Tandem Mass Spectrometry-Based Proteomics**; Hongwei Xie; Sricharan Bandhakavi; Timothy J. Griffin; *University of Minnesota, Minneapolis, MN*

TP 502 **New SCX Peptide Elution Score for pH/Salt-Gradient SCX Chromatography in 2D-nano-LC/MSMS Analysis of Protein Digests**; Witold M. Winnik; *US Environmental Protection Agency, Research Triangle Park, NC*

TP 503 **Comparing Chromatography Columns for the Separation and ESI LC-MS/MS Analysis of Peptide Mixtures**; Hansjoerg Toll[1]; Ulrike Schweiger-Hufnagel[2]; Catherine Stacey[2]; Christian G. Huber[1]; *[1]Instrumental Analysis and Bioanalysis, University, Saarbruecken, Germany; [2]Bruker Daltonik GmbH, Bremen, Germany*

TP 504 **Bottom-up Analysis of Complex Protein Mixtures with Large Sequence Coverage using a Novel CE/ESI-MS Technique**; Selynda A Soto; Mehdi Moini; *University of Texas, Austin, TX*

TP 505 **Complex Protein Mixture Profiling by Oline Capillary Isoelectric Focusing, Reversed Phase Liquid Chromatography and Mass Spectrometry**; Feng Zhou; Murray V. Johnston; *University of Delaware, Newark, DE*

TP 506 **Mechanism of Enhanced Nanobore LC-MS using Methanol Gradient Elution with Peptide Mixtures**; Adam W. Perala; Christopher J. Toher; Gary A. Valaskovic; *New Objective, Inc, Woburn, MA*

TP 507 **High-Throughput Chip Based Screening of Intact Protein Ligand Complexes – Automating Drug Discovery;** Hannah V Florance[1]; Perdita E Barran[1]; Alistair Sterling[2]; *[1]The University of Edinburgh, Edinburgh, UK; [2]Advion BioSciences Ltd., Norwich, UK*

TP 508 **On-Line Protein Digestion using Trypsin-Nanomagnetic Particles at Elivated Temperature**; Jingyueh Jeng[1]; Yue-Lin Xu[2]; Mon-Fong Lin[2]; Jentaie Shiea[2]; *[1]Chia Nan University of Pharmacy & Science, Tainan, Taiwan; [2]National Sun Yat-Sen University, Kaohsiung, Taiwan*

PROTEOMICS: PHOSPHORYLATION

TP 509 **Phosphoproteomics of Yeast Mitosis: Identification of Phosphopeptides Isolated by IMAC**; Elisabeth Roitinger[1]; Dorothea Anrather[2]; Edina Csaszar[2]; Christoph Stingl[1]; Karl Mechtler[1]; *[1]Research Institute of Molecular*

Pathology, Vienna, Austria; [2]Max F. Perutz Laboratories, Vienna, Austria

TP 510 **Phosphopeptide Enrichment and Characterization using a Novel IMAC Material followed by Off-Line LC/MS/MS Analysis**; Susanne C. Moyer; Gordon Nicol; Barry Boyes; *Agilent Technologies, Wilmington, DE*

TP 511 **A Phosphopeptide Capturing Fe Kit Designed for Selective Isolation of Phosphopeptides on the Surface of Superparamagnetic Micro Particles**; Corinna Sykora[1]; Peter Hoffmann[1]; Thomas Elßner[2]; Markus Kostrzewa[2]; Ralf Hoffmann[1]; *[1]University of Leipzig, BBZ, Leipzig, Germany; [2]Bruker Daltonics GmbH, Leipzig, Germany*

TP 512 **Exploring the Fragmentation of Phosphopeptides from AP MALDI QqLIT in Both Positive and Negative Polarities**; Phillip V. Tan[1]; Christie L. Hunter[2]; Bradley B. Schneider[3]; *[1]MassTech, Inc., Columbia, MD; [2]Applied Biosystems, Foster City, CA; [3]MDS SCIEX, Toronto, ON, Canada*

TP 513 **Universal Phospho-Sensor Dye Arrays and MALDI-TOF MS in Large-Scale High-Throughput Detection and Identification of Protein Phosphorylations in Cellular Lysates**; Manoj Pal; Allison Moffa; Arun Shreekumar; David M. Lubman; Stephen P. Ethier; Arul M. Chinnayan; *University of Michigan, Ann Arbor, MI*

TP 514 **Improved Chromatographic and Mass Spectrometric Properties of Small Phosphopeptides by N-Terminal Derivatisation**; Marten Snel; Emmanuelle Claude; Iain Campuzano; Therese McKenna; James Langridge; *Waters MS Technology Centre, Manchester, United Kingdom*

