

ITP 2012 Scientific Program

19th International Symposium, Exhibit & Workshops on Electro- and Liquid Phase-separation Techniques

The Final Program and Book of Abstracts is available only in electronic format.

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Sunday, September 30, 2012

Course 1: **CE-MS: PRINCIPLES AND APPLICATIONS**

[Must pre-register](#)

Time: 9:00 am - 4:30 pm (*lunch on own 1:00-2:30pm*)

Location: Composite Room (3rd Floor)

Instructors: Prof. Govert W. Somsen, University Utrecht, Utrecht, THE NETHERLANDS
Prof. Christian W. Klampfl, Johannes Kepler University, Linz, AUSTRIA
Prof. Alejandro Cifuentes, National Research Council (CSIC), Madrid, SPAIN

Course Notes: **Course notes are only available online.** There will be no printed copies available.
Course registrants will be provided a webmail link to download the course notes and bring a printed copy with them to the course.

4:30-8:00 pm **SYMPOSIUM REGISTRATION OPEN**

Location: Corinthian Foyer (2nd Floor)

OPENING CEREMONY

Location: Corinthian Room (2nd Floor)

5:25 pm Remarks by the Chair of ITP 2012. [Ziad El Rassi](#), Oklahoma State University, Department of Chemistry, Stillwater, OK, USA

Sunday Session 1. Opening Plenary Lectures

Session Chair: Ziad El Rassi, Oklahoma State University, Stillwater, OK, USA

Location: Corinthian Room (2nd Floor)

The aim of this opening session is to set the stage with two important themes of the ITP meeting: Mass spectrometry and proteomics by two world-renowned scientists

5:40 pm L-101 **The Critical Role of the Front End to the Mass Spectrometer for Protein and Proteome Analysis.** [Barry L. Karger](#), Barnett Institute, Northeastern University, Boston, MA, USA [PLENARY LECTURE]

6:20 pm L-102 **The Wide World of Proteomic Technologies for Biomarker Discovery.** [Samir Hanash](#), Fred Hutchinson Cancer Research Center, Program Head/Molecular Diagnostics, Seattle, WA, USA [PLENARY LECTURE]

7:00-8:00 pm **EXHIBITION OPEN** (5th Floor)

7:00-8:00 pm **WELCOME RECEPTION** in Exhibit Hall (5th Floor)

Monday Session 2. Plenary Lectures - I

Session Chair: Steven A. Soper, Louisiana State University, Baton Rouge, LA, USA

Location: Corinthian Room (2nd Floor)

This plenary lecture session will provide the participants with new frontiers in ion chromatography of various inorganic anions and cations, organic acids and bases, carbohydrates, and amino acids and cutting edge research in nanofluidics of single biomolecules and single cell analysis

- 8:00 am L-103 **New Developments in Ion Chromatography.** Paul Haddad¹, Greg Dicoski¹, Robert Shellie¹, Emily Hilder¹, Naama Karu¹, Melissa Hanna-Brown², ¹Australian Centre for Research on Separation Science, University of Tasmania, Hobart, Tasmania, AUSTRALIA; ²Pfizer Inc., Kent, UK [PLENARY LECTURE]
- 8:30 am L-104 **Nanofluidics Based Single Biomolecule and Single Cell Analysis for Cancer Diagnosis and Stem Cell Therapy.** Yoshinobu Baba, Nagoya University, Department of Applied Chemistry, FIRST Research Center Innovative Nanobiodevices, Synchrotron Radiation Center, Nagoya University, Nagoya, JAPAN [PLENARY LECTURE]
- 9:00 am Coffee Break in Exhibit Hall (Edinburgh Room, 5th Floor)

Monday Session 3A. Dielectrophoresis - I

Session Chairs: Blanca H. Lapizco-Encinas, Rochester Institute of Technology, Rochester, NY, USA, and Nathan Swami, University of Virginia, Charlottesville, VA, USA

Location: Corinthian Room (2nd Floor)

This session on dielectrophoresis-I as well as dielectrophoresis – II and -III sessions bring together authoritative speakers from various disciplines to discuss new frontiers in the areas of electrokinetic microfluidics and separation of particles, cells, biomacromolecules, etc.

- 9:30 am L-105 **Forming Highly Concentric Liquid Shells with Electric Fields.** Thomas B. Jones, University of Rochester, Rochester, NY, USA [KEYNOTE LECTURE]
- 10:00 am L-106 **Dielectrophoretic Separation of Particles.** Ezinwa Elele, Yueyang Shen, Boris Khusid, New Jersey Institute of Technology, Chemical, Biological, and Pharmaceutical Engineering, Newark, NJ, USA
- 10:25 am L-107 **Maxwell-Wagner Polarization and Frequency Dependent Injection at Aqueous Electrical Interfaces.** Zachary Gagnon, Johns Hopkins University, Department of Chemical and Biomolecular Engineering, Baltimore, MD, USA
- 10:50 am L-108 **Practical Platforms for High Throughput Sample Preparation using 3D Carbon-electrode Dielectrophoresis.** Rodrigo Martinez-Duarte, Ecole Polytechnique Federale de Lausanne, Lausanne, SWITZERLAND
- 11:15 am Pause

Monday Session 3B. Affinity-Based Systems

Session Chairs: Norman Dovichi, University of Notre Dame, Notre Dame, IN, USA, and Ann Van Schepdael, KU Leuven, Leuven, BELGIUM

Location: Doric Room (4th Floor)

The aim of this session is to revive and illustrate the importance and unsurpassed capability of Micro-HPLC and CE in measuring and assaying bio-molecular interactions

- 9:30 am L-109 **High-Performance Affinity Microcolumns: Recent Developments and Applications.** David Hage, University of Nebraska, Chemistry Department, