7th International Conference on Proteomics & Bioinformatics

Scientific Program
Day 1  October 24, 2016

Olimpica 1

Opening Ceremony

Keynote Forum

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Introduction</th>
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<tbody>
<tr>
<td>09:00-09:05</td>
<td>Introduction</td>
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</tbody>
</table>
| 09:05-09:35| Title: Solvent interaction analysis: A new approach to structure-focused clinical proteomics  
            Boris Zaslavsky, Cleveland Diagnostics, USA |
| 09:35-10:05| Title: Glycomics work-flows for the characterization of vaccine glycoprotein antigens  
            John F Cipollo, Center for Biologics Evaluation and Research-USFDA, USA |
| 10:05-10:35| Title: Systematic analysis of liver cancer metabolism - Lessons from mice and humans  
            Stefan Kempa, Berlin Institute for Medical Systems Biology - MDC Berlin, Germany |
| 10:35-11:05| Title: Quantitative measurement of cellular events with image processing and data mining for drug discovery, therapy and system biology  
            Petra Perner, Institute of Computer Vision and Applied Computer Sciences, Germany |

Sessions:

Protein Expression and Analysis  | Cancer and Clinical Proteomics  | Proteomics for Bioinformatics

Session Chair: Wendy Sandoval, Genentech, Inc., USA  
Session Co-chair: Nekane Guarrotxena, Spanish National Research Council, Spain

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<thead>
<tr>
<th>Time</th>
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<th>Speaker</th>
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<tbody>
<tr>
<td>11:25-11:45</td>
<td>Quantification of non-cognate pairs resulting from single cell bispecific antibody assembly using high resolution intact mass measurement</td>
<td>Wendy Sandoval, Genentech, Inc., USA</td>
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<tr>
<td>11:45-12:05</td>
<td>Moonlighting microtubule-associated proteins: Regulatory functions by day and pathological functions at night</td>
<td>Judit Ovádi, Hungarian Academy of Sciences, Hungary</td>
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<tr>
<td>12:05-12:25</td>
<td>Temporal and spatial T-patterns in behavior and DNA: Is the structure of DNA reflected in the structure of neuronal and human behavior?</td>
<td>Magnus S Magnusson, University of Iceland, Iceland</td>
</tr>
<tr>
<td>12:25-12:45</td>
<td>The antioxidant protein PARK7 plays an important role in cell resistance to cisplatin induced apoptosis in case of clear cell renal cell carcinoma</td>
<td>Marwa Eltoweissy, University of Göttingen, Germany</td>
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| 12:45-13:05| Solution structure of CUBO, a novel domain that preferentially binds the ubiquitin-like protein NEDD8  
            Elena Santonico, University of Rome Tor Vergata, Italy |
| 13:05-13:25| Sensitive, selective and accurate response of plasmonic bead platforms in high-throughput biomarker screening | Nekane Guarrotxena, Spanish National Research Council, Spain |

Lunch Break 13:25-14:25 @ Hotel Restaurants

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<tr>
<td>14:25-14:45</td>
<td>Next generation protein sequencing (NGPS) enables rapid full-length de-novo antibody and other protein sequence determination</td>
<td>Alon Savidor, Weizmann Institute of Science, Israel</td>
</tr>
<tr>
<td>14:45-15:05</td>
<td>Allosteric modulation: The Hsp70 case study</td>
<td>Federica Chiappori, Istituto di Tecnologie Biomediche-Consiglio Nazionale delle Ricerche, Italy</td>
</tr>
</tbody>
</table>
15:05-15:25  Title: Proteomics analysis of rat serum seeking for new transporters across blood-brain barrier  
Eunjoo Kim, Daegu Gyeongbuk Institute of Science and Technology, South Korea

Workshop

Detection of recurrent self-similar structured clusters in human and neuronal interactions, DNA and proteins: T-Pattern Analysis (TPA) with Theme™  
Magnus S Magnusson, University of Iceland, Iceland

Sessions:

Evolutionary & Structural Bioinformatics | Emerging Trends in Proteomics & Genomics | Frontiers of Systems Biology in Bioinformatics

Session Chair: Alexandru G Floares, SAIA-Solutions of Artificial Intelligence Applications, Romania  
Session Co-chair: Elena Papaleo, Danish Cancer Society Research Center, Denmark

16:10-16:30  Title: Of men and not mice: Comparative genomic analysis of human diseases and mouse models  
Wenzhong Xiao, Stanford University School of Medicine, USA

Networking and Refreshment Break 16:30-16:50 @ Foyer

16:50-17:10  Title: The impact of functional redundancy on molecular signatures  
Alexandru G Floares, SAIA-Solutions of Artificial Intelligence Applications, Romania

