

## **HUPO BPP**

### **Title**

HUPO Brain Proteome Project - Activity Report, January 1, 2009 to August 18, 2009.

### **Chairs**

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### **General Secretary**

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### **Vision**

Towards an understanding of the pathological processes of the Brain Proteome in Neurodegenerative Diseases and Aging

### **Mission**

The HUPO Brain Proteome Project is an open, international scientific initiative under the Umbrella of HUPO. The consortium welcomes all adequate groups and laboratories that are willing to contribute to the goals of HUPO BPP. These goals are:

- Defining and deciphering of normal brain proteome including polymorphisms, modifications, histological localization as well as identification of brain derived proteins in bodily fluids.

- Identification of disease-related proteins involved in neurodegenerative diseases and aging by differential protein expression profiling and by techniques and methods available within the participating groups.
- Validation and functional characterization of these proteins by techniques and methods available within the participating groups leading to biomarkers for diagnosis and therapeutic targets.
- The focus will be on Alzheimer`s Disease (AD), Parkinson`s Disease (PD) and aging including corresponding mouse models. However, the elucidation of other neurodegenerative diseases and other brain disorders is not less important and can be part of the HUPO BPP scientific program.
- Besides scientific research the information of the public and the propagation of techniques and methods used in proteomic research via an extensive training and standardisation/harmonisation program is another important part of the HUPO BPP work.
- Establishing of a neuroproteomic data base and suitable bioinformatics tools accessible to all participating laboratories and the scientific community.

### Workshops, meetings & achievements in the reporting period

Table 1. Workshops and Meetings 2009 (for meeting 2004 – 2008 see [www.hbpp.org](http://www.hbpp.org))

Timeline	Meeting
March 3 <sup>rd</sup> , 2009	11 <sup>th</sup> HUPO BPP WORKSHOP, Orthodox Academy of Crete, Kolymbari, Crete, Greece
March 4 <sup>th</sup> , 2009	5 <sup>th</sup> ProDaC workshop in Kolymbari, Crete, Greece
April 27, 2007	1st regular ProDaC meeting in Lyon, France
September 26 <sup>th</sup> , 2009	12 <sup>th</sup> HUPO BPP Workshop Meeting during the 8 <sup>th</sup> HUPO World Congress in Toronto, Canada

The 12<sup>th</sup> HUPO BPP Workshop is scheduled as follows:

***HUPO BRAIN PROTEOME PROJECT***  
**12<sup>th</sup> HUPO BPP Workshop**

September 26<sup>th</sup>, 2009

**Location**

Westin Harbour Castle, Toronto, Canada  
Chaired by Helmut E. Meyer, Lea Grinberg & Young Mok Park

**Biomarker for neurodegenerative diseases**

**Schedule**

09:30 am – 09:35 am	Welcome address <b>Young Mok Park</b>
09:35 am – 10:00 am	Biomarker analysis using protein biochips. <b>Helmut E. Meyer</b>
10:00 am – 10:25 am	Biomarker research in Alzheimer's disease <b>Jens Wiltfang</b>
10:25 am – 10:50 am	t.b.a.
10:50 am – 11:15 am	Pathological and clinical aspects in Parkinson's disease <b>Lea T. Grinberg</b>
11:15 am – 11:40 am	t.b.a ( <b>Clinical Expert</b> )
11:40 am – 12:00 am	Discussion & Final remarks All

### **Major accomplishments in the reporting period**

- identification and motivation of interested, suitable groups with engagement in committee work and access to human brain & liquor banks.
- realisation of two pilot studies (aging of mouse brain, autopsy vs. biopsy human material)
- realisation of a PROTEOMICS special edition and establishing of public relations (journals & media, homepage & forum, eMail lists) .
- elaboration and implementation of a Data Collection Centre & Bioinformatics Structure.
- elaboration of semi-automated MS and MS/MS-data analysis criteria.
- coordination of numerous meetings and training courses, leading to continuous exchange.
- continuation of the bioinformatics standardisation efforts (EU project "Proteomics Data Collection") in close cooperation with the HUPO PSI and the European Bioinformatics Institute

### **Collaborations with other HUPO initiatives**

Very strong relationship to the HUPO PSI via bioinformatics and standardization efforts (e.g. the EU project Proteomics Data Collection), to the HUPO LPP also via governmental Chinese-German Cooperation as well as to the HUPO PPP.



Optimisation of Re-Processing Pipeline  
Cross link to HUPO PSI  
Specimen Collection & Handling: Models and Specimen Collection  
BrainNetEurope II  
EMMA  
Technology & Standardization: SOPs  
GLPs, see workshop  
Biomarker Discovery: SOPs,  
Brain-Proteome-guided Biomarker Discovery in  
Human Body Fluids (blood, CSF, Urine, saliva, and  
blood cells)  
Protein Arrays  
Clinical Neuroproteomics  
Publication