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13th International Conference on

METABOLOMICS AND SYSTEMS BIOLOGY

October 11-12, 2018
Zurich, Switzerland



SCIENTIFIC PROGRAM

DAY 1
Thursday, 11th October

08:30-09:00 **Registrations**

09:00-09:30 **Introduction**

09:30-09:50 COFFEE BREAK

09:50-11:50 Meeting Hall 01 **KEYNOTE LECTURES**

11:50-13:10

MEETING HALL 01	MEETING HALL 02
Talks On:	**Talks On:**
Metabolomics	Diagnostic Biomarkers in Metabolomics
Cancer Metabolomics	Metabolic Modeling and Synthetic Biology

13:10-13:15 GROUP PHOTO

13:15-14:00 LUNCH BREAK

14:00-16:00

MEETING HALL 01	MEETING HALL 02
Talks On:	**Talks On:**
Clinical and Precision Medicine Metabolomics	Edibilomics
Metabolomics in Drug Discovery	Lipidomics

16:00-16:20 COFFEE BREAK

MEETING HALL 01 (16:20-17:00)	MEETING HALL 01 (17:00-18:00)
Young Researchers in Metabolomics and System Biology	Workshop

DAY 2
Friday, 12th October

09:00-10:30 Meeting Hall 01 — **KEYNOTE LECTURES**

10:30-10:50 COFFEE BREAK

10:50-12:50

MEETING HALL 01	MEETING HALL 02
Talks On:	**Talks On:**
Plant and Environmental Metabolomics	Computational Methodologies
Transcriptomics and Proteomics	Systems Biology

12:50-13:35 LUNCH BREAK

13:35-15:55

MEETING HALL 01	MEETING HALL 02
Talks On:	**Talks On:**
Analytical Techniques in Metabolomics	Metabolomic Devices
Recent Advancements in Metabolomics	Disease-Focused Research in Metabolomics
Metabolomic Syndrome	

15:55-16:15 COFFEE BREAK

MEETING HALL 01 (16:15-17:00)	MEETING HALL 01 (17:00-18:00)
Young Researchers in Metabolomics and System Biology	Workshop

Awards & Closing Ceremony

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Glimpses of Metabolomics Conferences













ZURICH Attractions



















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Scientific Program

5th International Conference and Exhibition on Metabolomics

Osaka, Japan May 16-18, 2016

UK: Conference Series llc LTD
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Day 1 May 16, 2016

08:00-08:30 Registrations

RUBY

conferenceseries.com 08:30-09:00 **Opening Ceremony**

Keynote Forum

09:00-09:30 **Title: ^{18}O-assisted ^{31}P NMR and mass spectrometry: From phosphometabolomics to fluxomics**
Petras Dzeja, Metabolomics NMRS Core, Mayo Clinic, USA

09:30-10:00 **Title: 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 Profilingi
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 **Title: Metabolic and epigenetic alterations in patients with Alzheimer's disease**
Eugenia Trushina, Mayo Clinic College of Medicine, USA

10:40-11:00 **Title: 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 **Title: 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 **Title: Myc induces expression of glutamine synthetase through promoter demethylation**
I-Chen Peng, National Cheng Kung University, Taiwan

11:40-12:00 **Title: Slow-MAS NMR Metabolomics**
Jian Zhi Hu, Pacific Northwest National Laboratory, USA

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

13:00-13:20 **Title: Prevention of metabolite change due to enzymatic post-sample activity using heat based enzyme inactivation**
Mats Borén, Denator, Sweden

13:20-13:40 **Title: Clinical metabonomics for biomarker discovery of malignant pleural effusions (MPE)**
Ching-wan Lam, The University of Hong Kong, Hong Kong

13:40-14:00 **Title: 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 **Title: 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 **Title: ERRα induces mitochondrial glutaminase expression guiding anaplerosis upon osteogenic differentiation of mesenchymal stem cells**
Min Guan, Chinese Academy of Sciences, China