TP 515 **Differential Phosphoproteomic Analysis of Rat Cortical Neurons by On-Line 2DLC-MS/MS for Studying Amyloid-Beta Cytoxicity in AD**; Stefano Gotta; Claus Andersen; Georg C. Terstappen; Roberto Raggiaschi; *Sienabiotech S.p.A., Discovery Research, Siena, Italy*

TP 516 **Sensitive Identification of Phosphopeptides in B rain Tissue using 2D-NanoLC-ESI-MS^n**; Jenny Samskog; Henrik Wadensten; John Flensburg; *GE Healthcare, Uppsala, Sweden*

TP 517 **Quantitative Analysis of Protein Expression and Phosphorylation Applied to the Yeast Pheromone Pathway**; Albrecht Gruhler; Jesper V Olsen; Rune Matthiesen; Shabaz Mohammed; Nils J Færgeman; Matthias Mann; Ole N Jensen; *University of Southern Denmark, Odense, -*

TP 518 **The Role of Tyrosine Phosphorylation in Signaling**; Simone M Lemeer[1]; Albert J R Heck[1]; Jeroen den Hertog[2]; Monique Slijper[1]; *[1]Utrecht University, Utrecht, The Netherlands; [2]Netherlands Institute for Developmental Biology, Utrecht, The Netherlands*

TP 519 **Apoptosis-Related Changes in Human Mitochondrial Proteome**; Brian Squadroni; Rulin Zhang; Emine C Koc; Hasan Koc; *Penn State University, University Park, PA*

TP 520 **Phospho Proteome Analysis of an Alzheimer's Disease Transgenic Mouse Model (UBB^{+1}) using a Q-Trap instrument**; Thomas Schulenborg[1]; David Fischer[2]; Helmut E. Meyer[1]; Fred van Leeuwen[2]; Katrin Marcus[1]; *[1]Medical Proteom-Center, Bochum, Germany; [2]Netherlands Institute for Brain Research, Amsterdam, The Netherlands*

TP 521 **Phosphoproteins in Higher Plants: Combining Gel- and MS-based Characterization Approaches**; Peter Hufnagel[1]; Ulrike Schweiger-Hufnagel[1]; Stephanie Hahner[1]; Jürgen Schmidt[2]; Horst Röhrig[3]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]Max-Planck-Institute for Plant-Breeding Research, Köln, Germany; [3]Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany*

TP 522 **Phosphoproteomic Analysis of Rat Liver**; Katrin Moser; Forest M White; *Massachusetts Institute of Technology, Cambridge, MA*

TP 523 **Comparative Strategies for the Characterization of the Phosphorylation of Tpl2 using a Linear Ion Trap Mass Spectrometer**; Terrence M Black[1]; Christine L Andrews[2]; Jeonghee Cho[3]; Mircea Ivan[2]; Phillip N Tsichlis[2]; Paul Vouros[1]; *[1]Northeastern Univerisity, Boston, MA; [2]Tufts-New England Medical Center, Boston, MA; [3]Tufts School of Medicine, Boston, MA*

TP 524 **Identification and Characterization of Phosphorylated Proteins in Human Prostate Cancer Cells**; Yingxin Zhao; Francesco Giorgianni; Sarka Beranova-Giorgianni; *University of Tennesee Health Science Center, Memphis, TN*

TP 525 **Identification of PHF Tau Phosphorylation Sites by Linear Ion Trap Mass Spectrometry using Data-Dependent Neutral Loss MS3**; Diane Cripps; Stefani N. Thomas; Austin J. Yang; *University of Southern California, Los Angeles, CA*

TP 526 **Analysis of Phosphorylation Events Regulated by Protein Phosphatase 2A by using Phosphoprotein Enrichment and ICAT**; Jennifer J. Hill; Debbie A. Callaghan; Wen Ding; John F. Kelly; Balu Chakravarthy; *National Research Council Canada, Ottawa, ON Canada*

TP 527 **Phosphorylation Site Mapping of an Extremely Hydrophilic Phospopeptide by a Chemical Modification Approach**; Michelle R Salemi; Roselle C Visaya; Robert H Rice; Young-Moo Lee; *University of California, Davis, CA*

TP 528 **The Identification of Phosphorylated Peptides in Plasma: A Comparison of IMAC Purification and SCX Fractionation**; Ian I Stewart; Thierry Le Bihan; Dawn P. Richards; Rob M. Ewing; Nancy Ng; *Protana Inc, Toronto, ON, Canada*

