

PRELIMINARY DAILY PROGRAM (updated 4/4/05, subject to change)

ABRF 2005 Biomolecular Technologies: Discovery to Hypothesis will be held at the Savannah International Trade & Convention Center, beginning Saturday, February 5 – Tuesday, February 8, 2005. All sessions have been scheduled at the Savannah International Trade & Convention Center.

Sponsored by the Association of Biomolecular Resource Facilities (ABRF)

Saturday, February 5, 2005

8:00 AM – 5:00 PM	SATELLITE MEETING <i>Protein and Peptide Identification Using Mass Spectrometry Database Search Engines</i> (Limited to 80. Advance registration only.) Instructor: David Landsman, NCBI, NLM, NIH Computational Biology Branch, Bethesda, MD
2:00 PM – 6:00 PM	Registration Open, River Concourse
6:00 PM - 8:00 PM	Opening Reception, Georgia International Gallery, Chatham Ballroom A

Sunday, February 6, 2005

7:00 AM – 5:00 PM	Registration Open, River Concourse
7:00 AM – 7:45 AM	Continental Breakfast, <i>Exhibit Halls AB</i>
7:45 AM – 8:00 AM	INTRODUCTORY REMARKS Ruth Hogue Angeletti, George Orr, Andras Fiser (Program Chairs) Albert Einstein College of Medicine, Bronx, NY
8:00 AM – 8:45 AM	Plenary Lecture 1: Andrej Sali, University of California, San Francisco, CA, <i>Modeling the Structure of Proteins and Macromolecular Assemblies</i>
9:00 AM - 10:30 AM	CONCURRENT SCIENTIFIC SESSIONS <u>Scientific Session 1: Next Generation DNA Sequencing Technologies</u> Speakers: Susan Hardin (Session Chair), VisiGen Biotechnologies, Inc., Houston, TX, <i>Real-time DNA Sequencing</i> Daniel Branton, The Biological Laboratories, Cambridge, MA, <i>Prospects for Electronic Sequencing</i> Ido Braslavsky, Ohio University, Athens, OH, <i>Single molecule DNA sequencing by cyclic synthesis</i> Kent Lohman, 454 Life Sciences Corporation, Branford, CT, <i>454 Life Sciences High Throughput Sequencing Technology and its Application to Microbial Genomes</i> <u>Scientific Session 2: Protein Biomarkers</u> Speakers: Kojo Elenitoba-Johnson (Session Chair), University of Utah School of Medicine, Salt Lake City, UT, <i>Identification of deregulated pathways involved in lymphoma pathogenesis by ion-trap tandem mass spectrometry</i> Kevin Coombs, University of Texas, MD Anderson Cancer Center, Houston, TX, <i>Statistical Analysis of Proteomics Spectra from Serum Samples</i> David Muddiman, Mayo Clinic and College of Medicine, Rochester, MN, <i>Unraveling the Low Molecular Weight Serum and Plasma Proteome using LC-FT-ICR-MS: The Search for Biomarkers Predictive for Early Stage Ovarian and Pancreatic Cancer</i>
10:00 AM - 5:00 PM	EXHIBITS OPEN, Exhibit Halls AB

10:30 AM - 11:00 AM

REFRESHMENT BREAK, *Exhibit Halls AB*

11:00 AM - 12:00 PM

CONCURRENT TUTORIAL SESSIONS

Tutorial Session 1: Open Source Proteomics Software

Chair: Ruedi Aebersold, Institute for Systems Biology and Kristine Swiderek, SymoGenetics, Seattle, WA

Speakers: Ron Beavis, Beavis Informatics, Winnipeg, Manitoba, Canada, *The Global Proteome Machine: the Dynamics of an Open Source Bioinformatics Project*

Nat Goodman, Institute for Systems Biology, Seattle, WA, *Pragmatics of Open Source Software and Licensing*

Tutorial Session 2: 2D Gel Separation and Analysis

Chair: Kathryn Lilley, University of Cambridge, Cambridge, United Kingdom

Speakers: Burghardt Scheibe, GE Healthcare, Bio-Sciences, Amersham Biosciences Europe GmbH

Lewis Brown, University of Colorado Health Sciences Center, Aurora, CO, *Papillary Carcinoma of the Thyroid: A Case Study in 2D Gel Proteomics*