15:40-16:00 **Title: 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 **Title: 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 **Title: Metabolism alterations in aggressive lymphomas**
Pier Paolo Piccaluga, Bologna University School of Medicine, Italy

16:40-17:00 **Title: 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

RUBY

Keynote Forum

09:00-09:30 **Title: Plasma metabolic profiles are associated with habitual dietary patterns**
Choon Nam ONG, National University of Singapore, Singapore

09:30-10:00 **Title: 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 **Title: Biomarker Discovery in Cardiovascular Disease and role of LC/MS**
Jose Castro-Perez, Waters Corp, USA

10:20-10:40 **Title: 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 **Title: Understanding human health and disease with LC/MS based metabolic phenotyping**
Robert Plumb, Imperial College London, UK

11:00-11:20 **Title: 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 **Title: 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 **Title: Elevation in liver function marker (alanine aminotransferase) and plasma metabolites with aging**
Minjoo Kim, Yonsei University, Korea

P02 **Title: 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 **Title: Augmentation in LDL-cholesterol with aging leads to oxidative stress and disturb sphingolipid metabolism**

Miso Kang, Yonsei University, Korea

P04 **Title: Urine metabolomics revealed complex pesticide exposure in farmers in Chinese**

Yan-xin Zhang, Harbin Institute of Technology, China

P05 **Title: 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 **Title: Combining in vitro and in silico techniques: a complex case of metabolite structural assignment**

Minkyung Kim, Yonsei University, Korea

P07 **Title: Development of quantitative analytical method using liquid chromatography-tandem mass spectrometry for the trytophan and its metabolites in serum and gastric juice to discovery biomakers for the diagnosis of gastric cancer**

Byung Hwa Jung, Korea Institute of Science and Technology, Republic of Korea

P08 **Title: 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 **Title: Ferrous glycinate regulates cell energy metabolism via suppression of hypoxia-induced factor in human A549 cells**

Jhong-Huei Jheng, Taipei Medical University, Taiwan

P10 **Title: The association between carbon and nitrogen stable isotope ratios of human hair and cardiovascular risk factors**

Song Vogue Ahn, Yonsei University, South Korea

P11 **Title: Alteration of plasma acylcarnitines and glycerophospholipids between metabolically healthy and unhealthy overweight subjects**

Seung Han Baek, Yonsei University, Korea

P12 **Title: 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 **Title: 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 **Title: Development and mechanism research of multi functional peptide product**

I-Chuan Sheih, Ta Hwa Institute of Technology, Republic of China

P15 **Title: 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 **Title: Nα-(carboxymethyl) lysine decreases insulin secretion in beta cells through mitochondrial dysfunction and mitophagy**

Mei-Chen Lo, Taipei Medical University, Taiwan

P17 **Title: Praeruptorin A regulates bone metabolic diseases via anti-osteoclastogenic acitivity by p38/Akt-c-Fos-NFATc1 signaling and PLCγ-independent Ca2+ oscillation**

Sik-Won Choi, National Institute of Crop Science, Republic of Korea

P18 **Title: The targeted and untargeted analysis of serum indicate changes in the urea cycle of psoriasis patients**

Aigar Ottas, University of Tartu, Estonia

P19 **Title: Plasma taurine, genetic predisposition, and changes of insulin sensitivity in response to weight-loss diets: The POUNDS lost**
Yoriko Heianza, Tulane University, USA

P20 **Title: Development of galectin-12 siRNA to defeat metabolic disorders**
Yen-Ju Lin, Industrial Technology Research Institute, Taiwan

P21 **Title 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 **Title: Skin metabolomics approach for the development of biomarkers in psoriatic disease**
Ewelina P Dutkiewicz, National Chiao Tung University, Taiwan

P23 **Title: 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 Panoroma

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 **Title: 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 **Title: 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 **Title: Crosstalk between the circadian clock and cancer metabolism reveals novel anticancer strategies**
Benedetto Grimaldi, Istituto Italiano di Tecnologia, Italy

15:40-16:00 **Title: 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 **Title: 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 **Title: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

