

145th OMICS Group Conference

Scientific Program



4th International Conference and Exhibition on **Analytical & Bioanalytical Techniques**

October 15-17, 2013 Hampton Inn Tropicana, Las Vegas, NV, USA



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OMICS Group Conferences

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08:30-08:55

Opening Ceremony

Keynote Forum

08:55-09:00	Introduction
09:00-09:25	Joseph J. Pesek San Jose State University, USA
09:25-09:50	John Szpylka Silliker Inc., USA
09:50-10:15	Klaus Albert University of Tuebingen, Germany
10:15-11:00	Eduard Rogatsky Albert Einstein College of Medicine of Yeshiva University, USA

Coffee Break 11:00-11:15 @ Foyer

Track 1: Novel Approaches to Analytical & Bioanalytical Methods

Track-2: Analytical Methodology

Track 4: Analytical Techniques in Pharmacology

Session Chair: Andrew C. Benniston, Newcastle University, UK

Session Co-Chair: Yuhui Henry Zhao, Epcor Water Service Inc., Canada

Jose S. Torrecilla, Complutense University of Madrid, Spain

Session Introduction

11:15-11:35	Hydrogen exchange method to identify the protein targets of drugs Masaru Miyagi, Case Western Reserve University, USA
11:35-11:55	Development of an on-line GC using existing retired equipment Yuhui Henry Zhao, Epcor Water Service Inc, Canada
11:55-12:15	Development of liquid phase microextraction in-line coupled with capillary electrophoresis Doo Soo Chung, Seoul National University, Korea
12:15-12:35	Online glutamate measurement during brain altered function with sub seconds time resolution. A new alternative to measure biological compounds with laser induced fluorescence detection and the use of enzymatic reactors Alberto Morales-Villagran, University of Guadalajara, Mexico
12:35-12:55	Fluorescence-based imaging using Boron dipyrromethene (Bodipy) dyads Andrew C. Benniston, Newcastle University, UK

Lunch Break 12:55-13:50 @ Carol & Patio

13:50-14:10	Luminescent lanthanide chemosensors for the detection of zinc ions Kellie L. Tuck, Monash University, Australia
14:10-14:30	Use of streptomycin for the concentration and detection of the pathogenic prion protein in biological samples Aly Moussa, Laboratory of Lyon, France
14:30-14:50	Zinc, lead, copper, and cadmium determination in canned and fresh fish samples by anodic stripping voltammetry and inductively coupled argon plasma Neylan Dirilgen, Bogazici University, Turkey
14:50-15:10	New techniques and approaches to address the drugability of RNA Jonathan Hall, ETH Zurich, Switzerland
15:10-15:30	Unknown polymer additive identification by multimode LC-MS/MS and multi-detectors Wenjie Cao, SABIC Technology Center, Saudi Arabia

Coffee Break 15:30-15:45 @ Foyer

15:45-16:05	Unknown GPC peak identification by multimode GPC-MS/MS/DAD Nasser Al-Harbi, SABIC Technology Center, Saudi Arabia
16:05-16:25	Direct determination of N-Nitrosodiethanolamine (NDELA) in Ethanolamines by LC-MS-MS George Kuriakose, SABIC Technology Center, Saudi Arabia
16:25-16:45	Kinetic and pharmacokinetic analysis of treosulfan and its biologically active mono- and diepoxytransformers Franciszek Glowka, Poznan University of Medical Sciences, Poland
16:45-17:05	A simple electronic tongue for online monitoring of model fermentation Matthias Gerstl, Austrian Centre of Industrial Biotechnology (ACIB), Austria
17:05-17:25	Computational modelling of the hydride generation reaction in a tubular reactor and hydride fragmentation in a dielectric barrier discharge atomizer Wameath Sh. Abdul-Majeed, The University of Sheffield, UK

18:30-19:30 Cocktails Sponsored by Journal of Chromatography & Separation Techniques @ Foyer

