

Applications of Bioinformatics in Cancer Detection Workshop

Agenda

Tuesday August 6, 2002

Registration and Breakfast

7:45 to 8:25 AM

Welcome and Opening Remarks

8:25 to 8:35 AM Welcome. **Peter Greenwald**, Director, Division of Cancer Prevention, NCI, NIH, Bethesda, MD.

8:35 to 8:45 AM Opening Remarks. **Izet M. Kapetanovic**, Chemoprevention Agent Development Research Group, Division of Cancer Prevention, NCI, NIH, Bethesda, MD.

Session I: Genomics in Early Cancer Detection and Classification

8:45 to 9:10 AM The courage of your computations, **Michael Bittner (session chair)**, National Human Genomic Research Institute, Rockville, MD.

9:10 to 9:35 AM Gene Expression Profiling in Diffuse Large B-Cell Lymphoma: Risk Assessment and Target Identification, **Margaret A. Shipp**, Dana-Farber Cancer Institute, Boston, MA.

9:35 to 10:00 AM The Three B's of Prostate Cancer: Biomarkers, Bioinformatics, and Biology, **Arul Chinnaiyan**, University of Michigan, Ann Arbor, MI.

10:00 to 10:20 AM Morning Break

10:20 to 10:45 AM Statistical Methods and Software for the Analysis of DNA Microarray Experiments, **Sandrine Dudoit**, University of California, Berkeley, CA.

10:45 to 11:10 AM Meeting the Challenges of Microarray Data the TIGR Way, **John Quackenbush**, The Institute for Genomic Research, Rockville, MD.

11:10 to 11:35 AM Bayesian model-based methods for the analysis of DNA microarray data, **Joseph Ibrahim**, Harvard, Boston, MA.

11:35 to 11:55 AM Questions, Discussion, Summary

11:55 to 1:00 PM Boxed Lunch

1:00 to 1:25 PM Using dChip and GoSurfer software to analyze oligonucleotide array data, **Cheng Li**, Harvard, Boston, MA.

1:25 to 1:55 PM Combined Dataset Microarray Classification: Large Bayes Inference with Combined Features, **Pablo Tamayo**, Whitehead Institute, MIT, Cambridge, MA.

1:55 to 2:20 PM Characterization and Diagnosis of Cancer Using DNA Microarrays and Artificial Neural Networks, **Javed Khan**, NCI, Gaithersburg, MD.

2:20 to 2:40 AM Questions, Discussion, Summary

2:40 to 3:00 PM Afternoon Break

3:00 to 5:00 PM Discussion Sessions
6:15 to 7:30 PM Dinner/Invitation Only)

Wednesday August 7, 2002

Continental Breakfast

7:30 to 8:00 AM

Session II: Proteomic Profiling, Bioimaging and Pattern Recognition

8:00 to 8:25 AM FDA-NCI Clinical Proteomics Program: Applications at the Bedside, **Emanuel Petricoin III**, Food and Drug Administration, Rockville, MD.

8:25 to 8:50 AM SCOPE: A probabilistic model for scoring tandem mass spectra against a peptide database, **Vineet Bafna**, Celera Genomics, Rockville, MD.

8:50 to 9:15 AM Automated Interpretation of Protein Subcellular Location Patterns: Implications for Early Cancer Detection and Assessment, **Robert Murphy (session chair)**, Carnegie Mellon University, Pittsburgh, PA.

9:15 to 9:40 AM Improved detection of small lung cancers with computer aided detection, **Matthew Freedman**, Georgetown University, Washington, DC.

9:40 to 10:00 AM Questions, Discussion, Summary

10:00 to 10:20 AM Morning Break

Session III: Multifactorial Analysis in Early Cancer Detection and Risk Assessment

10:20 to 10:45 AM Emerging Computational Systems for Cancer Detection and Bioinformatics **Judith Dayhoff (session chair)**, Complexity Research Solutions, Inc., Silver Spring, MD.

10:45 to 11:10 AM Fuzzy CoCo, a methodology for modeling human-decision processes applied to breast-cancer risk assessment, **Dr. Carlos Andres Pena-Reyes**, Swiss Federal Institute of Technology **Lausanne, Switzerland**.

11:10 to 11:35 AM Identification of Multiple Coregulation in Expression Data by Bayesian Decomposition, **Michael Ochs**, Fox Chase Cancer Institute, Philadelphia, PA.

11:35 to 11:55 AM Questions, Discussion, Summary

11:55 AM to 1:00 PM Boxed Lunch

Session IV: Drug Discovery

1:00 to 1:25 AM InfoEvolve(tm) - Moving from Data to Drugs Using Information Theory and Genetic Algorithms, **Ganesh Vaidyanathan (session chair)**, Dupont Pharmaceuticals, Inc., Wilmington, DE.

1:25 to 1:50 AM, Data Mining for Drug Discovery, **John McCarthy**, Anvil Informatics, Inc., Lowell, MA.

1:50 to 2:15 AM Computational Tools and the Development of Gene Expression Diagnostics, **Steve Laderman**, Agilent Laboratories, Palo Alto, CA.

2:15 to 2:35 AM Questions, Discussion, Summary

2:35 to 2:50 PM Afternoon Break

2:50 to 4:30 PM Discussion Sessions

4:30 to 5:00 PM Wrap Up