RUBY

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 **Title: Molecular Mechanism for modulationof a multiple transcriptionfactorcomplexformed on enhancer site upon phosphorylation**
Kazuhiro Ogata, Yokohama City University Graduate School of Medicine, Japan

10:20-10:40 **Title: Development and commercialization of a plasma amino acid based risk diagnosis service**
Takeshi Kimura, Ajinomoto Co., Inc., Japan

10:40-11:00 **Title: 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	**Title: 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	**Title: 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	**Title: ERRα induces mitochondrial glutaminase expression guiding anaplerosis upon osteogenic differentiation of mesenchymal stem cells** **Min Guan,** Chinese Academy of Sciences, China
12:20-12:40	**Title: Development and mining of a volatile organic compound database** **Md. Altaf-Ul-Amin,** Nara Institute of Science and Technology, Japan
12:40-13:00	**Title: 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 Panoroma
	Awards and Closing Ceremony

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Day 1 **April 27, 2015**

08:30-09:00 **Registrations**

Independence Room-A

OMICS International conferenceseries.com **09:30-10:00**

Opening Ceremony

Keynote Forum

10:00-10:05	**Introduction**
10:05-10:30	**Mukesh Verma** National Institutes of Health, USA
10:30-10:55	**Jian Zhi Hu** Pacific Northwest National Laboratory, USA

Group Photo

Networking & Refreshments Break 10:55-11:10 @ Independence Foyer

Track 1: Metabolomics and Cancer Research
Track 2: Analytical Techniques in Metabolomics
Track 3: Applications of Separation Sciences in Metabolomics
Track 4: Frontiers of Metabolomics Research

Session Chair: Mukesh Verma, NIH, USA
Session Co-Chair: Paola Marignani, Dalhousie University, Canada

Session Introduction

11:10-11:30	**Title: Using stable isotope resolved metabolomics to characterize glycolytic inhibition and to decode synthetic lethality in cancer** **Stefan Kempa,** BIMSB, Germany
11:30-11:50	**Title: Metabolomic approaches in cancer epidemiology** **Mukesh Verma,** NIH, USA
11:50-12:10	**Title: Non-, or minimally invasive intact biological objects using slow magic angle spinning** **Jian Zhi Hu,** Pacific Northwest National Laboratory, USA
12:10-12:30	**Title: Targeting cancer metabolism to overcome treatment resistance in HER2-positive breast cancer** **Paola A Marignani,** Dalhousie University, Canada
12:30-12:50	**Title: Evaluating the association of heme and heme metabolites with lung cancer energetics and progression** **Li Zhang,** The University of Texas at Dallas, USA
12:50-13:10	**Title: Non-invasive biomarker candidates of interstitial cystitis** **Jayoung Kim,** Cedars-Sinai Medical Center, USA

Lunch Break 13:10-14:10 @ Benjamin's

Session Chair: Sam F Y Li, National University of Singapore, Singapore
Session Co-Chair: Houkai Li, Shanghai University of Traditional Chinese Medicine, China

14:10-14:30	**Title: Metal Element on Non-alcoholic Fatty Liver Disease(NAFLD)** **Yongyu Zhang,** Shanghai University of Traditional Chinese Medicine, China
14:30-14:50	**Title: Dynamic pattern and terminal switch of lipid metabolomics in HBV tumorigenesis** **Ih-Jen Su,** National Health Research Institutes, Taiwan
14:50-15:10	**BRMS1L suppresses breast cancer metastasis by inducing epigenetic silence of FZD10** **Chang Gong,** Sun Yat-Sen University, China

Networking & Refreshments Break 15:10-15:30 @ Benjamin's

15:30-15:50	**Title: Combined metabolomic and transcriptomic profiling revealed the time-dependent effects of metformin on LoVo cells** **Houkai Li,** Shanghai University of Traditional Chinese Medicine, China
15:50-16:10	**Title: Metabolomics approach to understanding the metabolic regulatory effects on rats under several kinds of stresses** **Xiaoyan Wang,** Shanghai Center for Systems Biomedicine, China
16:10-16:30	**Title: Mitochondrial DNA depletion in H1299 cells promotes radio-resistance and anti-apoptosis through activation of PI3K/Akt2** **Fuxiang Zhou,** Zhongnan Hospital of Wuhan University, China
16:30-16:50	**Title: Comparative metabolic profiling of halotolerant bacterial strains and identification of novel species-specific metabolites** **Jayaraman G,** VIT University, India