Tutorial Session 3: Benchmarking to Improve Lab Operations

Chair: Ronald L. Niece, Research Resources & Technologies, Tustin, CA

Speakers: Lyn Faas, Seattle Public Utilities, Seattle, WA, *Benchmarking to Improve Laboratory Operations -- Taking it to the Next Level*

Tutorial Session 4: Comparative Protein Structure Modeling

Chair: Rolf Apweiler, EMBL – EBI, Hinxton, Cambridgeshire, United Kingdom,

Speakers: Roland Dunbrack, Fox Chase Cancer Center, Philadelphia, PA, *Protein Structure Prediction in Proteomics*

Andras Fiser, Albert Einstein College of Medicine, Bronx, NY

12:00 PM - 1:00 PM

LUNCH BREAK (on own)

12:00 PM – 1:00 PM

Exhibitor Presentations

1:00 PM - 2:00 PM

POSTER SESSION I, *Exhibit Halls AB*

2:00 PM - 3:30 PM

CONCURRENT SCIENTIFIC SESSIONS

Scientific Session 3: Single Molecule Analysis

Chair: Philip Andrews, University of Michigan, Ann Arbor, MI

Speakers: Ellen Goldman, Center for Bio/Molecular Science and Engineering, Naval Research Lab, Washington, DC, *Luminescent quantum dot reagents for FRET-based biosensors*

Alice Ting, Massachusetts Institute of Technology, Cambridge, MA, *Small-molecule and genetically-encoded reporters of cellular biochemistry*

Scientific Session 4: Pathways, Motifs, Complexes

Chair: Andras Fiser, Albert Einstein College of Medicine, Bronx, NY

Speakers: Rob Russell, EMBL, Heidelberg, Germany

Chris Hogue, Mount Sinai Hospital, The Samuel Lunenfeld Research Institute, Toronto, Ontario, Canada

3:30 PM - 4:00 PM

REFRESHMENT BREAK, *Exhibit Halls AB*

4:00 PM - 5:00 PM

CONCURRENT RESEARCH GROUP PRESENTATIONS

Research Group 1: Nucleic Acids Research Group (NARG)

Research Group 2: Proteomics Research Group (PRG)

Research Group 3: Fragment Analysis Research Group (FARG)

5:10 PM - 6:10 PM

CONCURRENT ROUNDTABLE DISCUSSIONS & TUTORIALS

Roundtable Discussion 1: *Microarray Platform Comparability: Importance of Informatics and Design*

Chair: Andrew Brooks, University of Rochester Medical Center, Rochester, NY
Speakers: Academic Panel – Margaret Cam, NIDDK, NIH, Bethesda, MD
Mark Parrish, Rosetta Inpharmatics, LLC, Seattle, WA
Anna Rogojina, St. Jude's Medical Center, Memphis, TN
Shawn Levy, Vanderbilt University, Nashville, TN
Industrial Panel - Steve Lincoln, Affymetrix, Santa Clara, CA
Peter Webb, Integrate Biological Solutions, Agilent Technologies, Palo Alto, CA
Clark Mason, Applied Biosystems, Foster City, GA
Steven Smith, Nimblegen Systems, Inc., Madison, WI
Timothy Sendera, GE Healthcare, Chandler, AZ

Roundtable Discussion 2: *Evaluation/Survival of Small Core Laboratories*

Speakers: Mark Lively (Session Chair), Wake Forest University School of Medicine, Winston-Salem, NC
Ted Thannhauser, Functional and Comparative Proteomics Center, Cornell University, Ithaca, NY
Ron Niece, Research Resources & Technologies, Tustin, CA
Scottie Adams, Trudeau Institute Molecular Biology Core Facility, Saranac Lake, NY

Roundtable Discussion 3: *A New Method and Solutions for an Old Problem in Quantitative PCR*

Speakers: Deborah Grove (Session Chair), Pennsylvania State University, University Park, PA
Lawrence Wangh, Brandeis University, Waltham, MA, *LATE-PCR and allied technologies: Novel Real-time Methods and Reagents for Rapid, Reliable Genetic Analysis Down to the Level of Single Cells*
Tania Nolan, Stratagene Europe, Amsterdam, The Netherlands, *Making Biological Sense of QPCR Data from Small Samples – Process Considerations of Sample Preparation to Normalized Gene Expression Profiling*

Tutorial Session 5: *Validation of MS/MS Data*

Co-Chairs: Sue Weintraub, University of Texas Health Science Center, San Antonio, TX & Arnie Falick, HHMI Mass Spectrometry Laboratory, Berkeley, CA
Speakers: David Tabb, Oak Ridge National Laboratory, Oak Ridge, TN, *Seeing the Forest through the Trees: Proteomic Data Mining Tools*
Jeffrey Kowalak, NIMH LNT, Bethesda, MD, *An Integrated Workflow for Proteomics Data: or How to tell if Saccharomyces has a cold*

6:10 PM – 7:10 PM

ABRF NEWS, UPDATES & OPEN FORUM

Refreshments will be served. All conferees are encouraged to attend!

