# US HUPO-2005 Scientific Program

## Mapping the Human Proteome: From Tools to Functionality

### Saturday, March 12, 2005

**Holiday Inn Hotel**

- **9am-4pm** Course on Bioinformatics for Proteomics (must pre-register)
  - Location: Holiday Inn National Hotel, Shenandoah II Meeting Room
  - (www.hinationalairport.com / phone: 703-842-1224)

- **9am-4pm** Course on Methods for Quantitative Proteomics (must pre-register)
  - Location: Holiday Inn National Hotel, Shenandoah VI Meeting Room
  - (www.hinationalairport.com / phone: 703-842-1224)

### Sunday, March 13, 2005

**Holiday Inn Hotel**

- **9am-4pm** Course on Advanced Techniques for 2D Electrophoresis in Proteomics
  - Sponsored by GE Healthcare
  - (must pre-register) (Location: Holiday Inn National Hotel, Shenandoah II Meeting Room) (www.hinationalairport.com / phone: 703-842-1224)

- **9am-4pm** Course on Tandem Mass Spectrometry Methods for Proteomics
  - Sponsored by Shimadzu
  - (must pre-register) (Location: Holiday Inn National Hotel, Eisenhower Meeting Room) (www.hinationalairport.com / phone: 703-842-1224)

- **9am-4pm** Course on Sample Preparation and Fractionation for Proteomics
  - Sponsored by Agilent Technologies
  - (must pre-register) (Location: Holiday Inn National Hotel, Shenandoah IV Meeting Room) (www.hinationalairport.com / phone: 703-842-1224)

### Sunday, March 13, 2005

**Hyatt Regency Hotel**

- **6:00-8:00pm** REGISTRATION & WELCOME RECEPTION
  - Location: Hyatt Regency Crystal City Hotel
  - 2799 Jefferson Davis Highway, Arlington, VA 22202
  - www.crystalcity.hyatt.com
### SESSION 1: THE PLASMA PROTEOME

Co-chairs: Aran Paulus, Bio-Rad Laboratories, and Ryuji Kobayashi, MD Anderson Cancer Center

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Authors and Affiliations</th>
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<tbody>
<tr>
<td>8:30am</td>
<td>The HUPO Plasma Proteome Project Pilot Phase: Reference Specimens, Technology Platform Comparisons, and Standardized Data Analyses. (Abstract L-101).</td>
<td>G.S. Omenn; D. States; D.D. Chan; R. Simpson; H. Hermjakob; and S. Hanash. University of Michigan; Johns Hopkins University; Ludwig Institute European Bioinformatics Institute; Fred Hutchinson Cancer Research Center</td>
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10:15am Break / Exhibits Open (Location: Exhibit Hall A)
10:45am  The Oxidative Stress Response, as Viewed by Proteomics. (Abstract L-201). T. Rabilloud*, E.Wagner+, M. Chevallet*, S. Luche*, A. Van Dorsselaer+, E. Leize-Wagner+; * DRDC/ICH, INSERM U 548, Grenoble, France. +(LSMBO), UMR CNRS 7509, ECPM, Strasbourg, France

11:15am  Redox Regulation and Redox Proteomics of Protein Glutathionylation. (Abstract L-202). P. Ghezzi; L. Goodwin; V. Bonetto; E. Gianazza; M. Fratelli. Istituto Mario Negri; North Shore-Long Island Jewish Research Institute; Dulbecco Telethon Institute, Istituto Mario Negri University of Milan

11:45am  Identification of Yeast Oxidized Proteins via Individual Oxidized Proteins Isolation. (Abstract L-203). H. Mirzaei; F.E. Regnier, Purdue University

12:10pm  Proteomic Characterization of the Murine Cardiac 26S Proteasome. (Abstract L-204). 1 A.V Gomes; 2 R.D. Edmondson; 1 C. Zong; 1 B. Berhane; 1 P. Ping. 1 Physiology and Medicine/Cardiology, UCLA; 2 National Center for Toxicological Research

12:35pm  Break / Exhibits

12:45-1:45pm  Free Vendor Seminar on Nano-electrospray-LC/MS Using the Agilent HPLC-Chip: A New Polymer Microfluidic Device for Protein Identification, presented by Agilent Technologies
Meeting Room: Conference Theater
Early pre-registration required at Agilent's booth (seats limited)

