**Human Proteome Project**
Working Group
News – March 10th, 2010

**The working group is composed of :** R. Aebersold, A. Bairoch, K. Bala, L. Beretta, C. Borchers, E. Deutsch, B. Hancock, P. Kolar, P. Legrain, G. Omenn, YK Paik, S. Sechi, M. Snyder, S. Srivastava, C. Wu and T. Yamamoto. Representatives of clinical proteomics, connection with the genomics field, pharma and diagnostic industry are also currently being added.The three HUPO Past presidents, S. Hanash, J. Bergeron and R. Apweiler form a Senior Advisory Committee for the HPP WG.

**The Human Proteome Project working group held its kick-off meeting in Seattle on January 25**, 2010. A short history of the HPP vision was presented with references to key past events, including a meeting held in Barbados in 2008 that led to the Barbados white paper and the HUPO View paper on "A Gene-Centered Human Proteome Project published in MCP in February 2010. Key issues were addressed during a fruitful 8-hour meeting: updates on technologies and methodologies that should be used to ensure the best quality of data ; databases and data access; key biological questions or biomedical challenges HPP could best address. Specific topics were defined to be tackled by experts in the coming months (see below). Similarly, regional and national meetings will be encouraged to stimulate the contribution of the scientific community to the definition of the strategic plan of the HPP. National initiatives have already started in Korea, Russia, and Iran. Canada has embraced the project through the support of the Canadian National Proteomics Network. The European Science Foundation is currently exploring how to best fit it in the European Research Strategic Agenda. HPP will be discussed at the US HUPO annual meeting in March.

**Several practical recommendations were made for further action:**
- Gene-centric HPP: the wording should be explained as the backbone for a protein parts list.
- The ProteinAtlas initiative is a key part of HPP. It should be compared /combined with other on-going projects of Ab production/characterization. Also, the antibody-capture and mass spectrometry approaches need points of convergence.
- ProteomeXchange Consortium (PRIDE/PeptideAtlas/Tranche) is a well structured effort for proteomics data repositories and constitutes a solid ground for HPP. This will be further discussed including at the US HUPO on March 9.
- A sub-group of HPP WG (with additional expertise if needed) will define the minimal information that is required for a HPP human protein annotation.
- A sub-group of HPP WG (with additional expertise if needed) will prepare a proposal on the HPP data handling with users' point of view.
- Funding HPP. We discussed (and still need to) the type of specific funding that HPP might require, e.g., calls for specific infrastructures (proteomics and/or data bases and data processing). We also discussed the connection between HPP and other major themes funded by agencies (such as cancer, metabolic diseases, genomics, …). We will need to make recommendations for specific actions such as specific calls targeted on HPP or calls including HPP approaches (with the so called "certified" quality of data and data access…). Several current opportunities were mentioned and discussed, for example in the frame of the Common Fund NIH program.
- A sub-group of HPP WG will explore how to best integrate national chromosome-based approaches and international subproteome initiatives (organ-, biological fluid- or PTM-based) within the whole HPP.
- NCI has initiated interesting actions which might be relevant for HPP (including ongoing CPTAC studies). HPP WG will contact NCI for further information and input.

**HPP related papers**

HUPO published a HUPO Views article on HPP (2010, MCP) and invited proteomics and bioinformatics scientists to contribute comments and ideas via the www.hupo.org website.

Several publications may be helpful for discussion on HPP. Some are related to the Human Genome Project and its lessons (Roberts, Science, 2001 ; Collins et al., Science 2003). Others are presentation of individual scientists' visions, goals, and objectives for a Human Proteome Project (Baker, 2009, Curr. Op. in Mol. Therap.; Hochstrasser, 2008, Journal of Proteome Research) or HUPO-related reference papers such as the Barbados 2008 white paper. Those publications are posted on this site (www.hupo.org/research/hpp/) or pointers are provided toward the journals' sites.

We encourage scientists to share with us any relevant literature that will contribute to building up the Human Proteome Project

Pierre Legrain

HPP WG project manager