



Fostering international proteomic initiatives to better understand human disease

[www.HUPO.org](http://www.HUPO.org)

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**Boston Congress**  
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## President's Message

### From a Transition Phase to a New Development for HUPO



**Pierre Legrain**

It is my pleasure to welcome you as the new HUPO president and to wish you a very Happy New Year. I hope that 2013 will allow you to succeed in your professional lives as well as keep you in good health and happiness with your relatives and families.

First I would like to thank deeply Cathy Costello for the work she has accomplished as HUPO president for the last two years. She guided the Executive Committee through the smooth transfer of HUPO administrative support from Montreal (Canada) to Santa Fe (New Mexico, USA) combining the aim of a more extensive service to HUPO and a rationalization of our expenses. Scientific Administrative Manager (SAM), a company led by Judith Sjoberg, is now in charge of this support, and Jennifer Watson being the contact person for HUPO. Thank you, Cathy, for this difficult and successful achievement!

Second, I would like to thank Executive Committee members who are leaving their positions after impressive service to HUPO for many years: Young Ki Paik, as past HUPO president, Richard Simpson first as Treasurer, then Secretary General, and Denis Hochstrasser as EC Member at Large and co-organizer of the Geneva 2011 HUPO congress. I hope to keep them as active HUPO members for many years!

I welcome Maxey Chung as new HUPO Secretary General, and Mark Baker, a new Member at Large of the HUPO EC. As the new HUPO president, I am eager to work with Executive Committee, with HUPO Council and with all HUPO members for the future development of HUPO.

2013 will be a challenging year for HUPO. I would like to share with you, in a few words, my vision for the long term development of HUPO and the key steps that we need to reach during the coming year.

- **HUPO as an international scientific organization.** Most operating rules are now in place (administrative operations; guidelines for annual Congresses ; improved election process for HUPO Council taking into account the reinforced relations between HUPO, national proteomics societies and HUPO industrial partners). Membership issues and relationships with HUPO regional and national proteomics societies are still open questions. We need to define better what the benefits for a HUPO member should be and how to create a fruitful relation between national proteomics communities and HUPO. This also raises the issue of the HUPO website, which is under reconstruction. It should stimulate better communication related to HUPO activities and the Human Proteome Project, it should promote scientific knowledge and applications delivered by our community.
- **HUPO as the worldwide proteomics Society.** It is important for HUPO to increase its support to scientific activities and research in the field of proteomics. This should be done in all proteomics areas, regardless of biological systems or applications. Proteins are the main support for biological functions (still with other cellular players such as small RNAs) but HUPO should support any action positioning protein biochemical characterization in the context of a biological function, a biological system and/or pathology. Ultimately, HUPO should contribute to a better integration of the proteomics community into the life sciences area in general. The HUPO 2013 annual congress in Yokohama will promote and exemplify these directions and HUPO fully supports the Yokohama congress organizers to make it a great scientific event.
- **The Human Proteome Project.** The gene-centered organization proposed in order to facilitate the gathering of in depth annotations on human proteins (C-HPP) combined with a network of hypothesis-driven projects on various biological questions and medical issues (B/D HPP) now ensures that the HPP will not be an only-technology driven project, but, on the contrary, will foster innovation and creativity to increase knowledge on human biology. HUPO has been instrumental in the launch of the HPP, it must stay and continue to be a key player in the coming years to assure a complete success of the HPP. HUPO will be judged for its capacity to stimulate this process, to organise the discussions on the HPP worldwide and, ultimately, to make the HPP consortium successful in its mission of coordination of national or local initiatives, and dissemination of the resulting knowledge toward the entire scientific community and beyond.

In summary, HUPO should gain some stability in 2013. In addition HUPO will start a new phase for long term development on key scientific missions regarding the proteomics scientific community in all its diversity and supporting a human proteome project, aiming ultimately at delivering innovative solutions for societal and medical needs.