12:45-1:45pm  Free Vendor Seminar on New Advanced LC/MS Workflows for Biomarker Discovery and Validation, presented by Applied Biosystems
Meeting Room: Arlington Room
Early pre-registration required at Applied Biosystems' booth (seats limited)

1:30-3:30pm  POSTER SESSION 1
[Authors of papers in the P-100 through P-500 series will be at their posters]

3:00-3:30pm  Break / Exhibits (Location: Exhibit Hall A)

3:30pm  Exhibits Close
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<tr>
<th>Time</th>
<th>Session</th>
<th>Details</th>
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<tbody>
<tr>
<td>3:30pm</td>
<td>Study of Glycoproteins in Human Serum and Human Plasma Using</td>
<td>(Abstract L-301). W.S. Hancock, Barnett Institute and Department of Chemistry and Chemical Biology</td>
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<td></td>
<td>Multi-Lectin Affinity Chromatography Coupled with RPLC-MS/MS.</td>
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<td>4:00pm</td>
<td>Qualitative and Quantitative Phosphoproteomics by Mass Spectrometry.</td>
<td>(Abstract L-302). O.N. Jensen; University of Southern Denmark</td>
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<td>4:30pm</td>
<td>Global Analysis of Protein Phosphorylation in Yeast.</td>
<td>(Abstract L-303). J. Ptecik*, G. Devgañ*, G. Michaud*, H. Zhu*, X. Zhu*, J. Fasolo*, H. Guo*, G. Jona*, A. Breitkreutz*, R. Sopko*, S.-J. Lee, R.R. McCartney*, M.C. Schmidt*, N. Rachidi*, M.J.R. Stark*, D.F. Stern*, M. Tyers*, C. de Virgilio*, B. Andrews*, M. Gerstein*, B. Schweitzer*, P. Predki*, M. Snyder1,2. 1) Department of Molecular Biophysics &amp; Biochemistry and 2) Molecular, Cellular &amp; Developmental Biology. Yale University, 3) Invitrogen Corporation, Carlsbad, CA, 4) Department of Medical Genetics and Microbiology, University of Toronto, 5) Department of Molecular and Medical Genetics, University of Toronto, Canada, 6) Department of Molecular Genetics and Biochemistry, University of Pittsburgh School of Medicine, 7) Division of Gene Regulation and Expression, University of Dundee, United Kingdom, 8) Department of Pathology, Yale University School of Medicine, 9) Département de Biochimie Médicale, Centre Médical Universitaire, Geneve, Switzerland</td>
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<td>5:00pm</td>
<td>Direct Identification of Ubiquitination Sites on the Ubiquitin-conjugated CHIP Using MALDI Mass Spectrometry.</td>
<td>(Abstract L-304). D. Wang; W. Xu; S.C. McGrath; L. Neckers; R.J. Cotter; Johns Hopkins University and the NCI</td>
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<td>5:25pm</td>
<td>Global Analysis of Protein Sumoylation in Saccharomyces Cerevisiae.</td>
<td>(Abstract L-305). J.A. Wohlschlegel; E.S. Johnson; S.I Reed; J.R. Yates; The Scripps Research Institute and Thomas Jefferson University</td>
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<td>5:50pm</td>
<td>Pause</td>
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<td>8:00-10:00pm</td>
<td><strong>EVENING DISCUSSION SESSIONS</strong></td>
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<td></td>
<td><strong>Bioinformatics.</strong></td>
<td>Led by Rolf Apweiler</td>
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<td>Meeting Room: Regency E/F</td>
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<td><strong>Biomarkers.</strong></td>
<td>Led by Joshua Labaer</td>
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<td><strong>Sample Preparation and Separations.</strong></td>
<td>Led by Bill Hancock</td>
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<td>Meeting Room: Arlington Room</td>
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Tuesday, March 15, 2005
Hyatt Regency Hotel Meeting Room: Regency E/F

SESSION 4: FUNCTIONAL PROTEOMICS
Chair: Michael Snyder, Yale University

8:30am Harnessing the Human Proteome. (Abstract L-401). J. LaBaer, Harvard Medical School Institute of Proteomics
9:00am Interactome Networks. (Abstract L-402). M. Vidal, Dana-Farber Cancer Institute, Harvard Medical School
9:30am Comparative Genomics: Using Algae, Plants and Humans to Understand Cilia. (Abstract L-403). S.K. Dutcher, L. Li, J.B. Li, Washington University
10:25am Break / Exhibits Open (Location: Exhibit Hall A)

SESSION 5: NEW METHODS AND TOOLS
Co-chairs: Carol S. Giometti, Argonne National Laboratory, and Chitra Ratnayake, Beckman Coulter, Inc.