Panel Discussion

Cocktails sponsored by Journal of Metabolomics: Open Access 18:15-19:15 @ Independence Foyer

Independence Room-A

Keynote Forum

09:00-09:25	**Asha R Kallianpur** Cleveland Clinic Lerner College of Medicine, USA
09:25-09:50	**Sam F Y Li** National University of Singapore, Singapore
09:50-10:15	**Vladimir Tolstikov** BERG, USA (Video Presentation)

Networking & Refreshments Break 10:15-10:30 @ Independence Foyer

Track 1: Metabolomics and Cancer Research
Track 4: Frontiers of Metabolomics Research
Track 5: Metabolic Syndrome

Session Chair: Deliang Guo, The Ohio State University, USA
Session Co-Chair: Scott J Tebbutt, University of British Columbia, Canada

Session Introduction

10:30-10:50	**Title: Preferential sequestration of a vanadyl chelate by cancer tissue facilitates 2-(fluorine-18)-2-deoxyglucose (FDG) uptake for Positron emission tomography (PET) imaging** **Marvin W Makinen,** The University of Chicago, USA
10:50-11:10	**Title: Integrated metabolite and RNA biomarker signatures of the late phase asthmatic response** **Scott J Tebbutt,** University of British Columbia, Canada
11:10-11:30	**Title: Mass spectrometry based metabolic profiles of brain cancer** **Khalid Al-Qahtani,** University of Oxford, UK
11:30-11:50	**Title: Use of electricity to direct microbial metabolite production** **John M Pisciotta,** West Chester University, USA
11:50-12:10	**Title: Lipid metabolism in cancer** **Deliang Guo,** The Ohio State University, USA
12:10-12:30	**Title: An metabolomic approaches to identify the endogenous substrate of OCT1** **Ligong Chen,** Tsinghua University School of Medicine, China

Lunch Break 12:30-13:30 @ Benjamin's

13:30-14:30 Poster Presentations

Poster Judge: Sam F Y Li, National University of Singapore, Singapore

Workshop

14:30-15:30	**Title: Metabolomics research using bioelectrochemical systems** **John M Pisciotta,** West Chester University, USA

Track 6: Metabolic Modelling
Track 7: Systems Biology and Computational Biology
Track 8: Bioinformatics and Advancements
Track 9: Data Analysis and Interpretation

Session Chair: John M Pisciotta, West Chester University, USA
Session Co-Chair: Giulia Guerriero, University of Naples Federico II, Italy

Session Introduction

15:30-15:50	**Title: *In silico* identification of gene targets for bioethanol production from lignocellulosic hydrolysates using E. coli** **Shireesh Srivastava,** ICGEB, India
15:50-16:10	**Title: Metabolomics of xylose-fermenting yeast for increasing efficiency in the production of second generation ethanol** **Patricia Verardi Abdelnur,** Embrapa Agroenergy, Brazil
16:10-16:30	**Title: Frontiers in comparative endocrinology: Challenges and opportunities of the "Program of Relevant National Interest"** **Giulia Guerriero,** University of Naples Federico II, Italy

Networking & Refreshments Break 16:30-16:50 @ Independence Foyer

16:50-17:10	**Title: Assessment of reproductive hormones and gynaecomastia in male CML patients with imatinib therapy** **Veena Singh Ghalaut,** PGIMS ROHTAK, India
17:10-17:30	**Title: Tryptase – new diagnostic and prognostic marker for AML AND CML** **P S Ghalaut,** PGIMS Rohtak, India
17:30-17:50	**Title: Isolation, identification and evaluation of highly cellulases producing trichoderma isolates from Egypt** **A I Fahmi,** Menoufia University, Egypt