TP 529 **Phosphorylation Site Identification in GSK-3β and its Molecular Chaperones using LC-MS/MS- Insights into the Dynamic Regulation of Kinase Function**; Dawn P. Richards[1]; Jing Jin[2]; Lorne Taylor[2]; Tony Pawson[2]; Ian I. Stewart[1]; *[1]Protana Inc, Toronto, ON, Canada; [2]Samuel Lunenfeld Research Institute, Toronto, ON, Canada*

TP 530 **Improved Detection of Phosphopeptides with Ion Trap MS using new CID Fragmentation Techniques**; Markus Lubeck; Andreas Brekenfeld; Ralf Hartmer; Carsten Baessmann; *Bruker Daltonik GmbH, Bremen, Germany*

TP 531 **Mass Spectrometric Integration of Robust Phosphoprotein Profiling Strategies**; Erol E. Gulcicek; Matthew Berberich; Christopher Colangelo; Tukiet T. Lam; Walter McMurray; Kathryn L. Stone; Kenneth Williams; *Yale University, New Haven, CT*

PROTEOMICS: SAMPLE PREPARATION AND METHODOLOGIES

TP 532 **Quality Control and Assurance for Mass Accuracy and Sensitivity in LC-FTICR Based Proteomic Studies**; Charley C. Langley; Aleksey V. Tolmachev; Eric F. Strittmatter; Rui Zhang; Anil K. Shukla; Harold R. Udseth; Richard D. Smith; *Pacific Northwest National Laboratory, Richland, WA*

TP 533 **Analytical Strategies for Characterizing Protein Complexes: Bacterial Ribosomes**; Anthony J. Makusky; Wenyao Shi; Sanford P. Markey; Jeffrey A. Kowalak; *National Institute of Mental Health, Bethesda, MD*

TP 534 **Comparative Evaluation of Methods for Abundant-Protein Depletion in Plasma: Results from a Mouse Plasma Biomarker Discovery Study**; Veronica Saenz-Vash; Matthew Sigakis; Betty Chang; Michael Gillette;

Steven A Carr; *Broad Institute at MIT and Harvard, Cambridge, MA*

TP 535 **Large-Scale Quantitative Analysis of Expression of Saccharomyces Cerevisiae Integral Membrane Proteins**; Boris L. Zybailov; Michael P. Washburn; *Stowers Institute for Medical Research, Kansas CIty, MO*

TP 536 **Novel Immunoaffinity Depletion Technology With Increased Binding Capacity Removes Approximately 95 % (w/w) of High Abundance Human Plasma Protein;** Mark D. Schuchard; Christopher D. Melm; Angela S. Crawford; Holly A. Chapman; John G. Dapron; Richard J. Mehigh; Graham B.I. Scott; *Sigma-Aldrich, St. Louis, MO*

TP 537 **Plasma Cleanup: A Prerequisite for Biomarker Discovery**; Cameron O. Scarlett[1]; Viorel Mocanu[1]; Jian Jiang[1]; Bruce A. Lessey[2]; Nedyalka N. Dicheva[1]; Carol E. Parker[1]; Christoph H. Borchers[1]; *[1]UNC-CH, Chapel Hill, NC; [2]Center for Women's Medicine, Greenville, SC*

TP 538 **Effect of Gas Phase Fractionation of Peptide Ions on Bacterial Identification using Mass Spectrometry-Based Proteomics Approach**; Rabih E. Jabbour[1]; Jacek P. Dworzanski[1]; Samir V. Deshpande[2]; A. Peter Snyder[3]; Charles H. Wick[3]; *[1]Geo Centers INC., APG, MD; [2]STC , Edgewood, MD; [3]US Army Edgewood Chemical Biological Center, APG, MD*

TP 539 **Subcellular Proteomic Studies on the Effects of Aging: Use of a Novel Technique to Separate and Enrich Organelles**; Ajay N. Kiri; Kate L. Drahos; Hung-Cuong Tran; WenKui Lan; Donald K. McRorie; Marcus J. Horn; *Alfa Wassermann Proteomic Technologies, LLC, West Caldwell, NJ*

TP 540 **Method Development of RPLC-SDS-PAGE in Combination with Nano-RPLC-ESI-MS-MS and Its Application for Human Liver Proteome Research**; Yangjun Zhang; Wenrui Li; Qingfang Meng; Xinyu Deng; Yinghua Tian; Jinglian Wang; Bing Yang; Yun Cai; Fuchu He; Xiaohong Qian; *Beijing Institute of Radiation Medicine, Beijing, China*

TP 541 **Evaluation of Immunoaffinity Protein Depletion Methods for the Analysis of Low-abundant Proteins and their Post-Translational Modifications in Human Cerebrospinal Fluid**; Yuko Ogata; M. Cristine Charlesworth; David C. Muddiman; *Mayo Clinic College of Medicine, Rochester, MN*