2013 will be an exciting year!  
Pierre Legrain  
HUPO President

## HUPO General Assembly of the Members

September 11, 2012 Boston Massachusetts



- ▶ The meeting was called to order by President Catherine Costello.
- ▶ 261 members were present and a quorum was declared.

- ▶ Chairs of the 2012 Boston Congress were thanked.
  - Michael Snyder, Stanford University
  - Catherine Fenselau, University of Maryland
  - William Hancock, Northeastern University
  - Gilbert Omenn, University of Michigan
- ▶ Treasurer Roman Zubarev reported assets of just under \$500,000, an amount that HUPO will strive to maintain. Operational revenue and expenses are currently almost equal. This will continue as certain new projects such as a web site redesign and enhancement of membership benefits must be undertaken in 2013.
- ▶ Vice President William Hancock announced the results of the elections to Council and the Executive Committee. The members ratified the appointment of five members to the Council nominated by regional/national organizations.
- ▶ A motion to dissolve the Charter of the HUPO corporation in Canada in favor of the new U.S. nonprofit corporation was ratified by a show of hands.
- ▶ The HUPO Distinguished Service Award was presented to Mark Baker.
- ▶ The meeting was adjourned.

### HUPO.org Is Getting a Face Lift

Members - please contribute:

- Images that represent proteomics, basic but varied dynamic
- Regional meetings to add to the calendar
- Reports, including photos, from regional meetings

Look for launch in April!

*Don't Forget*  
**Support HUPO and  
 save on Congress  
 registration**  
 Pay 2013 dues now!  
[www.HUPO.org](http://www.HUPO.org)

## HUPO Election Results

### Executive Committee, 2013

Pierre Legrain, President (France)  
 Catherine Costello, Past President (U.S.A.)  
 Maxey C.M. Chung, Secretary General (Singapore)  
 Roman Zubarev, Treasurer (Sweden)  
 William Hancock, Vice President, (U.S.A.)  
 Gilbert S. Omenn, Member at Large (U.S.A.)  
 Mark Baker, Member at Large (Australia)

### Elected and appointed to Council

#### Europe/Africa

Alexander Archakov  
 Emøke Bendixen  
 Fernando Corrales  
 Henning Hermjakob  
 Connie Jimenez  
 Mathias Uhlen  
 Gyorgy Marko-Varga

#### The Americas

Christoph Borchers  
 Donald Hunt  
 Robert Moritz

#### Asia/Oceania

Thomas (Bill) Jordan  
 Hubert Hondermarck  
 Young Mok Park  
 Terence Poon  
 Ravi Sireshmikh  
 Visith Thongboonkerd  
 Takeshi Tomonaga  
 Pengyuan Yang

## HUPO Initiatives

HUPO will fund up to \$1,500 for initiative projects. Contact [office@hupo.org](mailto:office@hupo.org) for an application. The next deadline for applications is March 15, 2013.

Recently funded projects:

- HLPP: to support a pilot experiment on the urine exosome focused multicentric study
- HBPP: to support registration/expenses for workshop invited speaker
- iMOP: to support satellite meeting next Spring at University of Zurich
- HKUPP: to support web site and workshop travel expenses for young investigators

## HUPO Met with National/Regional Organizations in Boston

The HUPO Executive Committee and representatives of the National and Regional HUPO associated societies met in Boston. Pierre Legrain, HUPO president elect, reported the discussions that occurred at the HUPO council meeting the day before.

First it was enacted that some new HUPO council members will be appointed each year directly upon the nomination by Regional HUPO organizations, on behalf of National organizations. This year there were five appointments (1 from Americas, 2 from Europe-Africa and 2 from Asia-Oceania). Six will be appointed every year hereafter.

In the context of the new HUPO organization and governance, the group discussed an action plan for several activities that would increase the synergy between national organizations and HUPO. In particular Pierre conveyed the desire of HUPO Council to reinforce the statement that HUPO is interested not only in the human proteome, but also in any proteomics research (*any study on any organism that somehow might contribute to increase knowledge and indirectly to human health and well-being*). In this regard, it is important to carefully consider all specific activities of all national communities.