Title: The mast cell has much in store for us: A call to bioinformaticians to advance insights into a unique, intriguing but underexplored cell subset of the human body  
Magda Babina, Charité University Medicine Berlin, Germany

17:30-17:50  Title: Structural communication in transcription factors  
Elena Papaleo, Danish Cancer Society Research Center, Denmark

17:50-18:10  Title: GNM 2.0 - A database housing protein dynamics data of >11,000 PDB structures revealing dynamics prerequisites for protein functions and interactions  
Lee Wei Yang, National Tsing Hua University, Taiwan

Panel Discussions

Day 2           October 25, 2016

Olimpica 1

Keynote Forum

Introduction

09:00-09:30  Title: Multi-level self-similarity from cells to insect and human societies: Socio-proteomics as a possible source of ideas and guidance for a general bio-social science?  
Magnus S Magnusson, University of Iceland, Iceland

09:30-10:00  Title: Fragments, fragmentome and fragmentomics in proteomics  
Alexander A Zamyahtin, A.N. Bach Institute of Biochemistry, Russia; Universidad Técnica Federico Santa María, Chile

Sessions:

Cancer and Clinical Proteomics | Mass Spectrometry in Proteome Research | Proteomics from Discovery to Function | Plant Proteomics

Session Chair: Bart Devreese, Ghent University, Belgium  
Session Co-Chair: Pavel Vítámvás, Crop Research Institute, Czech Republic

10:00-10:20  Title: Effects of natural compounds and proteins on solvent properties of aqueous media  
Boris Zaslavsky, Cleveland Diagnostics, USA
10:20-10:40 Title: Laser microdissection in proteomic analysis
Mauro Baron, Leica Microsystems, Italy

10:40-11:00 Title: Fecal (meta)proteomics: A tool to investigate dysbiosis and inflammation in patients with cystic fibrosis
Bart Devreese, Ghent University, Belgium

Networking and Refreshment Break 11:00-11:20 @ Foyer

11:20-11:40 Title: Quantitative proteomic analysis of prostate cancer for biomarker discovery and drug target identification
Amilcar Flores Morales, University of Copenhagen, Denmark

11:40-12:00 Title: Quantitative proteomics and pharmacokinetic modeling in the optimisation of drug dosing
Jill Barber, University of Manchester, UK

12:00-12:20 Title: Analysis of cereal response to abiotic stress using gel-based proteomics
Pavel Vitámvás, Crop Research Institute, Czech Republic

12:20-12:40 Title: Potential use of reciprocal levels of serum and urinary peptides for discriminating prostate cancer from benign prostatic hyperplasia
Jaime Jacqueline Jayapalan, University of Malaya, Malaysia

Poster Presentations 12:40-13:20 @ Cassia
Lunch Break 13:20-14:20 @ Hotel Restaurants

Workshop 14:20-15:05 Title: Disease specific databases for personalized medicine: Fabry disease as a case of study
Maria Vittoria Cubelli, University of Naples, Italy

Sessions:
Immunology and Drug Discovery | Bioinformatics Algorithms & Databases | Clinical Informatics & Biostatistics
Session Chair: Nabil Mili, University of Geneva, Switzerland
Session Co-Chair: Tamas Hegedus, Semmelweis University, Hungary

Session Introduction

15:05-15:25 Title: Translating genomic biomarker findings into clinical medicine: Dimension of the problem, network structure of competing models, and estimate of the misclassification prediction error
Nabil Mili, University of Geneva, Switzerland

15:25-15:45 Title: PhyQuart-A new algorithm to avoid systematic bias & phylogenetic incongruence: Are directed quartets the key for more reliable supertrees?
Patrick Kück, The Natural History Museum London, UK

15:45-16:05 Title: VHL-Hunter: A predictor of the impact of missense mutations in the function of the Von Hippel-Lindau protein (pVHL), risk of clear cell renal carcinoma and severity of pVHL-associated diseases
Alvaro Olivera-Nappa, University of Chile, Chile

16:05-16:25 Title: Big data in noncoding RNA and precision medicine
Runsheng Chen, Institute of Biophysics, Chinese Academy of Sciences, China

Networking and Refreshment Break 16:25-16:45 @ Foyer

16:45-17:05 Title: In silico modeling of ABCG2/BCRP structure and dynamics sheds light on xenobiotic recognition and transport function
Tamas Hegedus, Semmelweis University, Hungary

17:05-17:25 Title: Probability sampling in matched case-control study in drug abuse
Surya Raj Niraula, B P Koirala Institute of Health Sciences, Nepal