Track 3-1: Chromatographic methods

Track 3-2: Electrophoresis/ligand binding assay

Track 3-3: Extraction/precipitation/purification techniques

Track 3-4: Analytical proteomics and metabolomics

Track 3-5: Microscopy, hybrid methods, and thermal analysis

Session Chair: Joseph J. Pesek, San Jose State University, USA

Session Co-Chair: Susanne P Boyle, University College London-Qatar, Qatar

Session Introduction

09:00-09:20	Hydride-based HPLC stationary phases: A rapidly evolving technology for the development of new bio-analytical methods Joseph J. Pesek, San Jose State University, USA
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- 09:20-09:40 **Evaluation of direct and indirect methods for the quantitation of plasma malondialdehyde**
Susanne P Boyle, University College London-Qatar, Qatar
- 09:40-10:00 **Rapid identification of counterfeit pills by ATR FT/IR analysis of crushed samples**
Graham Lawson, De Montfort University, UK
- 10:00-10:20 **Cardiovascular drug medication compliance assessed by dried blood spot sampling techniques**
Sangeeta Tanna, De Montfort University, UK
- 10:20-10:40 **Application of supercritical fluid chromatography/mass spectrometry to metabolic profiling**
Takeshi Bamba, Osaka University, Japan

Coffee Break 10:40-10:55 @ Foyer

- 10:55-11:15 **Monitoring of protein function at single-molecule level with single-event precision using fluorescence microscopy imaging DNACueRCy3Cy5**
Chandra P. Joshi, Cornell University, USA
- 11:15-11:35 **Evaluation of affinity capillary electrophoresis for ligand binding assays**
Deia Abd El-Hady, King Abdulaziz University, Saudi Arabia
- 11:35-11:55 **Selective bio-analytical methods for specific identification and detection of toxic Microcystis species and Microcystins in water**
Titus A. M. Msagati, University of Johannesburg, South Africa
- 11:55-12:15 **Toxicity evaluation of some dental materials: Three-dimensional confocal laser scanning microscopy. Time-lapse imaging of cell behavior**
Nina Attik, University of Lyon, France
- 12:15-12:35 **Investigation and analysis of photoirradiation effects on bio-compatible semiconductor nanocrystals systems using spectroscopic techniques**
Tareq Youssef, Cairo University, Egypt
- 12:35-12:55 **The preparation and separation performance of Imino- β -Cyclodextrin derivatives chiral stationary phase**
Zhi-Ming Zhou, Beijing Institute of Technology, China
- 12:55-13:15 **Evaluation of solid-phase extraction approaches for LC-MS metabolomics**
Dajana Vuckovic, Concordia University, Canada
- 13:15-13:35 **Analysis of pesticides in water samples and removal of monocrotophos by γ -irradiation**
Muhammad Ismail, University of Peshawar, Pakistan

Lunch Break 13:35-14:20 @ Carol & Patio

Track 3-6: Molecular and functional imaging
Track 3-7: Diverse applications: Biologics, diagnostics, and toxicology
Track 3-8: Spectroscopy and ultrafast spectroscopy
Session Chair: **M. Cather Simpson**, University of Auckland, New Zealand
Session Co-Chair: **Jun-ya Kohno**, Gakushuin University, Japan

Session Introduction

- 14:20-14:40 **Raman spectroscopy of living biofilms in flowcells**
Truis Smith-Palmer, St Francis Xavier University, Canada
- 14:40-15:00 **Bioanalytical characterization of HIV gp120 vaccine antigens and its relation to vaccine-induced antibody response**
Antu K. Dey, Novartis Vaccines & Diagnostics, USA
- 15:00-15:20 **Surface-enhanced Raman spectroscopy for medical diagnostics and bio-imaging**
Pareesh Chandra Ray, Jackson State University, USA
- 15:20-15:40 **GC-MS investigation of cell-culture based small molecular cancer biomarkers (SMCBs)**
Seung-Woo Lee, The University of Kitakyushu, Japan