TP 542 **Profiling of Human Urinary Peptides**; Kouzou Suto; Yoshinori Satomi; Ying Chen; Toshifumi Takao; *Institute for Protein Research, Osaka University, Suita, Osaka, Japan*

TP 543 **Protein Expression Profiling In Developing Plant Embryos using 1-DE and Q-TOF LC-MS/MS**; Lianglu Wan; Daoquan Xiang; Jenny Yang; Douglas J.H. Olson; Raju Datla; Andrew R.S. Ross; *National Research Council Canada, Saskatoon, SK Canada*

TP 544 **Separation and Identification of Proteins in the Albumin Enriched Fraction of Human Serum**; Rebekah L Gundry; Qin Fu; Jennifer E Van Eyk; Robert J Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*

TP 545 **Comparative Proteomic Analyses of he Lipid Droplet of Fed and Fasted Rat Liver by LC-MS and LC-MS/MS**; Carole Sztalryd[1]; Sonja Hess[2]; *[1]University of Maryland, Baltimore, MD; [2]NIDDK, NIH, DHHS, Bethesda, MD*

TP 546 **Proteomic Approach to Mapping the Stimulus-Specific Signaling Pathways in Periodontitis**; Julian A Saba[1]; Qingde Zhou[2]; Catherine E Costello[1]; Salomon Amar[2]; *[1]Boston University School of Medicine, Boston, MA; [2]Boston University School of Dental Medicine, Boston, MA*

TP 547 **Proteomic Analysis of Articular Cartilage Tissue from Osteoarthritic Patients**; Amanda L Bemis; Zhiyong Yang; Eunice Wang; Carl Flannery; Elisabeth Morris; Yongchang Qiu; Jiang Wu; *Wyeth Research, Cambridge , MA*

TP 548 **Monitoring Proteomic Changes from the Top to Bottom using a Progressive Model of Breast Cancer**; James A. Mobley; Swati Biswas; Carlos L. Arteaga; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 549 **Technology Developments for Characterizing the Scaffold Protein of Toxoplasma gondii**; Tianmin Huang; Zhigang Wu; B Burd; Chris Pulse; Lianji Jin; George Orr; Ruth Angeletti; *AECOM, Bronx, NY*

TP 550 **Subfractionating the Salivary Proteome**; Prasanna Ramachandran; Pinmanee Boontheung; Shen Hu; Yongming Xie; Joseph Loo; *University of California, Los Angeles, CA*

TP 551 **Extending Identification of Proteins to Unsequenced Bacterial Strains *via* MALDI-MS**; Daisy-Malloy Hamburg[1]; Moo-Jin Suh[1]; Steven T Gregory[2]; Albert E Dahlberg[2]; Patrick A Limbach[1]; *[1]University of Cincinnati, Cincinnati, OH; [2]Brown University, Providence, RI*

TP 552 **Differential Detergent Fractionation and Frozen Whole Organ Proteomics;** Bart H.J. van den Berg[1]; Eefje J.H. Pingen[1]; Tya Harris[1]; Fiona M. McCarthy[1]; Sue Lamont[2]; Haujun Zhou[2]; William E. Holmes[3]; Shane C. Burgess[1]; *[1]Mississippi State University, Starkville, MS; [2]Iowa State University, Ames, IA; [3]Mississipi State Chemistry Laboratory, Starkville , MS*

TP 553 **Bottom-up and Top-down Characterization of Novel Cuticle Proteins from Anopheles gambiae**; Todd H. Mize; Vladimir Belozerov; Rebecca J. McNall; Judy Willis; Ron Orlando; *University of Georgia, Athens, GA*

TP 554 **Differential Proteomic Analysis of Bronchoalveolar Lavage Fluid in Asthmatics Following Segmental Antigen Challenge**; Eric Sousa[1]; Michiko Kobayashi[1]; Wei Liu[1]; Sandy Goldman[1]; Andy Dorner[1]; Steven Projan[1]; Mani Kavuru[2]; Yongchang Qiu[1]; Mary Jane Thomassen[2]; Jiang Wu[1]; *[1]Wyeth Research, Cambridge, MA; [2]Cleveland Clinic Foundation, Cleveland, OH*

TP 555 **Investigation of Se-Containing Proteins in *Bertholletia excelsa* (Brazil Nuts) by Chromatographic and Mass Spectrometric Techniques;** Sarath B Jayasinghe; Joseph A Caruso; *University of Cincinnati, Cincinnati, OH*

TP 556 **Mapping Tubulin: A Robust Protocol for MALDI-TOF Analysis and Identification of Subunits, Isotypes and Postranslational Modifications in Tubulin Extracts**; Matthew Olson; Dan Sackett; Peter Backlund; Alfred Yergey; *NIH/NICHD, Bethesda, MD*