11:20am Reversible Covalent Binding of the Fluorophore Epicocconone to Proteins Provides a Novel Approach to the Sensitive Quantification of Proteins Across a WideVariety of Different Platforms. (Abstract L-502). 1D.A. Veal; 1J.A. Mackintosh; 1D. Coghlan; 1Y. Choi; 2P.H. Karuso. 1FLUORotechnics Pty, Ltd. and 2Macquarie University
11:45am Top-Down Multidimensional Separation Technologies Targeting Comprehensive Proteomics. (Abstract L-503). Y. Wang; B.M. Balgley; P. Rudnick; D. Ren; C.S. Lee, University of Maryland and Calibrant Biosystems
12:35pm HPLC-Chip/MS: High Performance Nano-LC/MS Using Polymer Microfluidic Devices. (Abstract L-505). K. Killeen1, H. Yin1, R. Brennen1, K. Seaward1, T. van de Goor2, K. Kraiczek3, J. Eickhoff3; 1Agilent Technologies, Palo Alto, CA, USA; 2Santa Clara, CA, USA, 3Waldbronn, Germany
1:00pm Break / Exhibits
Tuesday, March 15, 2005
Hyatt Regency Hotel Meeting Room: Regency E/F

1:00-2:00pm  Career Networking Session
Meeting Room: Potomac 3/4 Conference Room

1:00-2:00pm  Free Vendor Seminar on Applying a Divide and Conquer Strategy to
Proteome-Based Biomarker Discovery, presented by Beckman Coulter
Meeting Room: Conference Theater
Early pre-registration required at Beckman's booth (seats limited)

1:30-3:30pm  POSTER SESSION 2
[Authors of papers in the P-600 through P-1000 series will be at their posters]

3:00-3:30pm  Break (Location: Exhibit Hall A)

3:30pm  Exhibits Close

PLENARY LECTURE
Chair: Peipei Ping, University of California, Los Angeles

3:30pm  The HUPO Brain Proteome Project. (Abstract L-001). H. E. Meyer,
Medical Proteome Center, Ruhr University of Bochum, Bochum, Germany

SESSION 6: PROTEOMICS OF DISEASES
Co-chairs: Donita Garland, National Institutes of Health, and Emanuel F. Petricoin,
Food & Drug Administration

4:00pm  Proteomic Mapping & Molecular Imaging of Distinct Molecular Signatures at
Luminal Endothelial Cell Surfaces and Caveolae in Organs and Solid
Tumors. (Abstract L-601). P. Oh, L. Yan, J. Testa, P. Borgstrom, J. Schnitzer,
Sidney Kimmel Cancer Center

4:25pm  Proteomics of Human Breast Cancer: Plasma Markers, Profiling of
Cellular Carcinogenic Transformation and TGFbeta Signalling.
(Abstract L-602). S. Souchelnytskyi, Ludwig Institute for Cancer Research

4:50pm  Energy Metabolism and Myosin Assembly Protein Changes Dominate in
Human Ischemic Heart Failure. (Abstract L-603). B.A. Stanley; P. Liu;
L.A. Kirshenbaum ; J. E. Van Eyk. Queen's University; University of Toronto;
University of Manitoba; Johns Hopkins University

5:15pm  Alterations in the Mitochondrial Proteome of Drug-resistant Cancer Cells.
(Abstract L-604). R.F. Strong; C. Fenselau, University of Maryland

5:40pm  The Use of Proteomics to Identify Mechanisms of Hormone Resistance in
Breast Cancer Cells. (Abstract L-605). ¹A. H. Syed; ¹S. Ali-Khan; ¹P. Gutierrez;
²A. Brodie. ¹Greenebaum Cancer Center, University of Maryland; ²University of
Maryland School of Medicine

6:05pm  Pause
SESSION 7: SIGNALING AND MODEL SYSTEMS
Co-chairs: Jennifer E. Van Eyk, Department of Medicine, Johns Hopkins University, and Paul Tempst, Memorial Sloan-Kettering Cancer Center

8:00am  Analysis of Interaction Proteomics Data in the PIN Database. (Abstract L-701). P. Tempst; P.–V. Luc; M. Yaneva, Memorial Sloan-Kettering Cancer Center

