

Tampa FL, March 31, 2007
Re: ABRF Bioinformatics Committee
For immediate release:

In 2006, the ABRF Proteomics Standards Research Group (sPRG) produced a Proteomics Standard of 49 proteins and conducted a collaborative study to assess the proteomics community's ability to accurately identify its constituents. The sPRG recognized that multiple independent evaluations of this proteomics standard would have unique value to bioinformaticians in the field. With raw datasets volunteered for public use by participants, the sPRG organized a committee of leading bioinformaticians to examine these data in order to define the exact content of the Proteomics Standard.

The Bioinformatics Committee (BIC) is a new team within the Proteomics Standards Research Group (sPRG). During the last year, the BIC has applied a collection of algorithms to the analysis of raw data collected during the 2006 sPRG Study. These data resulted from application of multiple separation strategies and analysis utilizing several models of mass spectrometers. The BIC members applied different strategies for filtering raw identifications to confident lists, assembling the peptides into protein lists, and applying parsimony rules to the resulting proteins. BIC members employed several database search tools, including Sequest, Mascot, Paragon, and MyriMatch. Filtering and assembly tools included MassSieve, Peptide Prophet, Protein Prophet, Proteomics Browser, Scaffold, Pro Group, and IDPicker. When the final protein lists were tallied, several conclusions were formed:

- In the hands of experts, the results of diverse instrumentation, analysis strategies and protein inference tools converged on surprisingly consistent results.
- All 49 proteins of the defined mixture were observable from at least one laboratory.
- The set of additional proteins, deemed 'bonus proteins' in the original sPRG2006 study, was defined.
- The data sets are being made publicly available for download to provide the proteomics community with these data for further informatic studies, or for individual labs' benchmarking and data processing tests.

The BIC will present details of this work as a part of the sPRG presentation on Tuesday, April 3 at ABRF2007 in Tampa FL.