TP 557 **Identification of S-Nitrosylated Cystines in Human Endothelial Nitric Oxide Synthase (eNOS) by Mass Spectrometry**; Manorama Tummala[1]; Victor Ryzhov[1]; Stephen M. Black[2]; *[1]Northern Illinois University, DeKalb, IL; [2]University of Montana, Missoula, MT*

TP 558 **Measurement of Protein Turnover Rate and Characterization of Protein Modification by Stable Isotope Labeling and Mass Spectrometry**; Gang Sun; Vernon E. Anderson; *Case Western Reserve University, Cleveland, OH*

TP 559 **Timber Rattlesnake Venom Disintegrins Characterization and Identification by MALDI-CAF-CID-QIT-TOF**; Jacob Galan[1]; Elda Sanchez[1]; John Perez[1]; Mario E Gomez-Hernandez[2]; Nicholas R Beller[2]; Sajid Bashir[2]; *[1]Natural Toxins Research Center (NTRC), Kingsville, Tx; [2]Chemical Biology Research Group (CBRG), Kingsville, Tx; [3]Texas A&M University-Kingsville, Kingsville, Tx*

TP 560 **Insulin Stimulation of GLUT4 Vesicle Transport – a Proteomic Investigation Based on Affinity Purification and 2D LC-MS/MS**; Mark C Larance[1]; Ellen van Dam[2]; Stephanie Winata[2]; Georg Ram[2]; Valerie Wasinger[1]; David E James[2]; Michael Guilhaus[1]; *[1]University of New South Wales, Sydney, NSW Australia; [2]Garvan Institute of Medical Research, Sydney, NSW Australia*

TP 561 **Purification of Nuclei by Cell Sorting as a Precursor to Comparative Mudpit Analysis of Arabidopsis thaliana and Oryza sativa (Rice);** Mike Galligan; Linda Breci; Georgina Lambert; David Galbraith; Paul A. Haynes; *The University of Arizona, Tucson, AZ*

TP 562 **Two Approaches for Enrichment of Human Glycoproteins prior to Structural Determination by Infrared Multiphoton Dissociation in FT-ICR Mass Spectrometry**; Carina Sihlbom[1]; Pia Davidsson[2]; Alan G Marshall[3]; Carol L Nilsson[1]; *[1]Medical Biochemistry, Göteborg University, Göteborg, Sweden; [2]Discovery Med/Mol Pharmacology AstraZeneca R&D, Mölndal, Sweden; [3]National High Magnetic Field Laboratory , Tallahassee, FL*

IMAGING – SURFACE ANALYSIS

TP 563 **Imaging of Clozapine and N-Desmethyl Clozapine in Rat Brain Tissue using MALDI-MS/MS**; Elaine Fukuda[1]; Yunsheng Hsieh[2]; Julia Wingate[1]; Ian Knemeyer[2]; Walter Korfmacher[2]; *[1]Applied Biosystems, Foster City, CA; [2]Schering-Plough, Kenilworth, NJ*

TP 564 **Detecting Drug Distribution in Whole Rat Sagittal Sections by Imaging Mass Spectrometry**; Sheerin Khatib-Shahidi[1]; Michelle L. Reyzer[1]; Jennifer Herman[2]; Todd A. Gillespie[2]; Richard M. Caprioli[1]; *[1]Vanderbilt University, Nashville, TN; [2]Eli Lilly and Co., Indianapolis, IN*

TP 565 **Transparent MALDI Matrices for Imaging Mass Spectrometry**; Stanislav S. Rubakhin; Jonathan V. Sweedler; *University of Illinois, Urbana, IL*

TP 566 **MALDI-Imaging of Zebrafish Sections**; Soeren-Oliver Deininger[1]; Marcus Macht[1]; Jens Hoehndorf[1]; Ulrike Binkle[2]; Anette-Yvonne Loos[2]; Claudia A. O. Stuermer[2]; Arne Fuetterer[1]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]University of Konstanz, Konstanz, Germany*

TP 567 **Imaging and Differentiating Individual Cancer Cells and Cell Extracts using Time-of-Flight Secondary Ion Mass Spectrometry (TOF-SIMS)**; Mark G. Knize; Kuang Jen J. Wu; David L. Shattuck; Ligang Wu; Erik J. Nelson; Jennifer L. Montgomery; James S. Felton; Kristen S. Kulp; *lawrence Livermore National Laboratory, Livermore, CA*