6:10 PM – 8:00 PM

Exhibitor Presentations

Monday, February 7, 2005

7:00 AM – 5:00 PM

Registration Open, River Concourse

7:00 AM – 7:45 AM

Continental Breakfast, *Exhibit Halls AB*

8:00 AM – 8:45 AM	Plenary Lecture 2: Pamela Stanley, Albert Einstein College of Medicine, Bronx, NY, <i>Glycosylation Mutants of CHO Cells and Mice Identify Glycan Functions</i> ,
9:00 AM - 10:30 AM	<p>CONCURRENT SCIENTIFIC SESSIONS</p> <p><u>Scientific Session 5:</u> <i>Biological Validation of Genomics/Proteomics Generated Hypotheses</i> Chair: Lynda Bonewald, University of Missouri at Kansas City, Kansas City, MO Speakers: Yibin Kang, Princeton University, Princeton, NJ, <i>Functional Genomics Analysis of Breast Cancer Bone Metastasis</i> Vyomesh Patel, National Institute of Health, Bethesda, MD, <i>Understanding Head and Neck Cancer Pathogenesis Using Evolving Genomics and Proteomics Technologies</i></p> <p><u>Scientific Session 6:</u> <i>Developments in Phosphorylation and O-Glycosylation Analysis</i> Chair: Gary Hathaway, CalTech Beckman Institute, Pasadena, CA Speakers: Eric Peters, Genomic Institute of the Novartis Research Foundation, San Diego, CA, <i>Enrichment Strategies for MS-based Phosphorylation and Glycosylation Analysis</i> Steve Whelan, Johns Hopkins University, Baltimore, MD, <i>Beta-elimination and Michael Addition using DTT to Site Map Phosphorylated and O-GlcNAc Modified proteins</i> Ole Norregaard Jensen, University of Southern Denmark, Odense, Denmark, <i>Multisite Protein Modifications and their Determination by Mass Spectrometry</i></p>
10:00 AM - 5:00 PM	EXHIBITS OPEN, Exhibit Halls AB
10:30 AM - 11:00 AM	REFRESHMENT BREAK, Exhibit Halls AB
11:00 AM – 12 Noon	<p>ABRF AWARD PRESENTATION AND LECTURE Sponsored by Agilent Technologies Awardee: Dr. Stephen Fodor, Affymetrix, Inc., Santa Clara, CA</p>
12:00 PM - 1:00 PM	LUNCH BREAK (on own)
12:00 PM – 1:00 PM	Exhibitor Presentations
1:00 PM - 2:00 PM	POSTER SESSION II, Exhibit Halls AB
2:00 PM - 3:30 PM	<p>CONCURRENT SCIENTIFIC SESSIONS</p> <p><u>Scientific Session 7:</u> <i>Genomics of a Few Model Organisms</i> Chair: David Landsman, NCBI, NLM, NIH Computational Biology Branch, Bethesda, MD Speakers: Karen Nelson, The Institute for Genomic Research, Rockville, MD, <i>Microbial Genomics: From Single Species to Whole Environments</i> Brenda Little, Naval Research Laboratory, Stennis Space Center, MS</p> <p><u>Scientific Session 8:</u> <i>Quantitative Proteomics</i> Chair: George Orr, Albert Einstein College of Medicine, Bronx, NY Speakers: Fred Regnier, Purdue University, West Lafayette, IN Akhilesh Pandey, Institute of Genetic Medicine, Johns Hopkins School of Medicine, Baltimore, MD</p>
3:30 PM - 4:00 PM	REFRESHMENT BREAK, Exhibit Halls AB
4:00 PM - 5:00 PM	CONCURRENT RESEARCH GROUP PRESENTATIONS

Research Group 4: Edman Sequencing Research Group (ESRG) (Survey Study and General Discussion) *Edman chemistry sequence of a synthetic peptide containing 7 modified amino acids. Survey on the current state of Edman Sequencing*