8:30am  2D Gel Proteomics Analysis of Protein Changes Induced by Grape Seed in a Transgenic Model of Dementia. (Abstract L-702). H. Kim; J. Deshane; P. Hall; S. Barnes; S. Meleth, University of Alabama at Birmingham

8:55am  Isotope-Coded Reductive Amination for Quantitation Applied to Phosphoproteins Obtained from a LPS Stimulated Mouse Macrophage Cell Line. (Abstract L-703). R.S. Johnson; M. Shen; C. Farnsworth; Al.Taylor, Amgen Corporation

9:20am  Proteomic Mapping and Quantitation of Plasma Membrane Proteins from Distinct Compartments of Mouse Brain. (Abstract L-704). 1P. Nielsen; 2J. Olsen; 1A. Podtelejnikov; 2M. Mann; 3J. Wisniewski. 1MDS Inc.; 2Center for Experimental BioInformatics (CEBI), University of Southern Denmark; 3Protana Inc. Analytical Services

9:45am  Break

SESSION 8: THE FUTURE
Co-chairs: Thierry Rabilloud, DRDC/ICH, INSERM, and Sanford Markey, National Institutes of Health

10:15am Novel Time-Resolved Proteomics to Discover Hidden Targets in Cystic Fibrosis Lung Epithelial Cells. (Abstract L-804). M. Srivastava; O. Eidelman; C. Jozwik; W. Huang; H.B. Pollard, Uniformed Services University


11:15am The Human Salivary Proteome: From Discovery to Translational Research. (Abstract L-803). J.A. Loo; D. Geffen, University of California, Los Angeles

11:45am Annotating the Human Proteome. (Abstract L-801). R. Apweiler. EMBL-EBI

PLENARY LECTURE
Chair: Catherine Fenselau, University of Maryland


CLOSING REMARKS

12:45pm Catherine Fenselau, University of Maryland
PLASMA


P-109. Inter-Individual Proteomic Profiling of Blood Monocytes Reveals Biological Insights. Ming Jin; Tran Bourgeois; Charis Eng; Clay B Marsh; Haifeng M. Wu; Ohio State University

P-110. Proteomic Analysis of Fractionated Plasma from Patients with Sickle Cell Disease. Susan Yuditskaya; Gerard Hoehn, Ph.D.; Anthony Suffredini, MD; Mark Gladwin, MD; Gregory Kato, MD; Critical Care Medicine Department, Clinical Center, National Institutes of Health; National Heart, Lung and Blood Institute, National Institutes of Health; Critical Care Medicine Department, Clinical Center; and National Heart, Lung and Blood Institute, National Institutes of Health.
P-201. Multidimensional Fractionation and Analysis of the Bovine Skeletal Muscle Proteome. I. D. Cruzado-Park; E. Betgoveargez; C. Ratnayake; M. H. Simonian. Beckman Coulter, Inc.


P-205. Paper withdrawn.

P-206. Microtechnologies Enabling Microdissection-Based Clinical Proteomics. Y. Wang; B.M. Balgley; P. Rudnick; Z. Zhuang; C.S. Lee. University of Maryland; Calibrant Biosystems; National Institute of Neurological Disorders and Stroke.

P-207. Proteomic Analysis of Heterogeneous Cytological Samples Using Laser Capture Microdissection, Saturation DIGE and Antibody Microarrays. C. Jozwik; Q. Fan; M. Srivastava; T. Darling; H.B. Pollard, Uniformed Services University and Johns Hopkins University.

CANCER

P-301. Serum Proteomics of Breast Cancer. 1Q. Ru; 1L. Zhu; 1J. Silberman; 1M. Liebman; 2C. Shriver. 1) Windber Research Institute; 2) Walter Reed Army Medical Center.

P-302. A Reevaluation of Annexin I Expression in Normal Breast and Breast Carcinoma. 1R. Speer; 1J.D Wulfkuhle; 2V.S Calvert; 1L.A Liotta; 2E.F. Petricoin. 1) FDA-NCI Clinical Proteomics Program, National Cancer Institute; 2) FDA-NCI Clinical Proteomics Program, Food and Drug Administration.


P-305. Proteomic Analysis of Serum Proteins for the Diagnosis of Breast Cancer Disease. T. Maity; K. Kolli; H. Brzeski; C.D. Shriver; M.N. Liebman. Windber Research Institute; Walter Reed Army Medical Center.

