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7<sup>th</sup> International Conference on

# Proteomics & Bioinformatics

October 24-26, 2016 Rome, Italy

## Scientific Program



## Olimpica 1

conference**series.com** 08:30-09:00

## Opening Ceremony

## Keynote Forum

- 09:00-09:05 Introduction
- 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

## Group Photo

Networking and Refreshment Break 11:05-11:25 @ Foyer

## 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

## Session Introduction

- 11:25-11:45 **Title: Quantification of non-cognate pairs resulting from single cell bispecific antibody assembly using high resolution intact mass measurement**  
Wendy Sandoval, Genentech, Inc., USA
- 11:45-12:05 **Title: Moonlighting microtubule-associated proteins: Regulatory functions by day and pathological functions at night**  
Judit Ovádi, Hungarian Academy of Sciences, Hungary
- 12:05-12:25 **Title: Temporal and spatial T-patterns in behavior and DNA: Is the structure of DNA reflected in the structure of neuronal and human behavior?**  
Magnus S Magnusson, University of Iceland, Iceland
- 12:25-12:45 **Title: The antioxidant protein PARK7 plays an important role in cell resistance to cisplatin induced apoptosis in case of clear cell renal cell carcinoma**  
Marwa Eltoweissy, University of Göttingen, Germany
- 12:45-13:05 **Title: 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 **Title: 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

- 14:25-14:45 **Title: Next generation protein sequencing (NGPS) enables rapid full-length de-novo antibody and other protein sequence determination**  
Alon Savidor, Weizmann Institute of Science, Israel
- 14:45-15:05 **Title: Allosteric modulation: The Hsp70 case study**  
Federica Chiappori, Istituto di Tecnologie Biomediche-Consiglio Nazionale delle Ricerche, Italy

15:05-15:25 **Title: Proteomics analysis of rat serum seeking for new transporters across blood-brain barrier**  
Eunjo Kim, Daegu Gyeongbuk Institute of Science and Technology, South Korea

### Workshop

15:25-16:10 **Title: 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

### Session Introduction

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

17:10-17:30 **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

18:10-18:30 **Title: Mathematical modelling of evolution of tetranucleotide usage patterns of whole bacterial genomes to improve phylogenetic inferences**  
Xiaoyu Yu, University of Pretoria, South Africa

18:30-18:50 **Title: ADPredict: ADP-ribosylation sites prediction based on physicochemical and structure descriptors**  
Matteo Lo Monte, Institute of Protein Biochemistry (IBP-CNR), Italy

### 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 Zamyatnin, 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

### Session Introduction

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 Vítámvás**, 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 **Disease specific databases for personalized medicine: Fabry disease as a case of study**  
**Maria Vittoria Cubellis**, 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

## Panel Discussions

Day 3      October 26, 2016

### Olimpica 1

#### 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

#### Session Introduction

10:15-10:35 **Title: Systemic properties of proteome profiles of carcinogenesis of human breast epithelial cells, and clinical applications of these profiles**

Serhiy Souchelnytskyi, Qatar University, Qatar

**Title: Unraveling of gene expression control in genome-reduced bacteria**

10:35-10:55 **Vadim Govorun**, Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Russia

#### Networking and Refreshment Break 10:55-11:15 @ Foyer

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

11:35-11:55 **Title: Protein profile of seminal plasma and functionality of spermatozoa during the reproductive season in common carp *Cyprinus carpio* and rainbow trout *Oncorhynchus mykiss***

Anna Shaliutina-Kolesova, University of South Bohemia České Budějovice, Czech Republic

11:55-12:15 **Title: Effect of therapeutic concentration of lithium on living HEK293 cells; alteration of overall protein composition**

Miroslava Vosahlikova, Institute of Physiology of the Czech Academy of Sciences, Czech Republic

12:15-12:35 **Title: Comparative proteomic analysis of fibrosarcoma and skin fibroblast cell lines**

