

08:00-08:30 Registrations

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

Opening Ceremony

Keynote Forum

- 09:00-09:30 **¹⁸O-assisted ³¹P NMR and mass spectrometry: From phosphometabolomics to fluxomics**
Petras Dzeja, Metabolomics NMRS Core, Mayo Clinic, USA
- 09:30-10:00 **Diet, amino acids profile, and diabetes risk**
Lu Qi, Tulane University, USA

Group Photo

Networking and Refreshments Break: 10:00-10:20 @ Foyer

Session Introduction

Track 1: Metabolomic Profiling

Track 2: Clinical Metabolomics & Lipidomics

Track 3: Cancer Therapeutic Approaches

Session Chair: Petras Dzeja, Metabolomics NMRS Core, Mayo Clinic, USA

Session Co-Chair: Björn Riefke, Bayer Pharma AG, Germany

- 10:20-10:40 **Metabolic and epigenetic alterations in patients with Alzheimer's disease**
Eugenia Trushina, Mayo Clinic College of Medicine, USA
- 10:40-11:00 **Fucoidan inhibitory function in cancer in vivo and in vitro: Role in the development of human anti-cancer therapeutic intervention**
Hsien-Yeh Hsu, National Yang-Ming University, Taiwan
- 11:00-11:20 **Interference with glutamine metabolism: A novel approach for treatment of acute myeloid leukemia**
Ashkan Emadi, University of Maryland School of Medicine, USA
- 11:20-11:40 **Myc induces expression of glutamine synthetase through promoter demethylation**
I-Chen Peng, National Cheng Kung University, Taiwan
- 11:40-12:00 **Slow-MAS NMR Metabolomics**
Jian Zhi Hu, Pacific Northwest National Laboratory, USA

Lunch Break: 12:00-13:00 @ Salon Panorama

- 13:00-13:20 **Prevention of metabolite change due to enzymatic post-sample activity using heat based enzyme inactivation**
Mats Borén, Denator, Sweden
- 13:20-13:40 **Clinical metabonomics for biomarker discovery of malignant pleural effusions (MPE)**
Ching-wan Lam, The University of Hong Kong, Hong Kong
- 13:40-14:00 **Mass spectrometry-based metabolomics reveals that serum lysophospholipids are associated with incident type 2 diabetes**
Yonghai Lu, National University of Singapore, Singapore

Special Session

- 14:00-15:00 **Metabolomics in neuroscience: Old tools for new models and new tools for old models**
Andrea Armirotti, Istituto Italiano di Tecnologia, Italy

Networking and Refreshments Break: 15:15-15:35 @ Foyer

Track 10: Plant & Environmental Metabolomics

Track 13: Food & Nutritional Metabolomics

Session Chair: Ching-wan Lam, The University of Hong Kong, Hong Kong

Session Co-Chair: Yongyu Zhang, Shanghai University of Traditional Chinese Medicine, China

15:20-15:40 **ERR α induces mitochondrial glutaminase expression guiding anaplerosis upon osteogenic differentiation of mesenchymal stem cells**

Min Guan, Chinese Academy of Sciences, China

15:40-16:00 **Urine metabolomics study on unilateral ureteral obstruction induced renal fibrosis in rats and intervention effects of total aglycone extracts of *Scutellaria baicalensis***

Yongyu Zhang, Shanghai University of Traditional Chinese Medicine, China

16:00-16:20 **Serum lipid alterations identified in chronic Hepatitis b, Hepatitis b virus-related cirrhosis and carcinoma patients**

Tao Wu, Shanghai University of Traditional Chinese Medicine, China

16:20-16:40 **Metabolism alterations in aggressive lymphomas**

Pier Paolo Piccaluga, Bologna University School of Medicine, Italy

16:40-17:00 **The correlation of polar lipids changes with TAG accumulation under nitrogen deprivation in *Nannochloropsis oceanica* based on lipidomics**

Song Xue, Dalian Institute of Chemical Physics-CAS, China

Panel Discussion

Day 2

May 17, 2016

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Keynote Forum

09:00-09:30 **Plasma metabolic profiles are associated with habitual dietary patterns**

Choon Nam ONG, National University of Singapore, Singapore

09:30-10:00 **NMR Metabolomics Studies of Mice Exposed to Ionizing Radiation**

Jian Zhi Hu, Pacific Northwest National Laboratory, USA

Track 11: Metabolic Syndrome

Track 12: Metabolomics in Precision Medicine

Session Chair: Robert Plumb, Imperial College London, UK

Session Co-chair: Houkai Li, Shanghai University of Traditional Chinese Medicine, China