P-306. Protein Microarray Profiling Identifies 4EBP1 and Phosphorylated eIF4E as Prognostic Indicators in Childhood Rhabdomyosarcoma. 1V.A Espina; 1C. Yeung; 1B. Midura; 2E.F Petricoin; 1L.A Liotta. 1) National Cancer Institute; 2) Food and Drug Administration.


P-308. Molecular Network Analysis of Metastatic Colorectal Carcinoma Using Reverse Phase Protein Microarray Based Phosphoproteomic Portraits. 1V.S. Calvert; 2K.M. Sheehan; 3E. Mammano; 3C. Belluco; 1E.F. Petricoin. 1) Food & Drug Administration; 2) National Cancer Institute; 3) University of Padova.

P-309. Detection of Low Abundant Proteomic Biomarkers through LC-MS/MS Sequencing of Albumin Bound Serum Fragments. 1K.M. Frogale; 2A. Mehta; 1M. Lowenthal; 3L. Liotta; 1E. Petricoin. 1) National Institutes of Health; 2) Tufts University.

P-311. Melanosome Proteomics: I. Purification and Identification of Melanosome Proteins. A. Chi; ²J. Valencia; ³V. J. Hearing; ⁵E. Appella; ⁶D. F. Hunt. ¹University of Virginia; ²University of Virginia.

P-312. Melanosome Proteomics: II. Identification of Trafficking Molecules Present in Early and Late Melanosomes. ¹Julio C Valencia; ²An Chi; ³Ettore Appella; ⁶Donald F Hunt; ⁵Vincent J Hearing. ¹Laboratory of Cell Biology, NCI; ²University of Virginia.


P-315. Target Identification for Tumor Immunotherapy. T. He, Celera Genomic.


P-317. Large-Scale Identification of Surface Proteins in Lung Adenocarcinoma Cells. V.M. Faca; B. Deng; D. Phanstiel; L.F. Newcomb; S. Hanash, Fred Hutchinson Cancer Research Center.


P-322. Paper withdrawn


P-401. Defining the Mononuclear Phagocyte Proteome in Health and Disease.
P. Ciborowski; Y. Enose; G. E. Howard, University of Nebraska Medical Center.

P-402. Combinatorial Proteome Analysis to Identify Neural Stem Cell Surface Proteins.
C.S.Giometti; S.L.Tollaksen; L.Chen, Argonne National Laboratory.

P-403. Normal Human Kidney Proteome: Database of Glomerular Proteome, Differential Protein Expression in Glomerulus, Cortex, and Medulla, and 2-DE Profiling of Glomeruli Isolated from Biopsy Tissues.
Y. Yoshida; K. Miyazaki; A. Tsugita; E. Yaita; T. Yamamoto. 1) Niigata University Graduate School of Medical and Dental Sciences; 2) NEC Corp.

P.C.Guest; J.G Bilsland; H. A. Skynner; T.P Bonnett; I. Munoz-Sanjuan, Merck Sharp & Dohme.

P-405. Identification of Serum Biomarkers Indicating Radiation Exposure.
D. J Johann; C. Menard; C.N. Coleman; L.A Liotta; K. Camphausen. 1) NIH/NCI-FDA Clinical Proteomics Program; 2) NIH/Radiation Oncology Branch; 3) Princess Margaret Hosp, Univ. of Toronto.

P-406. Advanced LC/MS Workflows for Protein Biomarker Discovery and Validation.
S. Webb; M. Siu; M. Hardt; R. Jenkins; C. Hunter. 1) Applied Biosystems; 2) York University; 3) University of Liverpool.

P-407. Identification of Proteins in HIV-1 and HTLV-1 Infected Cells Associated with Transcription and Membranes.
C. de la Fuente; K. Kehn; R. Berro; A. Pumfery; L. Parvin; A. Vertes; F. Kashanchi. 1) Department of Biochemistry and Molecular Biology, 2) Institute for Proteomics Technology and Applications, 3) The Institute for Genomic Research, George Washington University.

P-408. Dysfunctional Changes in the Cytoskeletal Proteome Occur in CF Lung Epithelial Cells Challenged With Pseudomonas Aeruginosa.
C. Jozwik; Y. Eudy; B. McGowan; D.M. Jacobowitz; H.B. Pollard. Department of Anatomy, Physiology and Genetics, Uniformed Services University; Department of Microbiology, Uniformed Services University.