Research Group 5: Microarray Research Group (MARG)

Research Group 6: CANCELLED

5:10 PM – 6:30 PM

CONCURRENT ROUNDTABLE DISCUSSIONS & TUTORIALS

Roundtable Discussion 4: *Biomarker Discovery: Have We Learned How to Do This Yet?*

Chair: Steve Carr, Broad Institute of Harvard and MIT, Cambridge, MA
Speakers: Sushmita Mimi Roy, SurroMed Inc., Menlo Park, CA
Gregory J. Opitck, Caprion Pharmaceuticals, Inc., Montreal, QC, Canada
Leigh Anderson, Plasma Proteome Institute, Washington, DC
Michael Gillette, Broad Institute of Harvard and MIT, Cambridge, MA
Kevin Coombs, University of Texas, MD Anderson Cancer Center, Houston, TX
Kojo Elenitoba-Johnson, University of Utah School of Medicine, Salt Lake, UT

5:10 PM – 6:10 PM

Roundtable Discussion 5: *Multidisciplinary Shared Resources: Advantages/Challenges*

Chair: Clayton Naeve, St. Jude's Children's Hospital, Memphis, TN
Speakers: Kathryn Stone, Yale University, W. M. Keck Foundation Biotechnology Resource Laboratory, New Haven, CT
John Wunderlich, University of Georgia, Integrated Biotech Laboratories, Athens, GA

Roundtable Discussion 6: *Strategies for SNP Genotyping in Core Labs*

Chair: Peter Schweitzer, Cornell University, Ithaca, NY,
Speakers: Karl Hager, Yale University, W.M. Keck Biotechnology Resource, New Haven, CT
Alison Brown, Harvard University, Harvard Partners Center for Genetics and Genomics, Cambridge, MA

Tutorial Session 6: *Sequence Alignments*

Chair: Roland Dunbrack, Fox Chase Cancer Center, Philadelphia, PA
Speakers: Kimmen Sjolander, University of California, Berkeley, CA, *High-Throughput Phylogenomic Inference of Protein Molecular Function*

6:10 PM – 8:00 PM

Exhibitor Presentations

Tuesday, February 8, 2005

7:00 AM – 3:00 PM

Registration Open, Room: River Concourse

7:00 AM – 7:45 AM

Continental Breakfast, *Exhibit Halls AB*

8:00 AM - 8:45 AM

Plenary Lecture 3: *NeuroImaging*, Nat Heintz, Rockefeller University, New York, New York

9:00 AM - 10:30 AM

CONCURRENT SCIENTIFIC SESSIONS

Scientific Session 9: *siRNA Technology and Applications*

Chair: Stephen Scaringe, Fisher Scientific, Louisville, CO

Speakers: Aimee Jackson, Rosetta Inpharmatics, LLC, Seattle, WA, *Expression Profiling Analysis of siRNA Function*

Christopher Dillon, Massachusetts Institute of Technology, Cambridge, MA

Scientific Session 10: Microfluidics for DNA and Proteins: Faster, Smaller, Cheaper?

Chair: Alan Smith, Somerset Consulting, Grass Valley, CA

Speakers: James Landers, University of Virginia, Charlottesville, VA
Steven Soper, Louisiana State University, Baton Rouge, LA
Roger O'Neill, Cell Biosciences, Palo Alto, CA

10:00 AM - 3:00 PM

EXHIBITS OPEN, *Exhibit Halls AB*

10:30 AM - 11:00 AM

REFRESHMENT BREAK, *Exhibit Halls AB*

11:00 AM - 12:00 PM

CONCURRENT TUTORIAL SESSIONS

Tutorial Session 7: Laser Capture Microdissection

Chair: Paula Cohen, Cornell University, Ithaca, NY

Speakers: Emmanuel Petricoin, FDA-NCI Clinical Proteomics Program, Bethesda, MD, *Application of Protein Microarrays for Signal Pathway Analysis*
Dr. Dennis Sgroi, Massachusetts General Hospital, Charlestown, MA, *Breast Cancer Gene Expression Profiling: Past, Present and Future*

Tutorial Session 8: CANCELLED

Tutorial Session 9: Insights into Content and Management of Core Bioinformatics Resources for Proteomics and Genomics