Cocktails sponsored by Journal of Computer Science and Systems Biology 18:15-19:15 @ Independence Foyer

Day 3 April 29, 2015

Independence Room-A

Track 10: Proteomics and Genomics
Track 11: Clinical Metabolomics and Lipidomics
Track 12: Analytical Platforms Employed in Metabolomics

Session Chair: Sam F Y Li, National University of Singapore, Singapore
Session Co-Chair: P K Ragunath, Sri Ramachandra University, India

09:30-09:50	**Title: Total lipid extraction for lipidomics made easy – the BUME method** **Lars Lofgren,** AstraZeneca R&D, Sweden
09:50-10:10	**Title: Relevance of Machine Learning Approach in Analysing Metabolomic Data to gain insights on Comorbidity issues in COPD & Asthma** **P K Ragunath,** Sri Ramachandra University, India
10:10-10:30	**SimMet: Informatics tool for automating LC-MS and MS/MS based large metabolomic data processing and analysis** **Ningombam Sanjib Meitei,** Premier Biosoft, USA
10:30-10:50	**Title: Application of metabolomics for toxicity assessment of solid waste re-utilization** **Sam F Y Li,** National University of Singapore, Singapore

Networking & Refreshments Break 10:50-11:00 @ Independence Foyer

Young Researchers Forum

11:00-11:20	**Title: Dissecting the distinct functions of mitochondria** **Inmaculada Martinez-Reyes,** Northwestern University, USA
11:20-11:40	**Title: Quantifying metabolic fluxes in cancer and stem cells** **Christin Zasada,** BIMSB, Germany
11:40-12:00	**Title: De-differentiation: A critical malignant phenotype in glioblastoma** **Narinderbir Singh,** Deakin University, Australia

Panel Discussion

Lunch Break 12:30-13:30 @ Benjamin's

Poster Presentations

P-01	**Title: System Engineering Tools and Analysis to Leverage Signaling Pathways of Hepatocytes to Determine Toxicity Risk** **James S Gigrich,** Keysight Technologies, USA
P-02	**Title: Refine restraints first-modeling next approach to improve trans-membrane protein modeling** **Rajan Chaudhari,** University of the Sciences, USA
P-03	**Title: Genome size estimation of P. Peltatum using flow cytometry** **Lauren J Brown,** University of the Sciences, USA
P-04	**Title: Brain response during sleep estimated from NMR metabolomics** **Ubeydullah ER,** University of Pennsylvania, USA
P-05	**Title: The new BUME method for rapid automated chloroform-free lipid extraction of biofluids and tissue samples – An option for metabolomics?** **Lars Lofgren,** AstraZeneca R&D, Sweden
P-06	**Title: Combining *in vitro* and in silico techniques: a complex case of metabolite structural assignment** **Paolo Schiavini,** McGill University, Canada
P-07	**Title: Analysis of central metabolism in developing oilseeds of *Brassica napus*** **Nicolas Heinzel,** IPK-gatersleben, Germany
P-08	**Title: Bio-electrochemically formed Geobacter sulfurreducens gas metabolites as phototroph feedstocks** **Nikita Panov ,** West Chester University, USA
P-09	**Title: Reduce apoptosis and enhance autophagy by exercise training and resveratrol in the cortex of aging rats** **Chi-Wen Huang,** China Medical University, Taiwan
P-10	**Title: Mass spectrometry Identification and Quantification of N-oxalylglycinein an inhibitor for 2-Oxoglutarate Oxygenase in Spinach leaves** **Khalid Al-Qahtani, University of Oxford, UK**

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Day 1 March 24, 2014

08:00-09:00 Registrations

Texas E

OMICS Group Conferences
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09:00-09:25 **Opening Ceremony**

Keynote Forum

09:25-09:30	**Introduction**
09:30-09:55	**Bernd Schneider** Max Planck Institute for Chemical Ecology, Germany
09:55-10:20	**Chris Beecher** IROA Technologies, USA
10:20-10:45	**Vladimir V. Tolstikov** Eli Lilly & Company, USA
10:45-11:10	**Stephen E. Reichenbach** University of Nebraska, USA