Several types of actions were also discussed:

- Better information via the web sites on the different organisations and their activities –meetings, workshops, training courses, etc;
- Exchanges on the specificities of each organisation (scientific topics, membership, etc.);
- Scientific involvement of members in the various HUPO related initiatives.

The issue of matching membership between HUPO and national societies with a financial link between those organizations and HUPO was also discussed. HUPO Council proposed defining a fixed amount of fees (depending on the size of the local organization) to be paid to HUPO as recognition of their new direct participation to the governance and the activities of HUPO. Further along these lines, the HUPO membership committee proposed the creation of an Associate Membership for individuals affiliated with a National Society. Associate members would have limited benefits, and affiliation would occur through the National Societies. A long discussion followed, in particular on the reasons that would justify a fee from national organizations to HUPO.

To move on all these topics, a small group will be formed to finalize a document and action plan to be adopted within 6 months and implemented thereafter. This group will be appointed early in 2013. HUPO welcomes any volunteer from the National Societies to contribute. Please contact [office@HUPO.org](mailto:office@HUPO.org) to volunteer.

### HUPO Awards Presented in Boston

Distinguished Achievement



**Carol Robinson**

Distinguished Service



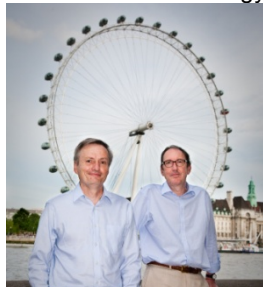
**Mark Baker**

Discovery in Proteomic Sciences



**Michel Desjardins**

Science and Technology



**David Creasy and John Cottrell**

### 2013 Awards Call for Nominations

The deadline for nominations is May 3, 2013. Awards will be presented at the HUPO World Congress and attendance at the Congress is required of recipients. Congress registration fee for recipients will be waived, but no travel support is provided. Self nominations are not accepted. Contact [office@HUPO.org](mailto:office@HUPO.org) for a nomination form.

**DISTINGUISHED ACHIEVEMENT IN PROTEOMIC SCIENCES (\$3,000)** recognizes a scientist for distinguished scientific achievements in the field of proteomic science.

**DISCOVERY IN PROTEOMIC SCIENCES AWARD (\$3,000)** recognizes a scientist for a single discovery in the field of proteomics.

**DISTINGUISHED SERVICE AWARD (\$3,000)** recognizes an exemplary member of the proteomic research community whose dedicated service has made indispensable contributions to the organization and mission of HUPO.

**SCIENCE AND TECHNOLOGY AWARD (\$3,000, sponsored by the HUPO Industrial Advisory Board)** recognizes an individual, or team (of up to three people) in private industry who played a key role in commercialization of a proteomics technology, product or procedure. The emphasis for the award is on making the technology, product or procedure widely available, which is different from the basic scientific invention.



## Calendar of Related Events

Send your posting to [office@ushupo.org](mailto:office@ushupo.org)

February 7 - 12, 2013

[Australasian Proteomics Society Symposium](#)  
Lorne, Australia

March 10 - 13, 2013

[US HUPO Annual Conference](#)  
Baltimore, MD

March 17 - 21, 2013

[Proteomic Forum 2013](#)  
Berlin, Germany

March 28 - 29, 2013

[KHUPO Annual Conference](#)  
Seoul, Korea

April 14 - 19, 2013

[EMBO Practical Course: Phosphoproteomics](#)  
Odense, Denmark

April 20 - 24, 2013

[CNPN Annual Meeting](#)  
Vancouver, Canada

July 6 - 11, 2013

[FEBS](#)  
Saint Petersburg, Russia

August 12 - 16, 2013

[Sociedad Mexicana da Proteomica Symposium](#)  
Cancun, Mexico

## HUPO Congress Dates and Locations

September 14 - 18, 2013

12<sup>th</sup> Annual World Congress  
Yokohama - [www.hupo2013.com](http://www.hupo2013.com)