P-409. High Abundance Protein Profiling of Cystic Fibrosis Lung Epithelial Cells.
X. Ji; C. Jozwik; X. Zhang; D.M. Jacobowitz; H.B. Pollard. Departments of Anatomy, Physiology and Genetics, Uniformed Services University.

P-410. Identification of Urinary Protein Biomarkers in Acute Renal Failure.
J.M. Arthur; J.S. Almeida; A. Bland; R. Stanislaus; S. Varghese. Medical University of South Carolina.

R.E. Neal; E. An; M. Datiles; N. Congdon. National Eye Institute; Johns Hopkins University.

H. Huang; D.H. Perlman; B. Budnik; C.E. Costello; M.E. McComb, Cardiovascular Proteomics Center, BUSM.

P-413. Human Proteome Resource.
C.A. Szigiarto; F. Sterky; A. Persson; J. Ottosson; H. Werners; P. Nilsson; A.-C. Andersson; C. Kampf; K. Wester; E. Björling; S. Hober; F. Pontén; M. Uhlen. 1) Department of Molecular Biotechnology, Royal Institute of Technology, SE-10691 Stockholm, Sweden; 2) Department of Genetics and Pathology, The Rudbeck Laboratory, Uppsala University, SE-75185 Uppsala, Sweden.

P-414. Paper withdrawn

Akiko Iwahori; Henrik Molina; Mads Gronborg; Akhilesh Pandey; Johns Hopkins University.
MODEL SYSTEMS

P-501. Two-Pronged Approach to Proteomic Databasing of Mouse Embryonic Stem Cells: Expanding the Known Proteome to Over 1100 Non-Redundant, Separated and Identified Proteins. 1S.T. Elliott; 1S. Sheng; 2D.G Crider; 2K.R Boheler; 1J.E. Van Eyk. 1) Johns Hopkins University. 2) National Institute on Aging, NIH/NIA.

P-502. Paper withdrawn

P-503. SELDI-TOF MS Profiling of Fractionated Plasma from Retinol-Deficient Rats: A Novel Tool for Biomarker Discovery in Nutrition Research. T. Linke; C.A. Ross; E.H. Harrison. USDA-ARS, BHNRC, Phytonutrients Laboratory; and the Pennsylvania State University.


P-505. Analysis of the Spermatozoa Proteome by MDLC Coupled to Tandem MS. D. Fenyo; J. Samskog; M.A. Baker; R. John Aitken; J. Flensburg. GE Healthcare; University of Newcastle.

P-506. Characterization of Alteration in Protein Expression Profiles by Gastric Epithelial Cells in Response to Helicobacter pylori Infection. S. Das¹, J.C. Sierra², K.V. Soman³, G. Suarez³, A.A. Mohammad⁴, T.A.T. Dang⁵, B.A. Luxon⁵, V.E. Reyes⁵#. Department of Pediatrics, ¹Department of Microbiology and Immunology, ²Bioinformatics Program, and Department of Human Biological Chemistry and Genetics; ³Department of Pathology, University of Texas Medical Branch; ⁴Ciphergen Biosystems.

P-507. The Plasticity of Global Proteome and Genome Expression Analysis in a Well Studied Closely Related Model Organism - Escherichia coli. C. Vijayendran; T. Polen; V.F. Wendisch; K. Friehs; K. Niehaus; E. Flasche. International NRW Graduate School in Bioinformatics and Genome Research; Institute of Biotechnology 1; Fermentation Engineering Group; Faculty of Biology.

Tuesday, March 15, 2005
Poster Session 2: 1:30-3:30 PM
[Authors of papers in P-600 through P-1000 series will be at their posters]

METHODS

P-601. Micromachined Ultrasonic Electrospray Microarray for High Throughput Multiplexed Mass Spectrometry of Proteins. S. Aderogba; J.M. Meacham; F.M. Fernandez; Levent Degertekin; Andrei G. Fedorov. Georgia Institute of Technology

P-602. The Open2Dgel Project for N-Dimensional Proteomic Data Analysis. P.F. Lemkin; G.C. Thornwall. LECB, CCR, NCI-Frederick; SAIC-Frederick.

P-603. Solution Isoelectric Focusing of Peptides. ¹Y. An; ¹Z. Fu; ²P. Gutierrez; ³C. Fenselau. ¹University of Maryland; ²University of Maryland, Greenebaum Cancer Center.


P-605. Isotope Coded Quaternary Amine Tags (ICQAT) for Quantification and Selection of Cysteinyl Peptides from Tryptic Digests. S. Julka; F.E. Regnier. Purdue University.