Hamdi Uysal, Ankara University, Turkey

#### Lunch Break 12:35-13:35 @ Hotel Restaurants

13:35-13:55 **Title: PRMT1 modulates gene expression during DNA damage response, through R-methylation of histones and non-histone targets**

Daniele Musiani, European Institute of Oncology, Italy

13:55-14:15 **Title: 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**

Hana Ujcikova, Institute of Physiology-Czech Academy of Sciences, Czech Republic

14:15-14:35 **Title: Analysis of screening and bioinformatics of antithrombotic peptides in casein molecules from bovine milk**

Maolin Tu, Harbin Institute of Technology, China

14:35-14:55 **Title: Proteomic characterization of apoptosis process in *Entamoeba histolytica*: Identification of pro- and antiapoptotic proteins**

Guillermo Pérez Ishiwara, Instituto Politécnico Nacional, México

14:55-15:15 **Title: Texture and gene expression analysis of the brain in detection of Alzheimer's disease**

Alhadi Bustamam, University of Indonesia, Indonesia

#### 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

- PBP-03** **Title: Nitric oxide synthases and acute sleep deprivation**  
Zdenka Kristofikova, National Institute of Mental Health, Czech Republic
- PBP-04** **Title: Expression and purification of membrane scaffold proteins for the design of discoidal phospholipid bilayer nanoparticles**  
Ramona Bosch, University of Hohenheim, Germany
- PBP-05** **Title: Proteomic analysis of endothelial to mesenchymal transition controlled by snail**  
Marta Stasiak, Medical University of Lodz, Poland
- PBP-06** **Title: An analysis of norovirus genome using next-generation sequencing**  
Jeong-Su Lee, National Institute of Food and Drug Safety Evaluation, Republic of Korea
- PBP-07** **Title: Identification and characterization of proteoglycans in early stages of fibrosis**  
Katarzyna Gawrys, Medical University of Lodz, Poland
- PBP-08** **Title: Quantitative analysis of prostate specific antigen isoforms using immunoprecipitation and stable isotope labeling mass spectrometry**  
Sung-Fang Chen, National Taiwan Normal University, Taiwan
- PBP-09** **Title: Molecular studies of scorpion toxins interactions with calcium-activated potassium channels**  
Alena Dmitrievna Volyntceva, Lomonosov Moscow State University, Russia
- PBP-10** **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
- PBP-11** **Title: Comparative NanoUPLC-MS<sup>E</sup> analysis between magainin I-susceptible and -resistant *Escherichia coli* strains**  
Marlon Henrique e Silva Cardoso, Universidade de Brasília, Brazil
- PBP-12** **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
- PBP-13** **Title: Role of fibrosin in the endothelial to mesenchymal transition**  
Marcin Popielarski, Medical University of Lodz, Poland
- PBP-14** **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
- PBP-15** **Title: Proteomic approach to determine the biological variation of oil palm fruit mesocarp**  
Benjamin Lau, Malaysian Palm Oil Board, Malaysia
- PBP-16** **Title: Neonatal immune challenges affect behaviour, cytokine profiles and brain morphology parameters in adult rats**  
Hana Tejkalová, National Institute of Mental Health, Czech Republic
- PBP-17** **Title: A wiki-based web server for human disease**  
Tao Chen, National Center for Protein Sciences, China
- PBP-18** **Title: Profiling of osteosarcoma serum leads to identification of proteins involved in modulation of  $\alpha 4\beta 1$  integrin expression in osteosarcoma cells migration**  
Fadzliza Hafiza Ramli, Universiti Teknologi MARA, Malaysia
- PBP-19** **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
- PBP-20** **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
- PBP-21** **Title: Evaluation of disulfide scrambling at various pH on Avastin digestion by mass spectrometry**  
Yi-Li Huang, National Taiwan Normal University, Taiwan
- PBP-22** **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