October 5 - 8, 2014

13<sup>th</sup> Annual World Congress  
Madrid

September 13 - 18, 2015

14<sup>th</sup> Annual World Congress  
Vancouver

*Don't Forget*  
Support HUPO and  
save on Congress  
registration  
Pay 2013 dues now!  
[www.HUPO.org](http://www.HUPO.org)

## Call for 2016 Congress Proposals

Proposals are being accepted for the 15th Annual World Congress in 2016. Contact [office@HUPO.org](mailto:office@HUPO.org) for complete details.

**Who may apply:** Any legally-constituted National / Regional HUPO or Proteomics Society

### Calendar:

- **March 15, 2013:** Deadline for receipt of applications. Applications will be scored and voted by the HUPO Executive Committee
- **April 30, 2013:** Notice of decision sent to applicants. Successful applicant will be sent Memo of Understanding (MOU).
- **July 31, 2013:** Deadline for finalized MOU signed by both parties. If no MOU is finalized, HUPO reserves the right to select another proposal.

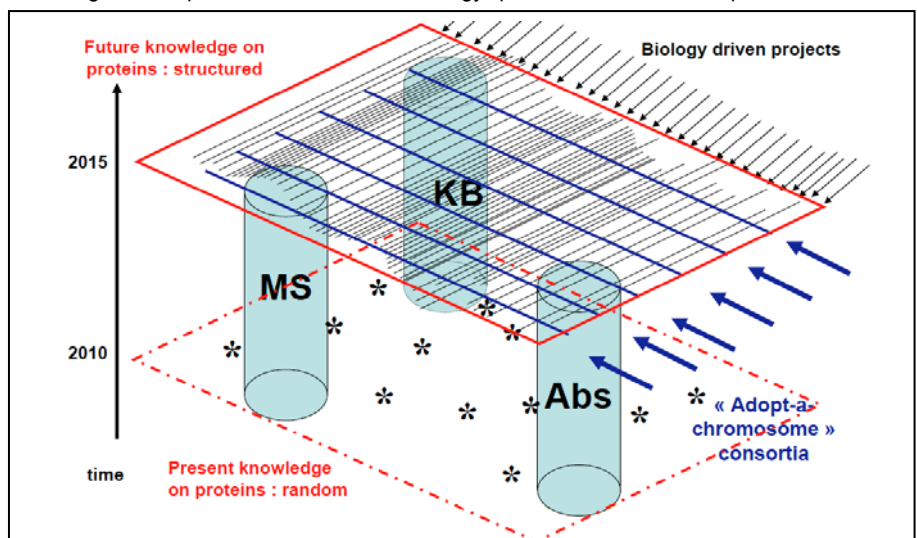
The normal 3-year rotation cycle for HUPO Annual World Congress is as follows: Americas, Asia/Oceania, Europe and Africa. **2016 is Asia/Oceania.** At the discretion of the HUPO executive committee, HUPO may consider applicants from a region outside the normal 3-year cycle if no acceptable bids are submitted from the projected region for a particular year.

## HUPO Human Proteome Project Celebrates a Year of Substantial Progress

Gilbert S. Omenn, MD, PhD, Chair, HPP; University of Michigan, Ann Arbor, MI, USA