Coffee Break 11:10-11:20 @ Texas BC

Track 1: Novel Approaches to Cancer Therapeutics
Track 2(ii): LC-MS and GC-MS based metabolomics

Session Chair: **Stephen F. Previs**, Merck & Co., Inc., USA
Session Co-Chair: **Florence I. Raynaud**, ICR, UK

Session Introduction

11:20-11:40	**Title: Kinetics and data normalization: Can we avoid being misled by "omic" investigations?** **Stephen F. Previs**, Merck & Co., Inc., USA
11:40-12:00	**Title: Plasma metabolomic signature of novel signal transduction inhibitors: From preclinical identification to clinical validation** **Florence I. Raynaud**, The Institute of Cancer Research, UK
12:00-12:20	**Title: Regulation of tumor metastasis by endogenous metabolite** **Sudhakar Akul Yakkanti**, Stanford Research Institute (SRI) International, USA
12:20-12:40	**Title: EGFR signaling regulates lipid metabolism in glioblastoma** **Deliang Guo**, The Ohio State University, USA
12:40-13:00	**Title: Mathematical model of β1-adrenergic signaling in mouse ventricular myocytes as an in silico tool for the cardiovascular drug test** **Vladimir E. Bondarenko**, Georgia State University, USA

Group Photo

Lunch Break 13:00-13:40 @ Texas BC

13:40-14:00	**Title: Change in metabolomic profiles due to lung cancer progression in golden syrian hamsters: Preventative effect of curcumin** **Smiti V. Gupta**, Wayne State University, USA
14:00-14:20	**Title: Clinical metabolomics: Case study CKD. cross-platform omics data integration in ingenuity systems** **Vladimir V. Tolstikov**, Eli Lilly & Company, USA
14:20-14:40	**Title: Cancer metabolism meets systems biology: Understanding metabolic master regulators** **Fabian V. Filipp**, University of California Merced, USA
14:40-15:00	**Title: Relative quantitation of diverse classes of lipids using a single step extraction protocol and targeted LC-MS/MS** **Hari Nair**, University of Washington Medical Center, USA
15:00-15:20	**Title: 'Omics' as a paradigm shift in investigating endometrial cancer risk among women with polycystic ovarian syndrome (PCOS)** **Mohamad Nasir Shafiee**, The University of Nottingham, UK

Coffee Break 15:20-15:30 @ Texas BC

15:30-15:50	**Title: Identification of mitochondrial single stranded DNA binding protein (mtSSB) as a novel radioresistance-related protein** **Fuxiang Zhou**, Wuhan University, China
15:50-16:10	**Title: Metabolic profiling in Aspergillus flavus to determine gene function** **Jose Diana Di Mavungu**, Ghent University, Belgium
16:10-16:30	**Title: Bilirubin as a biological marker for metabolic, cardiovascular and oncological disorders; Analysis using GOBIOM database** **Pidugu Vijaya Rao**, GVK Biosciences Private Limited, India
16:30-18:30	**Workshop** **Title: "Advancing metabolomics with high performance GCMS - practices and opportunities"** **By Jeffrey S Patrick**, LECO Corporation, USA
18:30-19:15	**Cocktails:** Sponsored by **Metabolomics: Open Access** **@ Texas BC**

Day 2 March 25, 2014

Texas E

Track 2(i): NMR and mass spectroscopy in metabolomics
Track 2(ii): LC-MS and GC-MS based metabolomics
Track 2(v): Shotgun proteomics

Session Chair: Stephen E. Reichenbach, University of Nebraska, USA
Session Co-Chair: Karen R. Jonscher, University of Colorado, USA