P-609. A Robust, Streamlined and Reproducible Method for Proteomic Analysis of Serum by Delipidation, Albumin and IgG Depletion, and 2-Dimensional Gel Electrophoresis. Q. Fu; C.P. Garnham; S.T. Elliott; D.E. Bovenkamp; J.E. Van Eyk, Johns Hopkins University.


P-611. Screening Method for Assessing Protein Binding Characteristics of Candidate Protein Microarray Substrates Manufactured from Silicon. J. Nijdam, R. Fedele, M. Ming-Cheng, E. Petricoin, M. Ferrari, L. Liotta, D. Geho. 1) Laboratory of Pathology, National Cancer Institute; 2) The Ohio State University; 3) Food and Drug Administration.


P-614. Identification of Proteins in Flagellar Rotor Assembly of Salmonella: Optimization of Efficiency of Tryptic Digestion. M. Gucek; J.A. Kowalak; S. Subramaniam; S. Misra; S.P. Markey. Laboratory of Neurotoxicology, NIMH, National Institutes of Health Laboratory of Cell Biology, NCI, National Institutes of Health; Department of Molecular Cardiology, Lerner Research Institute, The Cleveland Clinic Foundation


P-616. Development of a High-Throughput Method for Removal of Albumin from Serum and Plasma Samples. G.T Hoehn; H. Wang; S.R Kenney; K. Li; A. Sutfinedi. NIH Clinical Center; Critical Care Medicine Department; and Diagnostic Radiology.


P-619. Parallel PSD Analysis of 2D-Gel Spots from E.Coli. M. Snel; E. Claude; D. Kenny; R. Christian; J. Langridge. Waters Corporation, MS Technologies Centre.


P-621. Selection of Precast Gel Sizes and Staining Methods for 2D Gel Based Proteomics. A. Paulus; S. Freeby; A. Posch; K. Academia, Bio-Rad Laboratories.


P-626. A Spinning-Disk Interferometry Detection System for Monitoring Antigen: Antibody Complex Formation on Protein Arrays. M.M. Varma; H.D. Inerowicz; F.E. Regnier, D.D. Nolte. 1) Dept. of Physics, Purdue University; 2) Dept. of Chemistry, Purdue University.
P-627. Stable Isotope Labeling by Amino Acids in Cell Culture (SILAC) for Qualitative and Quantitative Phosphoproteomics. R. Amanchy; D.E. Kalume; A. Pandey; Johns Hopkins University.

P-628. Multidimensional Liquid Phase Separations of Intact Proteins as an Alternative to 2D Gel Electrophoresis for Proteomics. A. Apffel; A. Adler; J. Garcia; R. Kincaid; T. Sana; Agilent Laboratories.

P-629. Nanoliter ELISA Assays in a High Density Array Format for Identification of Tyrosine Kinase Inhibitors. Colin Brenan; Steve Smith; Tom Morrison; BioTrove Inc.

P-630. Correlation Network Analysis of Proteomic Data Generated by Immunoprecipitation/Pull-Down Followed by Mass Spectrometry. 1Z. Zhang; 1J. Song; 1A. Ray; 2E. Fung; 1L-M. Shih; 1D.W. Chan. 1) Johns Hopkins University School of Medicine, 2) Ciphergen Biosystems, Inc.


GLYCOPROTEINS

P-701. Targeted Glycoproteomics: Jacalin as a Selector of O-Glycosylation Sites on Proteins from the Human Blood Proteome. M.O. Durham; F.E. Regnier, Purdue University.

P-702. Use of Multidimensional Lectin Affinity Chromatography in Differential Glycoproteomics. R. Qiu; F. Regnier, Purdue University.

FUNCTIONAL PROTEOMICS

P-801. Screening of Immunostimulatory Oligosaccharides by Using a New HPLC-Chip/MS Technology. 1R. Grimm; 1H. Yin; 2M. Inoneuvo; 1K. Killeen; 2C. Lebrilla. 1) Agilent Technologies; 2) UC Davis.