17:25-17:45 Title: Structural implications of protease mutations in antiretroviral treatment exposed patients infected with HIV-1 subtype C
Veronna Marie, University of KwaZulu-Natal, South Africa

17:45-18:05 Title: Designer protein enriched with large neutral amino acids: A new approach for treating phenylketonuria
Prakruthi Appaiah, CSIR-Central Food Technology Research Institute, India

18:05-18:25 Title: Remote patient triage and prioritization in mobile telemedicine services
Omar Hussein Salman, Al Iraqia University, Iraq
### Olimpica 1  
**Panel Discussions**  
**Special Session**

09:30-10:15  
**Glycomics characterization of influenza hemagglutinin glycoprotein antigens**  
*John F Cipollo*, Center for Biologics Evaluation and Research-USFDA, USA

#### Sessions:

- **Proteomics in Protein Biochemistry and Personalized Medicine**  
- **Neuroproteomics & Neurometabolomics**  
- **Proteomics Case Study and Integrating Transcriptomics**  
- **Cancer and Clinical Proteomics**

**Session Chair:** Serhiy Souchelnytskyi, Qatar University, Qatar  
**Session Co-Chair:** Veronica Anania, Genentech, Inc., USA

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<td>10:15-10:35</td>
<td><strong>Systemic properties of proteome profiles of carcinogenesis of human breast epithelial cells, and clinical applications of these profiles</strong></td>
<td>Serhiy Souchelnytskyi, Qatar University, Qatar</td>
<td>Qatar University, Qatar</td>
</tr>
<tr>
<td>10:35-10:55</td>
<td><strong>Unraveling of gene expression control in genome-reduced bacteria</strong></td>
<td>Vadim Govorun, Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Russia</td>
<td>Country: Russia</td>
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**Networking and Refreshment Break 10:55-11:15 @ Foyer**

11:15-11:35  
**Proteomic approaches for identifying urinary biomarkers in Lupus nephritis**  
*Veronica Anania*, Genentech, Inc., USA

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<td>11:35-11:55</td>
<td><strong>Protein profile of seminal plasma and functionality of spermatozoa during the reproductive season in common carp Cyprinus carpio and rainbow trout Oncorhynchus mykiss</strong></td>
<td>Anna Shaliutina-Kolesova, University of South Bohemia České Budějovice, Czech Republic</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>11:55-12:15</td>
<td><strong>Effect of therapeutic concentration of lithium on living HEK293 cells; alteration of overall protein composition</strong></td>
<td>Miroslava Vosahlíková, Institute of Physiology of the Czech Academy of Sciences, Czech Republic</td>
<td>Czech Republic</td>
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<td>12:15-12:35</td>
<td><strong>Comparative proteomic analysis of fibrosarcoma and skin fibroblast cell lines</strong></td>
<td>Hamdi Uysal, Ankara University, Turkey</td>
<td>Turkey</td>
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**Lunch Break 12:35-13:35 @ Hotel Restaurants**

13:35-13:55  
**PRMT1 modulates gene expression during DNA damage response, through R-methylation of histones and non-histone targets**  
*Daniele Musiani*, European Institute of Oncology, Italy

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<td>13:55-14:15</td>
<td><strong>Proteomic analysis of protein composition of rat forebrain cortex exposed to morphine for 10 days: Comparison with animals exposed to morphine and subsequently nurtured for 20 days in the absence of this drug</strong></td>
<td>Hana Ujčíková, Institute of Physiology-Czech Academy of Sciences, Czech Republic</td>
<td>Country: Czech Republic</td>
</tr>
<tr>
<td>14:15-14:35</td>
<td><strong>Analysis of screening and bioinformatics of antithrombotic peptides in casein molecules from bovine milk</strong></td>
<td>Maolin Tu, Harbin Institute of Technology, China</td>
<td>China</td>
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<tr>
<td>14:35-14:55</td>
<td><strong>Proteomic characterization of apoptosis process in Entamoeba histolytica: Identification of pro- and antiapoptotic proteins</strong></td>
<td>Guillermo Pérez Ishiwará, Instituto Politécnico Nacional, México</td>
<td>Mexico</td>
</tr>
<tr>
<td>14:55-15:15</td>
<td><strong>Texture and gene expression analysis of the brain in detection of Alzheimer's disease</strong></td>
<td>Alhadi Bustamam, University of Indonesia, Indonesia</td>
<td>Country: Indonesia</td>
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**Awards & Closing Ceremony**

**Day 2  Poster Presentations  12:40-13:20 @ Cassia**

**PBP-01**  
**Title:** Quantification of drug-metabolising enzymes in human liver microsomes: A comparison between label-free profiling and targeted quantitative analysis  
*Zubida Al-majdoub*, University of Manchester, UK