Session Introduction

09:00-09:20	**Title: Application of metabolomics, lipidomics, and kinetic flux profiling to understand the metabolic role in microbial interactions** **Shawn R. Campagna**, University of Tennessee, USA
09:20-09:40	**Title: Spaceflight alters liver metabolic function in mice** **Karen R. Jonscher**, University of Colorado, USA
09:40-10:00	**Title: High performance gas chromatography mass spectrometry in addressing the challenges of metabolomic studies – separation in time and mass** **Jeffrey S Patrick**, LECO Corporation, USA
10:00-10:20	**Title: Complimentary LC- and GC-Mass spectrometry techniques provide broader coverage of the metabolome** **Fadi A. Abdi**, AB SCIEX, USA
10:20-10:40	**Title: Direct regulation of cupins by the metabolic network in C. elegans** **Shane L. Rea**, University of Texas Health Science Center at San Antonio, USA

Coffee Break 10:40-10:55 @ Texas BC

10:55-11:15	**Title: NMR- and MS-based micrometabolic profiling of special plant cell types and tissue** **Bernd Schneider**, Max Planck Institute for Chemical Ecology, Germany
11:15-11:35	**Title: Reverse metabolomics - Metabolomics in drug discovery: Connecting metabolomic profiles with phylogenetic, medicinal and flavoring properties** **Ludger A. Wessjohann**, Leibniz Institute of Plant Biochemistry, Germany
11:35-11:55	**Title: Fast 2D NMR methods for quantitative metabolomics and fluxomics** **Patrick Giraudeau**, University of Nantes, France
11:55-12:15	**Title: Isotope labeling-assisted metabolomics: Novel workflows for improved LC-HRMS based research** **Rainer Schuhmacher**, University of Natural Resources and Life Sciences, Austria
12:15-12:35	**Title: Metabolomics reveals altered metabolic pathways to L-phenylalanine and its catabolic shift in Rubrivivax benzoatilyticus JA2** **Lakshmi Prasuna**, University of Hyderabad, India
12:35-12:55	**Title: Data mining of urine H1-NMR data for metabolomics analysis of T2D diseases** **Halima Bensmail**, Qatar Computing Research Institute, Qatar

Lunch Break 12:55-13:55 @ Texas BC

ABSCIEX Luncheon Workshop — Lunch Break 12:55-13:55 @ Texas BC

Track 4: Toxicology and Drug Metabolism
Track 5: Current Trends and Innovations in Metabolomics

Session Chair: Jun Han, University of Victoria-Genome BC Proteomics Centre, Canada
Session Co-Chair: Byung Hwa Jung, Korea Institute of Science and Technology (KIST), Republic of Korea

Session Introduction

13:55-14:15	**Title: Application of metabolomics to investigate metabolic change in normal aging process** **Byung Hwa Jung**, Korea Institute of Science and Technology (KIST), Republic of Korea
14:15-14:35	**Title: A UPLC/MRM-MS method for comprehensive metabolic profiling of >50 bile acids in human and mouse samples** **Jun Han**, University of Victoria-Genome BC Proteomics Centre, Canada
14:35-14:55	**Title: Metabolic phenotyping: Applications in diagnosis, treatment prediction and system diagnostics** **Clarence Gillett**, BIOCRATES Life Sciences AG, Austria
14:55-15:15	**Title: Metabolomics of inborn errors of metabolism: A strategy to inform on genetically predisposed allostasis** **Carolus Reinecke**, Manager of the National Metabolomics Platform, South Africa

Coffee Break 15:15-15:30 @ Texas BC

15:30-15:50	**Title: Study on pharmacokinetics and drug-drug interactions of naringin** **Luodi Fan**, Sun Yat-sen University, China
15:50-16:10	**Title: Personalizing drug treatment using pharmacometabonomic approach** **Baharudin Ibrahim**, Universiti Sains Malaysia, Malaysia
16:10-16:30	**Title: Using neurotoxin proteolytic activity and mass spectrometry to determine botulinum neurotoxin A (BoNT/A) in pharmaceutical products** **Ray C T Hung**, Government Laboratory, China
16:30-18:30	**Workshops** **Title: "Isotopic techniques in metabolomics"** **By Chris Beecher**, Chief Scientific Officer, IROA Technologies, USA **Title: "Use of highly 13C enriched biological samples and pure tracer substances for LC-HRMS based metabolomics"** **By Rainer Schuhmacher**, University of Natural Resources and Life Sciences, Austria **Title: "Stable isotope assisted metabolic profiling reveals chronic inflammation and oxidative stress as a consequence of a functional loss of the Parkinson's disease related gene DJ-1"** **By Johannes Meiser**, University of Luxembourg, UK
15:00-16:00	**Poster Presentations** @ Texas BC
18:40-19:25	**Cocktails:** Sponsored by **Journal of Computer Science & Systems Biology** @ Texas BC