10:00-10:20 **Biomarker Discovery in Cardiovascular Disease and role of LC/MS**

Jose Castro-Perez, Waters Corp, USA

10:20-10:40 **Metabolomic study on the different responses to simvastatin therapy in normal and antibiotic-treated mice**

Houkai Li, Shanghai University of Traditional Chinese Medicine, China

10:40-11:00 **Understanding human health and disease with LC/MS based metabolic phenotyping**

Robert Plumb, Imperial College London, UK

11:00-11:20 **Treatment of natural plants on diabetes and metabolic syndrome**

Jingxin Zhou, Beijing University of Chinese Medicine, China

Networking and Refreshments Break: 11:20-11:40 @ Foyer

Special Session

11:40-12:40 **Two cases of the serious dementia improved dramatically by placing denture**

Yoshiro Fujii, Shin Kobe Dental Clinic, Japan

Poster Presentations

12:30-13:30

P01 **Elevation in liver function marker (alanine aminotransferase) and plasma metabolites with aging**

Minjoo Kim, Yonsei University, Korea

- P02 Fenofibrate regulates cell energy metabolism by restricting hypoxia-induced factor expression in human glioma cells**
Wan-Rou Shih, Central Taiwan University of Science and Technology, Taiwan
- P03 Augmentation in LDL-cholesterol with aging leads to oxidative stress and disturb sphingolipid metabolism**
Miso Kang, Yonsei University, Korea
- P04 Urine metabolomics revealed complex pesticide exposure in farmers in Chinese**
Yan-xin Zhang, Harbin Institute of Technology, China
- P05 Ferrous glycinate reverses epithelial mesenchymal transition and drug resistance to BCNU by suppression of hypoxia-induced factor in human U87 glioma cells**
Yu-Syuan Lin, Taipei Medical University, Taiwan
- P06 Combining in vitro and in silico techniques: a complex case of metabolite structural assignment**
Minkyung Kim, Yonsei University, Korea
- P07 Development of quantitative analytical method using liquid chromatography-tandem mass spectrometry for the tryptophan and its metabolites in serum and gastric juice to discovery biomarkers for the diagnosis of gastric cancer**
Byung Hwa Jung, Korea Institute of Science and Technology, Republic of Korea
- P08 Comparison of three mobile phase with liquid chromatography/time-of-flight mass spectrometry (LC/TOF-MS) for urine metabonomics analysis**
Pan Zou, Harbin Institute of Technology, China
- P09 Ferrous glycinate regulates cell energy metabolism via suppression of hypoxia-induced factor in human A549 cells**
Jhong-Huei Jheng, Taipei Medical University, Taiwan
- P10 The association between carbon and nitrogen stable isotope ratios of human hair and cardiovascular risk factors**
Song Vogue Ahn, Yonsei University, South Korea
- P11 Alteration of plasma acylcarnitines and glycerophospholipids between metabolically healthy and unhealthy overweight subjects**
Seung Han Baek, Yonsei University, Korea
- P12 Heat-killed and live Lactobacillus reuteri GMNL-263 exhibit similar effects on improving metabolic functions in high-fat diet-induced obesity rat**
Wu Ching-Shuang, Kaohsiung Medical University, Taiwan
- P13 Replacing carbohydrate with protein and fat affects PBMC metabolites in prediabetes or type-2 diabetes: Comparison with plasma metabolites**
Hye Jin Yoo, Yonsei University, Korea
- P14 Development and mechanism research of multi functional peptide product**
I-Chuan Sheih, Ta Hwa Institute of Technology, Republic of China
- P15 A 1H-NMR-Based Metabolomics Investigation on The Effect of Saffron Extract and Crocin on Rats Fed a High Fat Diet**
Fatin Najwa, Universiti Putra Malaysia, Malaysia
- P16 N α -(carboxymethyl) lysine decreases insulin secretion in beta cells through mitochondrial dysfunction and mitophagy**
Mei-Chen Lo, Taipei Medical University, Taiwan
- P17 Praeruptorin A regulates bone metabolic diseases via anti-osteoclastogenic activity by p38/Akt-c-Fos-NFATc1 signaling and PLC γ -independent Ca $^{2+}$ oscillation**
Sik-Won Choi, National Institute of Crop Science, Republic of Korea
- P18 The targeted and untargeted analysis of serum indicate changes in the urea cycle of psoriasis patients**
Aigar Ottas, University of Tartu, Estonia