P-802. CodeLink Protein Bioarrays. M. Bull; A. Agrawal; T. Giesler; A. Jinsi-Parimoo; S. Sundaram, GE Healthcare


P-804. US National Heart Lung and Blood Institute Proteomics Initiative. M.P. Schachte, Medical University of South Carolina

STIMULUS-RESPONSE

P-901. Supra-Additive Growth Inhibition By a Celecoxib Analog and Carboxyamidotriazole is Primarily Mediated Through Apoptosis. 1M.E. Winters; 2A. Mehta; 1E.C. Kohn; 3E.F. Petricoin; 1L.A. Liotta. 1) National Cancer Institute, Center for Cancer Research, Laboratory of Pathology; 2) Howard Hughes Medical Institute; 3) Food and Drug Administration, Center for Biologics Evaluation and Research, Office of Cellular and Gene Therapy


P-904. Characterization of Alteration in Protein Expression Profiles by Gastric Epithelial Cells in Response to *Helicobacter pylori* Infection. S. Das‡, J. C Sierra‡, K. V Soman§, G. Suarez‡, A.A. Mohammad‡, T. Anh. T Dang‡, B.A. Luxon‡, V.E. Reyes‡. 1) Department of Pediatrics, 2) Department of Microbiology and Immunology, 3) Bioinformatics Program, and Department of Human Biological Chemistry and Genetics; 4) Department of Pathology, University of Texas Medical Branch, Galveston; 5) Ciphergen Biosystems, Inc.


**BIOINFORMATICS**

P-1001. PRIDE: A Public Repository for Proteomics Identifications. 1) P. Jones; 2) L. Martens; 3) C. Taylor; 4) H. Hermjakob; 5) R. Apweiler. 1) EMBL Outstation - European Bioinformatics Institute (EBI), Hinxton; 2) Ghent University, Rommelaere Institute.


P-1003. Data Pre-Processing in LC-MS Based Proteomics. 1) X. Zhang; 2) J. M Asara; 3) J. Adamec; 4) M. Zhang. 1) Bindley Bioscience Center, Purdue University; 2) Beth Israel Deaconess Medical Center; 3) Department of Computer Science, Purdue University.


P-1010. A Novel Qualitative and Quantitative LC-MS Based Approach to Protein Profiling and Biomarker Discovery. J. Langridge; T. Riley; R. Christian; S. Geromanos; R. Martin. Waters Corporation, MS Technologies Centre.


P-1012. The Development of Genome Fingerprint Scanning as a Multi-exon Gene Finder. M.C. Giddings; M. Wisz. The University of North Carolina at Chapel Hill.

P-1013. PROCLAME: A Fuzzy-Logic-Based Tool for Predicting Protein Cleavages and Posttranslational Modifications Using Top-Down Mass Spectrometric Data. M.R. Holmes; S.R. Jefferys; M.C. Giddings. School of Medicine, UNC at Chapel Hill.

P-1015. **Effects of Delay in Tissue Processing/Fixation on Protein Expression Profiles of Normal and Malignant Colon Tissue.** J.A. Aquino¹, E. Castellano Sanchez², J.D. Wulfkuhle¹, C. Zornig³, K. David⁴, H. Juhl⁴, L.A. Liotta¹, E.F. Petricoin III⁵. 1) National Cancer Institute; 2) Centro de Investigacion del Cancer; 3) Israelitic Hospital, Dept. of Surgery; 4) Indivumed, Center for Cancer Research at the Israelitic Hospital; 5) Food and Drug Administration.

P-1016. **Paper withdrawn**

P-1017. **Protein Microarray Analysis of Lymphangiogenesis.** ³L.V. Leak; ²L.A Liotta; ³V.S. Calvert; ²J. Wulfkuhle; ³E.E. Petricoin, III. 1) Howard University; 2) National Cancer Institute, NIH; 3) FDA.

P-1018. **Application of a Comprehensive Biomarker Discovery Platform to Alzheimer’s Disease.** ¹S.A. Kuzdzal; ¹M. Lopez; ¹A. Mikulskis; ²G. Cioppa; ²W.M. Gershon. 1) PerkinElmer Life & Analytical Sciences; 2) Predictive Diagnostics.

P-1019. **Improving the Performance of Proteomics Studies via Sound Experimental Design.** G.P. Page; D.B. Allison; S. Barnes, University of Alabama.

P-1020. **Protein Information Resource (PIR): An Integrated Bioinformatics Resource for Functional Proteomics.** P. McGarvey; Z.-Z. Hu; C.H. Wu; Protein Information Resource, Department of Biochemistry & Molecular Biology, Georgetown University Medical Center.

P-1021. **Genome Annotation Using Mass Spectrometry-derived Data.** D.E. Kalume; R. Reddy; M. Okulate; N. Kumar; A. Pandey; Johns Hopkins University.