Award Ceremony

Day 3 March 26, 2014

Texas E

Track 6: Computational Biology, Synthetic Biology and Systems Biology
Track 8: Metabolomics Syndrome
Track 10: Glycomics and Lipidomics

Session Chair: Chandra Richter, Senior Scientist E&J Gallo Winery, USA
Session Co-Chair: Peter Karp, SRI International, USA

Session Introduction

09:00-09:20	**Title: Turning up the heat on enzyme design** **Corey J. Wilson,** Yale University, USA
09:20-09:40	**Title: Integration of omics into metabolic flux distribution by complementary elementary mode analysis for large-scale metabolic networks** **Md Bahadur Badsha,** Kyushu Institute of Technology, Japan
09:40-10:00	**Title: Impact of error on high content data** **Harry Harlow,** POET, LLC, USA
10:00-10:20	**Title: Conversion of CO2 and xylose to ethylene and organic acids using cyanobacteria** **Jianping Yu,** National Renewable Energy Laboratory, USA

Coffee Break 10:20-10:35 @ Texas BC

10:35-10:55	**Title: Analyzing metabolomics data with smart tables** **Peter Karp,** SRI International, USA
10:55-11:15	**Title: Biomarker discovery in functional genomics using metabolomics** **Preeti Bais,** The Jackson Laboratory, USA
11:15-11:35	**Title: 2-aminoadipic acid is a novel biomarker of diabetes risk and modulates glucose homeostasis** **Nikolaos Psychogios,** Shire, Lexington, USA
11:35-11:55	**Title: Untargeted metabolomics identifies numerous solutes that accumulate when the kidneys fail** **Pavel A Aronov,** Thermo Scientific, USA
11:55-12:15	**Title: A metabolomic perspective on S. cerevisiae in chardonnay wine fermentation** **Chandra Richter,** Senior Scientist E&J Gallo Winery, USA
12:15-12:35	**Title: The biological response of human skin tissue to low dose ionizing radiation - from a metabolomic perspective** **Zeping Hu,** University of Texas, USA
12:35-12:55	**Title: Phospholipid profile of amniotic fluid: A potential tool for the evaluation of physiological and pathological development of fetal lung** **Maria Chiara Mimmi,** University of Udine, Italy
12:55-13:15	**Title: Antioxidant and anti-epileptic activity ofAcalyphaindica leaf extracts** **Anupalli Roja Rani,** Osmania university, India
13:15-13:35	**Title: Metabolic profile of murine melanoma studied by nuclear magnetic resonance** **Said Rahnamaye Rabbani,** Physics Institute of Sao Paulo University, Brazil

Lunch Break 13:35-14:10 @ Texas BC

14:10-14:30	**Title: The protective efficiency of vitamin C against arsenic induced biochemical hazards in rats** **M. G. Shalan,** Al-Ghad International Colleges of Health Sciences, KSA
14:30-14:50	**Title: Effect of monosaccharide rich diets on blood lipid profile of rats** **Manal Salah Abbas El Gendy,** Taibah University, KSA
14:50-15:10	**Title: Effect of quinine therapy on plasma glucose and plasma insulin levels in pregnant women infected with Plasmodium falciparum malaria in Gezira state** **NourEldaim Elnoman Elbadawi,** University of Kassala, Sudan
15:10-15:30	**Title: Dual action antidiabetic compounds obtained from Rhododendron arboreum** **Rabia Raza,** Bahauddin Zakariya University, Pakistan

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