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7th International Conference on

Proteomics & Bioinformatics

October 24-26, 2016 Rome, Italy

Scientific Program



08:00-08:30 Registrations

Olimpica 1

conferenceseries.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 Recerche, Italy

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
15:25-16:10	**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

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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 Maria, 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

10:35-10:55 **Title: Unraveling of gene expression control in genome-reduced bacteria**
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 Cermony

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^E 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