TP 568 **Cluster TOF-SIMS Imaging of Various Biological Samples**; Alain Brunelle[1]; David Touboul[1]; Sabine De La Porte[2]; Sebastian Mas Fontao[3]; Jesus Egido[3]; Pascale Richardin[4]; Philippe Walter[4]; Olivier Laprévote[1]; *[1]ICSN-CNRS, Gif-sur-Yvette, France; [2]Institut A.Fessard-CNRS, Gif-sur-Yvette, France; [3]Lab. de Nefrologia Exp y Patologia Vascular, Madrid, Spain; [4]C2RMF, Paris, France*

TP 569 **Laser Microdissection MALDI Mass Spectrometry of Human Aortic Tissue**; Jerrell G. Gibson; Samuel J. Washington; James W. Robinson; Isiah M. Warner; Kermit K. Murray; *Louisiana State University, Baton Rouge, LA*

TP 570 **TOF-SIMS Imaging of Chlorhexidine-Digluconate Transport in Frozen Hydrated Biofilms of the Fungus Candida Albicans;** Bonnie J Tyler[1]; Srinath Rangaranjan[1]; Jörg Möller[2]; Andre' Beumer[2]; Heinrich Arlinghaus[2]; *[1]University of Utah, Salt Lake City, Utah; [2]University of Münster, Münster, Germany*

TP 571 **Identification of Proteomic Changes within the Mouse Uterus following Blastocyst Implantation**; Kristin E. Burnum; Takiko Daikoku; Susanne Tranguch; Hans-Rudolf Aerni; James Mobley; S.K. Dey; Richard Caprioli; *Vanderbilt University Medical Center, Nashville, TN*

TP 572 **A Study of the Depth of Secondary Ion Emission from Layered Films Bombarded by Massive Projectiles**; Zhen Li; S. V. Verkhoturov; E. A. Schweikert; *Texas A&M University, College Station, TX*

TP 573 **Massively Parallel Single-Cell Sized Sample Preparation for MALDI-MS Profiling**; John C. Jurchen; Eric B. Monroe; Marika O. Christie; Jenna L. Losh; Stanislav S. Rubakhin; Jonathan V. Sweedler; *University of Illinois, Urbana-Champaign, IL*

TP 574 **Molecular Profiling, Tissue Imaging and Top Down Identification of Ocular Lens Protein Degradation**; Jun Han; Rachel Wood; Kevin L. Schey; *Medical University of South Carolina, Charleston, SC*

TP 575 **Investigating Hydrocortisone Uptake in Porcine Tissue using a Solvent Extraction Method for Indirect Analysis by Imaging MALDI MS**; Sally J Atkinson; Malcolm R Clench; David Parkinson; *Sheffield Hallam University, Sheffield, UK*

TP 576 **Development of MALDI Mass Spectrometric Imaging in a Mammalian Brain Plasticity Model**; Stefan Clerens; Ruben Ceuppens; Estel Van der Gucht; Babs Van de Plas; Peter Verhaert; Lutgarde Arckens; *Lab. of Neuroplasticity and Neuroproteomics, Leuven, Belgium*

TP 577 **Imaging Time-of-Flight Secondary Ion Mass Spectrometry (TOF-SIMS) of Lipids in Freeze-Dried Mouse Brain Sections;** Peter Sjovall[1]; Jukka Lausmaa[1]; Bjorn Johansson[2]; *[1]SP Swedish National Testing and Research Institute, Boras, Sweden; [2]Karolinska Institutet, Stockholm, Sweden*

TP 578 **SIMS Imaging of Single Isolated and Cultured Neurons**; Eric B. Monroe; John C. Jurchen; Stanislav S. Rubakhin; Jonathan V. Sweedler; *University of Illinois, Urbana, IL*

TP 579 **Development of Strategies for Imaging Biomolecules and Trace Elements in Biopsy Tissue**; Cameron W McLeod[1]; Josephine Bunch[1]; Alan G Cox[1]; Richard Byers[2]; John Denton[2]; Richard Bonshek[2]; *[1]The University of Sheffield, Sheffield, UK; [2]The University of Manchester, Manchester, UK*

TP 580 **Rat Kidney Nephrotoxicity Investigated by Imaging Mass Spectrometry: A Case Study**; Hélène Meistermann[1]; Angélique Augustin[1]; Stefan Ruepp[1]; Laura Suter[1]; Hans-Rudolf Aerni[2]; Jeremy L. Norris[2]; Richard M. Caprioli[2]; Axel Ducret[1]; *[1]F. Hoffmann-La Roche Ltd, Basel, Switzerland; [2]Vanderbilt University, Nashville, TN*