**PBP-02**  
**Title:** Mass spectrometry in forensic identification of two main potential agents of bioterrorism and warfare: Botulinum toxins and ricin  
*Valerie Morineaux*, Direction générale de l'Armement, France
Title: Nitric oxide synthases and acute sleep deprivation  
Zdenka Kristofikova, National Institute of Mental Health, Czech Republic

Title: Expression and purification of membrane scaffold proteins for the design of discoidal phospholipid bilayer nanoparticles  
Ramona Bosch, University of Hohenheim, Germany

Title: Proteomic analysis of endothelial to mesenchymal transition controlled by snail  
Marta Stasiak, Medical University of Lodz, Poland

Title: An analysis of norovirus genome using next-generation sequencing  
Jeong-Su Lee, National Institute of Food and Drug Safety Evaluation, Republic of Korea

Title: Identification and characterization of proteoglycans in early stages of fibrosis  
Katarzyna Gawrysz, Medical University of Lodz, Poland

Title: Quantitative analysis of prostate specific antigen isoforms using immunoprecipitation and stable isotope labeling mass spectrometry  
Sung-Fang Chen, National Taiwan Normal University, Taiwan

Title: Molecular studies of scorpion toxins interactions with calcium-activated potassium channels  
Alena Dmitrievna Volnytceva, Lomonosov Moscow State University, Russia

Title: Development of RNA standardized controls for quantitative detection of rotavirus and astrovirus by realtime RT-PCR  
Kyu-Heon Kim, Ministry of Food & Drug Safety, Republic of Korea

Title: Comparative NanoUPLC-MS analysis between magainin I-susceptible and -resistant Escherichia coli strains  
Marlon Henrique e Silva Cardoso, Universidade de Brasilia, Brazil

Title: Application of N-terminal fusion protein partners for prokaryotic soluble expression of human VEGF165 and its simple purification with maltose binding protein tag  
Minh Tan Nguyen, University of Ulsan, South Korea

Title: Role of fibrosin in the endothelial to mesenchymal transition  
Marcin Popielarski, Medical University of Lodz, Poland

Title: Using entrapment sequences strategy for evaluation of database search engines and quality control methods in shotgun proteomics  
Jie Ma, Beijing Proteome Research Center, China

Title: Proteomic approach to determine the biological variation of oil palm fruit mesocarp  
Benjamin Lau, Malaysian Palm Oil Board, Malaysia

Title: Neonatal immune challenges affect behaviour, cytokine profiles and brain morphology parameters in adult rats  
Hana Tejkalová, National Institute of Mental Health, Czech Republic

Title: A wiki-based web server for human disease  
Tao Chen, National Center for Protein Sciences, China

Title: Profiling of osteosarcoma serum leads to identification of proteins involved in modulation of α4β1 integrin expression in osteosarcoma cells migration  
Fadzliza Hafiza Ramli, Universiti Teknologi MARA, Malaysia

Title: A proteomic road to acquire an accurate serological diagnosis for human tegumentary leishmaniasis  
Hélida Monteiro de Andrade, Simone Pires, Federal University of Minas Gerais, Brazil

Title: Proteome reorganization of the bacterium upon invasion of a host cell as a mechanism of adaptation: A Mycoplasma gallisepticum model  
Matyushkina Daria, Federal Research and Clinical Centre, Russia

Title: Evaluation of disulfide scrambling at various pH on Avastin digestion by mass spectrometry  
Yi-Li Huang, National Taiwan Normal University, Taiwan

Title: Apoptotic induction in Entamoeba histolytica: Differential proteomic analysis deals with the identification of pro and antiapoptotic proteins  
Gómez-García Consuelo, Escuela Nacional de Medicina y Homeopatía, Mexico
PBP-23  
**Title:** Quantitative analysis of medulloblastoma using tandem mass spectrometry  
*Marta Nekulova,* Masaryk Memorial Cancer Institute, Czech Republic

PBP-24  
**Title:** Transforming growth factor-beta1- and insulin-dependent regulation of carcinogenic transformation is in line with proteome profiling and identification of TGFbeta and insulin as keynodes of carcinogenic transformation of MCF7 cells  
*Fatima Saoud Al-Mouhannadi, Reem Saeed Mubarak,* Qatar University, Qatar

PBP-25  
**Title:** Whole transcriptome analysis reveals that Zika virus halts cell cycle progression and disrupts neuronal differentiation in human neurospheres  
*João Lídio da Silva Gonçalves Vianez Júnior,* Evandro Chagas Institute, Brazil