Chair: Kimmen Sjolander, University of California, Berkeley, CA,

Speakers: Rolf Apweiler, *UniProt and Beyond: Database Infrastructure for Genomics and Proteomics Research*

Tutorial Session 10: Utilizing qPCR to Validate Microarray Results

Chair: Gregory Shipley, University of Texas Health Science Center, Houston, TX, *Utilizing qPCR to Validate Microarray Results*

Speakers: Andrew Brooks, University of Rochester Medical Center, Rochester, NY

Tim Hunter, Vermont Cancer Center University of Vermont, Burlington, VT

12:00 PM - 1:00 PM

LUNCH BREAK (on own)

12:00 PM – 1:00 PM

Exhibitor Presentations

1:00 PM - 2:00 PM

POSTER SESSION III, *Exhibit Halls AB*

Oral Posters – Presentations by GE Healthcare Poster Award Winners
GE Healthcare will present awards for the four best posters presented at the ABRF2005. The ABRF Education Committee has reviewed the poster abstracts submitted for the meeting and has selected a small group that will be reviewed in person on the first day of the meeting. From that group of posters, four poster authors will be invited to give a brief oral presentation of their work during this session.

2:00 PM - 3:30 PM

CONCURRENT SCIENTIFIC SESSIONS

Scientific Session 11: Genetic Analysis: Study Design, Methodology, and Statistical Considerations

Speakers: Katia Sol-Church (Session Chair), The Alfred I duPont Hospital for Children, Wilmington, DE, *Genetic Analysis, an Overview*

Trevor Woodage, Applied Biosystems, Rockville, MD, *Study Design and SNP Selection Strategies for Genetic Association Studies*

Cynthia Spittle, Chase Cancer Center, Philadelphia, PA, *No More Gels: Alternative Genotyping Platforms*

Marcella Devoto, The Alfred I duPont Hospital for Children, Wilmington, DE, *Statistical Tools for Disease Gene Mapping and Association Studies*

Scientific Session 12: Regulatory Interaction Roles of Macromolecular Complexation and Post-translational Modification

Speakers: Michael Doyle (Session Chair), Bristol-Myers Squibb, Princeton, NJ, *Quantitative Analysis of Ternary Biomolecular Interactions by Calorimetry*
Jon Houtman, CCR/NCI/NIH, Bethesda, MD, *Biophysical and Biochemical Examination of Multiprotein Complex Formation at the linker for Activation of T-cell Protein*

James Staros, SUNY-Stony Brook, Stony Brook, NY, *Modulation of Ligand-Binding by Selective Glycosylation of the EGF Receptor at Asn 579*

3:30 PM - 4:00 PM

REFRESHMENT BREAK, Georgia International Gallery

4:00 PM - 5:00 PM

CONCURRENT RESEARCH GROUP PRESENTATIONS

Research Group 7: DNA Sequencing Research Group (DSRG)

Research Group 8: Peptide Standards Project Committee (PSPC)

5:10 PM - 6:10 PM

CONCURRENT ROUND TABLE DISCUSSIONS

Roundtable Discussion 7: *Protein Complexes (2-3 Hybrid, MS, arrays)*

Chair: Tom Vanaman, The Journal of Biological Chemistry, University of Kentucky Medical Center, Lexington, KY

Speakers: Ken Neet, Rosalind Franklin University of Medicine and Science, North Chicago, IL

Heng Zhu, Johns Hopkins University School of Medicine, Baltimore, MD, *Global Analysis of Protein Activities Using Protein Chips*

Kara Herlihy, BiaCore Inc., Piscataway, NJ

Roundtable Discussion 8: *Funding Opportunities for Genomics and Proteomics*

Chair: TBD

Speakers: Marjorie Tingle, National Cancer Institute, Bethesda, MD, *Funding for Instrumentation*

Ed Monachino, National Cancer Institute, Bethesda, MD

Roundtable Discussion 9: *MS Artifacts from Protein Sample Handling – Identified by Mass Spectrometry*

Chair: Katalin Medzihradzky, University of California at San Francisco, CA

Speakers: Philip Andrews, University of Michigan, Ann Arbor, MI

Mark McComb, Boston University School of Medicine, Boston, MA

6:30 PM – 10:00 PM

Closing Social (ticketed event)

River Street Riverboat dinner cruise. Boarding begins at 6:30 pm and the boat departs at 7:30 pm, returning at 9:30. Join your friends for buffet dinner, drinks, and evening of dancing while cruising the Savannah Harbor.