TP 581 **Evaluating Gleevec Distribution and Resulting Proteomic Changes in Brain Tumors via MALDI Mass Spectrometry**; Michelle L. Reyzer; Mamatha Rao; Kalyani Kasisomayajula; Nagendra Ningaraj; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 582 **Mass Imaging and Tissue Differentiation of Mouse Embryo Sections by ToF-SIMS;** Kuang Jen J. Wu; Xiaochen Lu; Mark Knize; Kris Kulp; *Lawrence Livermore National Laboratory, Livermore, CA*

TP 583 **Improvement of Biological TOF-SIMS Imaging with a Bismuth Cluster Ion Gun**; David Touboul[1]; Alain Brunelle[1]; Felix Kollmer[2]; Olivier Laprévote[1]; *[1]ICSN-CNRS, Gif-sur-Yvette, France; [2]ION-TOF GmbH, Muenster, Germany*

TP 584 **Profiling and Imaging Mass Spectrometry on Thin Sections from Solvent Preserved Tissue Specimens**;

Pierre Chaurand; Kirk B Lane; Georgios Stathopoulos; Richard M Caprioli; *Vanderbilt University, Nashville, TN*

TP 585 **Quantitative TLC/MS of Caffeine using Surface Sampling Electrospray Ionization Mass Spectrometry**; Bruce A. Tomkins[1]; Gary A. Van Berkel[1]; Michael J. Ford[2]; Michael A. Deibel[3]; *[1]Oak Ridge National Laboratory, Oak Ridge, TN; [2]National Center for Toxicological Research, Jefferson, AR; [3]Earlham College, Dept. of Chemistry, Richmond, IN*

TP 586 **Evaluation of a New Aerosol Matrix Deposition Method for Atmospheric Pressure and Vacuum MALDI Ion Imaging**; Daniel Kenny[1]; Marten Snel[1]; Jeff Brown[1]; Bob Bateman[1]; Jamie Coleman[2]; John Petrie[2]; Hilary Laidlaw[2]; Michael Ashford[2]; *[1]Waters Corporation, Manchester, UK; [2]University of Dundee, Dundee, UK*

TP 587 **New Cluster Beam Techniques for Sub-µm TOF-SIMS Organic Molecular Imaging**; Felix Kollmer; Thomas Grehl; Rudolf Moellers; Derk Rading; Ewald Niehuis; *ION-TOF GmbH, Muenster, Germany*

TP 588 **Characterization of Metal-Organic Contacts with Mass Spectrometry**; Zihua Zhu; Nicholas Winograd; *Penn State University, University Park, PA*

TP 589 **Imaging Mass Spectrometry with LD/MS^n at Different Pressure Regimes**; Timothy J Garrett[1]; Viatcheslav Kovtoun[2]; Huy Bui[2]; Maria C Prieto Conaway[2]; Ken Miller[2]; George Stafford[2]; Richard A Yost[1]; *[1]University of Florida, Gainesville, FL; [2]Thermo, San Jose, CA*

TP 590 **Examination of the Distribution of Secondary Metabolites in Plant Tissue by Imaging Matrix Assisted Laser Desorption Ionisation Mass Spectrometry**; Malcolm R Clench[1]; Sally J Atkinson[1]; Josephine Bunch[2]; Michael Burrell[2]; Daniel Kinsman[2]; *[1]Sheffield Hallam Univeristy, Sheffield, UK; [2]University of Sheffield, Sheffield, UK*

TP 591 **Determination of the Spatial Distribution of Pigments in Tissues with MALDI Imaging Software and QqTOF Mass Spectrometry**; Kaoru Karasawa; Makiko Komatsu; Toshiyuki Yamazaki; *Applied Biosystems Japan Ltd., Tokyo, Japan*

WEDNESDAY POSTERS

SURFACE ANALYSIS

WP 004 **High-Speed Automated Deposition of Matrix Onto Tissue Samples for Small Molecule Imaging Application usingMALDI MS/MS**; Min Yang; Andrew James; Tom Covey; Peter Kovarik; *MDS Sciex, Concord, ON, Canada*

WP 005 **Three-Dimensional Molecular Imaging of Peptide Films with Mass Spectrometry and Buckyballs**; Juan Cheng; Nicholas Winograd; *Penn State University, University Park, PA*

WP 006 **Automated Surface Sampling Electrospray Mass Spectrometry**; Vilmos Kertesz; Michael J. Ford; Gary J. Van Berkel; *Oak Ridge National Laboratory, Oak Ridge, TN*

WP 007 **Desorption Electrospray Ionization (DESI): A New Method for Bioanalytical Mass Spectrometry**; Zoltan Takats; Justin M. Wiseman; Bogdan Gologan; R. Graham Cooks; *Purdue University, West Lafayette, IN*