- P19 Plasma taurine, genetic predisposition, and changes of insulin sensitivity in response to weight-loss diets: The POUNDS lost**
Yoriko Heianza, Tulane University, USA
- P20 Development of galectin-12 siRNA to defeat metabolic disorders**
Yen-Ju Lin, Industrial Technology Research Institute, Taiwan
- P21 Brain metabolic change in the dorsolateral prefrontal cortex and its correlation with anxiety levels in patients with generalized anxiety disorder: 1H-MR spectroscopy**
Gwang-Woo Jeong, Chonnam National University Hospital, Republic of Korea
- P22 Skin metabolomics approach for the development of biomarkers in psoriatic disease**
Ewelina P Dutkiewicz, National Chiao Tung University, Taiwan
- P23 Platelet activation markers overexpressed specifically in aspirin-exacerbated respiratory disease**
Chihiro Mitsui, Sagamihara National Hospital Clinical Research Center, Sagamihara, Japan

Lunch Break: 13:40-14:40 @ Salon Panorama

Track 14: Frontiers of Metabolomics Research

Track 16: Therapeutic Metabolomics

Track 18: Transcriptomics & Metabolic pathways

Session Chair: Andrea Armirotti, Istituto Italiano di Tecnologia, Italy

Session Co-chair: Horng-Mo Lee, Taipei Medical University, Taiwan

14:40-15:00 Metabolomic biomarkers for amyotrophic lateral sclerosis (ALS) in patients and animal models of ALS

Loeffler Jean Philippe, Université de Strasbourg, France

15:00-15:20 Comparative assessment of phenolic compounds and antioxidant properties related to the harvest times from the leaves of Korean barley (*Hordeum vulgare* L.) cultivars

Woo Duck Seo, National Institute of Crop Science, Republic of Korea

15:20-15:40 Crosstalk between the circadian clock and cancer metabolism reveals novel anticancer strategies

Benedetto Grimaldi, Istituto Italiano di Tecnologia, Italy

15:40-16:00 Ferrous glycinate reverses Warburg effect and regulates cell energy metabolism via suppression of hypoxia-induced factor in human lung adenocarcinoma A549 cells

Horng-Mo Lee, Taipei Medical University, Taiwan

16:00-16:20 NMR-based metabolomics analysis of 2D with 3D (Spheroids) of breast cancer cells

Björn Riefke, Bayer Pharma AG, Germany

Networking and Refreshments Break: 16:20-16:40 @ Foyer

Special Session

16:40-17:30 Translational Research in Targeting Glucose or Glutamine Dependency in Solid and Hematologic Neoplasms

Ashkan Emadi, University of Maryland School of Medicine, USA

Day 3 May 18, 2016

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Track 17: Analytical Platforms in Metabolomics

Track 19: Data Analysis & Systems Biology

Session Chair: Andrea Armirotti, Istituto Italiano di Tecnologia, Italy

Session Co-Chair: Takeshi Kimura, Ajinomoto Co., Inc., Japan

10:00-10:20 Molecular Mechanism for modulation of a multiple transcription factor complex formed on enhancer site upon phosphorylation

Kazuhiro Ogata, Yokohama City University Graduate School of Medicine, Japan

10:20-10:40 Development and commercialization of a plasma amino acid based risk diagnosis service

Takeshi Kimura, Ajinomoto Co., Inc., Japan

10:40-11:00 Studying Conformational Changes on GDP and GTP Binding with a Novel Visualization Platform

Darby Tien-Hao Chang, National Cheng Kung University, Taiwan

11:00-11:20 Using chlorophyll as gamma absorber generated from uranium coated weapons to protect Iraqi children from cancer

Jaleel Kareem Ahmed, Babylon University, Iraq

Networking and Refreshments Break: 11:20-11:40 @ Foyer

11:40-12:00 Recent advancements in Mendelian genomics and data management at the Yale Center for Genome Analysis

Shrikant Mane, Yale University School of Medicine, USA

12:00-12:20 ERR α induces mitochondrial glutaminase expression guiding anaplerosis upon osteogenic differentiation of mesenchymal stem cells

Min Guan, Chinese Academy of Sciences, China

12:20-12:40 Development and mining of a volatile organic compound database

Md. Altaf-UI-Amin, Nara Institute of Science and Technology, Japan

12:40-13:00 Detection of Bt protein metabolites presence in insect and their predator transferred through GM rice using ELISA technique

Zunnu Raen Akhtar, University of Agriculture Faisalabad, Pakistan

Lunch Break 13:00-14:00 @ Salon Panorama

Awards and Closing Ceremony