Coffee Break 15:40-15:55 @ Foyer

- 15:55-16:15 **Ultrafast spectroscopy and the analysis of art pigment degradation and solar energy harvesting complex photoproducts**
M. Cather Simpson, University of Auckland, New Zealand
- 16:15-16:35 **Some applications of cavity ringdown spectroscopy in gas and condensed phases**
King-Chuen Lin, National Taiwan University, Taiwan
- 16:35-16:55 **Pushing time-resolved extreme UV and soft X-ray spectroscopy towards bigger molecules and condensed phase**
Jakob Grilj, Ecole Polytechnique Federale de Lausanne EPFL, Switzerland
- 16:55-17:15 **Analytical applications of small liquid droplets: From droplet-beam laser-ablation mass spectrometry to single-particle catalyst**
Jun-ya Kohno, Gakushuin University, Japan
- 17:15-17:35 **Probing packing interactions in pharmaceuticals and other small (bio) molecules using solid-state NMR spectroscopy combined with DFT calculations and X-ray diffraction**
Luis Mafra, University of Aveiro, Portugal

14:30-15:30 **Poster Presentations @ Carol & Patio**
18:30-19:30 **Cocktails Sponsored by Journal of Analytical & Bioanalytical Techniques @ Foyer**

Day 3 October 17, 2013

Salon B

Track 7: Environmental Analytical Aspects
Track 8: Risk Monitoring in Bioanalysis
Session Chair: **Peter J Baugh**, The British Mass Spectrometry Society (BMSS), England
Session Co-Chair: **Jacob Cox**, Green Science Corporation, USA

Session Introduction

- 09:30-09:50 **Recent advances in the applications of chromatography - mass spectrometry to environmental matrix analysis**
Peter J Baugh, The British Mass Spectrometry Society (BMSS), England
- 09:50-10:10 **Biomonitoring studies of environmental contaminants**
Brian T. Buckley, Rutgers University, USA
- 10:10-10:30 **Miniature LIMS system designed for in situ quantitative elemental and isotopic composition measurements of extra-terrestrial material in space research**
Andreas Riedo, University of Bern, Switzerland
- 10:30-10:50 **Comprehensive analysis of vitamin D analogues: Rapid LC-MS/MS method for quantification of eight metabolites and two epimers**
Iltaf Shah, Kingston University, UK

Coffee Break 10:50-11:05 @ Foyer

- 11:05-11:25 **Soil amendment of brownfields for plant growth by essential bacterial propagation on collagen substrate doped with corresponding impurities**
Jacob Cox, Green Science Corporation, USA
- 11:25-11:45 **Assessing biologics adherence behaviors among patients with psoriasis through group-based trajectory models**
Yunfeng Li, Novartis Pharmaceuticals Corporation, USA
- 11:45-12:05 **Natural herbs as alternative and complementary medicine "Herbal tea for treatment of Bronchial Asthma"**
Eman G. Haggag, Helwan University, Egypt

Track 9: Recent Applications of Analytical and Bioanalytical Methods**Track 10: Analytical Techniques in Immuno Chemistry**Session Chair: **Marc D. Porter**, University of Utah, USASession Co-Chair: **Jeanette M. Van Emon**, U.S. Environmental Protection Agency, USA

Session Introduction

- 12:05-12:25 **Ultrasensitive, multiplexed detection of infectious disease markers using a surface-enhanced Raman scattering immunoassay platform**
Marc D. Porter, University of Utah, USA
- 12:25-12:45 **Analysis of coplanar polychlorinated biphenyls (PCBs) using immunoaffinity chromatography cleanup with immunoassay detection**
Jeanette M. Van Emon, U.S. Environmental Protection Agency, USA
- 12:45-13:05 **Cytochrome P450-mediated biotransformation of the antitrypanosomal methamidoxime prodrug DB844 forms novel metabolites through intramolecular rearrangement**
Michael Zhuo Wang, The University of Kansas, USA