WP 008 **Analysis of a Monolayer Model of a Dental Composite Material by Laser Desorption Photoionization Mass Spectrometry**; Manshui Zhou; Chunping Wu; Praneeth D. Edirisinghe; James L. Drummond; Luke Hanley; *University of Illinois, Chicago, IL*

WP 009 **Metal Nanoparticle Deposition (MND) for ToF-SIMS Signal Enhancement of Polymers**; Abigale J. Marcus; Nicholas Winograd; *The Pennsylvania State University, University Park, PA*

WP 010 **Application of Coincidence Ion Mass Spectrometry for Characterization of Nanoparticles**; Sara Balderas; Stanislav V. Verkhoturov; Richard D. Rickman; Robert E. Cable; Raymond E. Schaak; Emile A. Schweikert; *Texas A&M University, College Station, TX*

WP 011 **Multi-ion Emission from Massive Gold Cluster Impacts**; George J. Hager; Stanislav V. Verkhoturov; Emile A. Schweikert; *Texas A&M University, College Station, TX*

WP 012 **Imaging Mass Spectrometry of Protein Microarrays and Thin Tissue Sections: A Simultaneous Top-Down/Bottom-Up Approach**; Stacy D. Sherrod; John A. McLean; David H. Russell; *Texas A&M University, College Station, TX*

WP 013 **Influence of Massive Projectile Size and Energy on Secondary Ions Yields of Organic Targets**; Christelle Guillermier[1]; Serge Della Negra[2]; Richard D Rickman[1]; Veronika Pinnick[1]; Emile A Schweikert[1]; *[1]Texas A&M University, College Station, TX; [2]Institut de Physique Nucleaire, Orsay, France*

WP 014 **Practical Aspects of Direct Tissue Analysis at Atmospheric Pressure by Desorption Electrospray Ionization**; Satu M. Puolitaival[1]; Justin M. Wiseman[2]; Zoltan Takats[3]; R. Graham Cooks[2]; Richard M. Caprioli[1]; *[1]Vanderbilt University, Nashville, TN; [2]Purdue University, West Lafayette, IN; [3]Hungarian Academy of Sciences, Budapest, Hungary*

WP 015 **A Comparison of Secondary Ion Yields Obtained with C_n^+ and Au_n^+ on Organic Surfaces**; Jay E. Locklear; Stanislav V. Verkhoturov; Christelle Guillermier; Emile A. Schweikert; *Texas A&M University, College Station, TX*

CLINICAL CHEMISTRY

WP 016 **Strategies for the Detection and Analysis of Buprenorphine and Norbuprenorphine**; Tanya N Gamble; Gary Impey; *Applied Biosystems/MDS Sciex, Concord, ON, Canada*

WP 017 **Identification of Nucleosides as Potential Biomarkers for Breast Cancer in Urine by ESI-TOF-MS**; Thomas Zey[1]; Matthias Pelzing[1]; Dino Bullinger[2]; Antje Frickenschmidt[2]; Gabriela Zurek[1]; H. M. Liebich[2]; Bernd Kammerer[2]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]University of Tuebingen, Tuebingen, Germany*

WP 018 **Routine Clinical Analysis of Endocrine Analytes (Dopamine, Epinephrine, Norepinephrine, Metanephrine, Normetanephrine, 5-HIAA, VMA and HVA) in Urine by LC/MS/MS;** Jeff C. Eichhorst[1]; Michele L Etter[1]; Joyce Lepage[1]; Crystal Bellegarde[1]; Denis C. Lehotay[2]; *[1]Saskatchewan Provincial Laboratory, Regina, SK, Canada; [2]University of Saskatchewan, Saskatoon, SK, Canada*

WP 019 **Recent Developments in the Direct Determination of the Ratio (Tetrahydrocortisol+alloTetrahydro-cortisol)/Tetrahydrocortisone in Urine**; Alessandro Saba; Andrea Raffaelli; Edda Vignali; Claudio Marcocci; Piero Salvadori; *AmbiSEN High Technology Center of the University, Pisa, Italy*

WP 020 **LC-MS/MS Analysis of Steroids for Clinical Evaluation of Endocrine Disorders**; Andrew Wagner; Teresa Kallal; William Curtin; Mary Moor; Walt Chandler; Russell P Grant; *Esoterix Inc., Calabassas Hills, CA*

WP 021 **Applying a Q TRAP ™ and Dynamic Background Subtraction for Multi Target Screening (MTS) with MS/MS-library based identification of drugs**; Sebastian Dresen[1]; Juergen Kempf[1]; Andre Schreiber[2]; Gary Impey[3]; Byron Kieser[3]; Wolfgang Weinmann[1]; *[1]Institute*