Over the past two years, the HUPO-initiated Human Proteome Project (HPP) has implemented its global organization to identify and characterize the proteins expressed from the 20,300 human protein-coding genes. As shown in Figure 1, resource pillars based on Mass Spectrometry, Antibody protein capture and immunohistochemistry, and well-linked KnowledgeBases provide advanced technology platforms and data repositories for the Chromosome-centric (C-HPP) and Biology and Disease-driven (B/D-HPP) components of the HPP. The August 2012 issue of HUPOST featured a comprehensive report from Young-Ki Paik about the Chromosome-centric Human Proteome Project, including the then just-completed roster of national teams addressing each of the 24 chromosomes. The HUPO 11<sup>th</sup> World Congress of Proteomics in Boston 9-13 September 2012 highlighted many aspects of the HPP, with a pre-Congress C-HPP workshop that included members of the HPP Senior Scientific Advisory Board and leaders of the other components of the HPP, thirteen early morning scientific sessions or workshops from most of the organ-based or disease-based B/D-HPP teams, the C-HPP, and the resource pillars, and then a Plenary Session about strategic directions for the HPP and striking results. For example, the plenary presentation by Emma Lundberg highlighted the combination of PrEST antibodies from the Human Protein Atlas project with mass spectrometry from the Mann Laboratory, as part of the EU-funded collaborative program called PROSPECTS (Zeiler et al, MCP 2012).

The B/D-HPP has stimulated several new teams—on diabetes, cardiovascular diseases, cancers, infectious diseases, epigenetic/chromatin biology—and incorporated the pre-existing organ and biofluid proteome initiatives established under HUPO aegis during the past 10 years. These teams are identified in Figure 2, including a brand-new initiative on the “Eye-ome” announced at the Congress and formally accepted as a part of the B/D-HPP by the HPP-EC in December 2012.



**Figure 1.** Schematic representation of the HUPO Human Proteome Project. The three pillars represent: knowledge base (KB), mass spectrometry (MS), and protein capture (antibodies, Abs). The biology-driven projects are now captured in the B/D-HPP, and the adopt-a-chromosome consortia are the chromosome-specific C-HPP teams. (Reproduced from Legrain *et al.*, Mol Cell Proteomics, 2011, with permission)

Continued on page 6



**September 14 - 18, 2013**  
International Conference Center in Yokohama, Japan  
[www.HUPO2013.com](http://www.HUPO2013.com)

**Important Dates**

Early Bird Registration  
January 11 - 31 May 31, 2013

Standard Registration,  
June 1 - August 30, 2013

Abstract Submission Deadline  
March 15, 2013

Abstracts must be submitted online

Abstract submission  
is open. Submit  
online before  
March 15.

**Congress Co-Chairs**

Hisashi Hirano  
Kazuyuki Nakamura  
Naoyuki Taniguchi  
Tadashi Yamamoto

**Preliminary List of Invited Speakers**



Shinya Yamanaka, Nobel Prize Laureate, Japan



Ruedi Aebersold Switzerland



Catherine Costello USA



Catherine Fenselau USA



William Hancock USA



Fuchu He China



Denis Hochstrasser Switzerland



Pierre Legrain France



Matthias Mann Germany



Gilbert S. Omenn USA



Yoshinori Ohsumi Japan



Young-Ki Paik South Korea



Richard J. Simpson Australia



Keiji Tanaka Japan



Naoyuki Taniguchi Japan



Mathias Uhlen Sweden



Roman Zubarev Sweden

**Register soon to obtain early discount**

	Early Registration 11 Jan. 2013 - 31 May, 2013	Regular Registration 1 June, 2013 - 30 August, 2013	On-site Registration
HUPO Member	50,000 JPY	60,000 JPY	70,000 JPY
HUPO Non-member	56,000 JPY	66,000 JPY	76,000 JPY
HUPO Member Student	8,000 JPY	9,000 JPY	10,000 JPY
HUPO Non-member Student	10,000 JPY	11,000 JPY	12,000 JPY
Accompanying Person		10,000 JPY	
Banquet (16 Sept. 2013)		5,000 JPY	