Lunch Break 13:05-13:50 @ Carol & Patio

- 13:50-14:10 **The agarose assay: Its utility in cell migration and invasion**
Maitham A. Khajah, Kuwait University, Kuwait
- 14:10-14:30 **Highly sensitive and selective detection of atrazine using microfluidic-based immunosensing platform**
Feng Long, University of China, China
- 14:30-14:50 **Neural networks and FET sensors combined: A tool to accurately classify and quantify molecules**
Jose S. Torrecilla, Complutense University of Madrid, Spain
- 14:50-15:10 **Optical and electrical Si-based biosensors: Fabrication and transduction issues**
Sebania Libertino, Istituto per la Microelettronica e Microsistemi (IMM) of CNR, Italy
- 15:10-15:30 **Nano/micro Porous based immunoassay microarray platform for improving detection sensitivity**
SangWook Lee, Bioengineering Laboratory Riken Institute, Japan
- 15:30-15:50 **Will next generation sequencing improve treatment outcomes: Low frequency kras mutations in colorectal cancer patients and the presence of multiple mutations in oncogenic drivers in non-small cell lung cancer patients**
Yihong Yao, MedImmune, USA

Coffee Break 15:50-16:05 @ Foyer

Tahiti**Track 5: Regulatory Issues and Biosafety Challenges in Bioanalysis****Track 6: Advances in Chromatography and Mass Spectrometry**Session Chair: **ZuLiang Chen**, University of South Australia, AustraliaSession Co-Chair: **Greg Heffron**, Harvard Medical School, USA

Session Introduction

- 09:30-09:50 **The AOAC method validation pathway: Setting standards for methods and demonstrating compliance to defined method requirements**
John Szpylka, Silliker, Inc., USA
- 09:50-10:10 **Elucidation of small molecule markers in cancer cells by NMR and mass spectrometry**
Greg Heffron, Harvard Medical School, USA
- 10:10-10:30 **HPLC-NMR: Present status and future**
Klaus Albert, University of Tuebingen, Germany
- 10:30-10:50 **High-throughput liquid chromatography-mass spectrometry based targeted metabolomics for separation and quantitation of ~250 cellular metabolites**
Fatemeh Mirnaghi, University of Toronto, Canada

Coffee Break 10:50-11:05 @ Foyer

- 11:05-11:25 **Mass spectrometry approach for novel Fabry disease biomarker detection**
Christiane Auray-Blais, CRC-CHUS/Universite de Sherbrooke, Canada
- 11:25-11:45 **Ion chromatography-ICP-MS and ESI-MS used for the chemical speciation analysis**
ZuLiang Chen, University of South Australia, Australia
- 11:45-12:05 **On-line multidimensional SPE-LC-(UV)-MS/MS as an alternative approach for analyzing small molecules in biological fluids**
Sena Caglar, Istanbul University, Turkey
- 12:05-12:25 **Femtosecond time-resolved mass spectrometry for the desorption process of tetracene ions from tetracene-doped anthracene crystals**
Tatsuya Fujino, Tokyo Metropolitan University, Japan
- 12:25-12:45 **Recent advances and application of SFC-MS in small molecules drug discovery**
Gerard Rosse, Dart Neuroscience LLC, USA
- 12:45-13:05 **Recovery of antioxidants from Myrmecodiapendans and identification of its major constituent compounds**
Adam Mekonnen Engida, National Taiwan University, Taiwan

Lunch Break 13:05-13:50 @ Carol & Patio

- 13:50-14:10 **Trick or treat, is the super food boost (Beetroot juice, spinach powder) best for nitrates supplementation? Which measure should we trust?**
Iltaf Shah, Kingston University, UK
- 14:10-14:30 **Bio-analytical determination of clopidogrel and pantoprazole by RP-HPLC method in rat plasma: Application to drug interaction study**
B. M. Gurupadayya, JSS College of Pharmacy, India

Award Ceremony

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August 18-20, 2014 Beijing, China

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