## HUPO Human Proteome Project, continued

The B/D-HPP aims to move well beyond building a parts list of protein expression. Led by Ruedi Aebersold and an Executive Committee of Jenny van Eyk, Jun Qin, Marvin Kussman, Gary Bader, and Aled Edwards, the B/D-HPP will produce information about biological networks, inter-omics relationships, and reagents and resources that can empower many other scientists to utilize proteomics in biological and clinical research. A notable example is the use of existing lists of cancer-associated proteins to guide preparation of very large numbers of SRM peptides from SRM Atlas and the spectral library for SRM peptides; Huttenhain et al (Science Translational Medicine 2012) identified 182 cancer-associated proteins in plasma and 408 cancer-associated proteins in urine from women with ovarian cancers. This approach has very broad applications. As documented by Aled Edwards, the vast majority of biological studies of proteins have been limited to a small subset of known proteins, those for which good assay reagents are widely available (Nature 2011). The B/D-HPP,

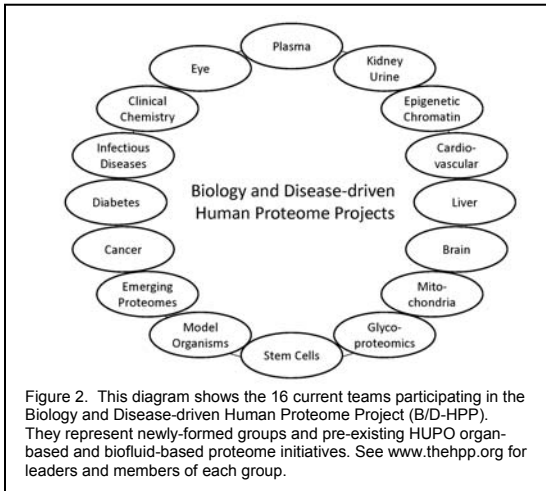


Figure 2. This diagram shows the 16 current teams participating in the Biology and Disease-driven Human Proteome Project (B/D-HPP). They represent newly-formed groups and pre-existing HUPO organ-based and biofluid-based proteome initiatives. See [www.thehpp.org](http://www.thehpp.org) for leaders and members of each group.

through the SRM approach, will, in principle, facilitate reproducible quantification of any protein in a suitable sample; then we expect biological processes and disease mechanisms will be increasingly analyzed in the full complexity of the living cell.

When starting a multi-year project, 10 years in this case, the investigators need to agree on the baseline metrics that will guide the deliverables. In terms of numbers of proteins confidently identified through mass spectrometry and protein capture, we have agreed to use nextProt (gold), GPMDB (green), and Human Peptide Atlas (canonical proteins with <1% FDR) for the numbers of proteins by mass spectrometry, Human Protein Atlas (moderate to high score) for numbers of proteins by antibody capture and immunohistochemistry, and Ensembl for the number of genes per chromosome (a moving target). The resulting “master table” of baseline metrics, prepared for the January 2013 special issue of *J Proteome Research* organized by the C-HPP, is presented here as Table 1. Note that about 2/3rds of all protein-coding genes have protein products identified with high confidence.

Additional proteins are expected to be identified with penetration to lower levels of protein concentrations, with targeted analyses of unusual cell types (like olfactory epithelium, brain regions, testis, placenta, and embryonic or fetal organs) where transcripts of missing proteins may be detected at significant levels, and with careful delineation of highly homologous protein families.

Detailed information about the HPP can be accessed at [www.thehpp.org](http://www.thehpp.org), including the participants and leaders of each component of the HPP and the publications emerging from the HPP, along with some HPP-related publications and selected national reports addressing proteomics and its integration with other omics fields. Significant advances will be presented at the 12<sup>th</sup> HUPO World Congress in Yokohama, Japan, 14-18 September, 2013.

Chr.	Ensembl Protein-coding Genes, v69	neXtProt (gold) Nov 2012	Human Peptide Atlas Dec 2012 (canonical)	GPMdb (Green) 26 Nov 2012	Human Protein Atlas Evidence (high or medium) Dec 2012	Est. Missing	% Missing
A	B	C	D	E	F		
1	2,044	1,414	1283	1466	1,053	656	32.1
2	1,253	896	819	936	726	369	29.5
3	1,065	754	691	784	641	322	30.2
4	757	527	475	546	450	241	31.8
5	874	631	552	635	534	268	30.7
6	1,041	709	723	761	560	310	29.8
7	904	618	589	655	471	283	31.3
8	695	469	425	478	323	238	34.2
9	798	541	496	543	397	271	34.0
10	762	540	485	557	478	235	30.8
11	1,304	769	714	821	654	536	41.1
12	1,049	717	652	751	577	342	32.6
13	326	233	214	240	187	97	29.8
14	651	429	408	455	375	220	33.8
15	605	416	383	451	328	188	31.1
16	866	591	555	639	444	271	31.3
17	1,198	829	779	856	555	377	31.4
18	284	195	173	214	132	90	31.7
19	1,449	941	788	1014	721	535	36.9
20	547	372	351	390	291	176	32.2
21	233	148	138	144	113	90	38.5
22	452	313	292	326	274	142	31.3
X	838	585	497	605	479	276	32.9
Y	51	15	15	21	26	34	66.7
MT	13	12	12	12	5	1	7.7
<b>Total</b>	<b>20,059</b>	<b>13,664</b>	<b>12,509</b>	<b>14,300</b>	<b>10,794</b>	<b>6568</b>	<b>32.7</b>

Ensembl v69(October 2012), neXtProt (October 10, 2012, confirmed 12/2012), PeptideAtlas (2012-07 build, confirmed 12/7/2012), GPMdb (October 1, 2012; confirmed 11/26/2012), HPA (September 12, 2012; confirmed 12/4/2012). Approximation of Missing Proteins is based on mass spec is #genes - [(B+C+D)/3], (x 100%) for %.

Table 1. Standard baseline metrics for numbers of genes and numbers of confidently identified proteins for each human chromosome (from Marko-Varga et al, *J Proteome Research*, January 2013, online December 20, 2012; DOI: 10.1021/pr301183a; reproduced with permission).

## Join Your Industry Partners to Support and Advise Hupo



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Created in 2006 the HUPO Industrial Advisory Board (IAB) facilitates communication and input from industry partners to support the proteomics community and to recognize these partners as HUPO affiliates. HUPO supports industry allies active in the development of innovative technologies and appropriate standards that are responsive to the constant changes in the scientific proteomics environment.

### Mission

To provide HUPO leadership (the Executive Committee) valuable input on technology and product innovation for the benefit of members and to identify industry trends that will position HUPO to meet the future challenges of its partners and organization.

### Benefits of IAB Membership

- One free individual HUPO membership available for company employee (value \$100.)
- Discounted fee and early sign-up for Industry Presentation at pre-congress 'New Technologies & Standardization Symposium.'
- Involvement in Human Proteome Project (HPP) with regular updates from project leadership.
- Direct connection with HUPO Executive Committee via IAB monthly calls.
- IAB sponsored *Science and Technology Award*, established in 2011 (2011 recipient: Alexander Makarov, Thermo Scientific and 2012 co-recipients: John Cottrell and David Creasy, Matrix Science), awarded to industrial scientist. IAB representatives solicit and vet nominees. Award recipient presents a talk on the project at the annual world congress

### Eligibility

- Proteomics product/service distributors/manufacturers; or
- Pharmaceutical or biotech companies with a proteomics disciplinary focus.
- Payment of annual dues (\$2,000 USD.)

### IAB Leadership and Composition

- Co-chaired by an appointed HUPO Executive Committee member and an elected IAB representative. The term for co-chair service is two years.
- Two representatives per IAB member company (one from science and one from marketing.)

### IAB Meetings

- Monthly conference call, all IAB representatives welcome
- IAB meetings at HUPO Annual World Congress and in conjunction with other pertinent meetings. IAB representatives cover their own travel and lodging for annual congress or other meetings.
- Operational costs of the IAB and its meetings are covered by the yearly fee paid by its members and by HUPO.

### HOW TO JOIN?

For more details go to <http://www.hupo.org/overview/structure/iab.asp> or contact contact Jennifer Watson ([jennifer@hupo.org](mailto:jennifer@hupo.org)) for details.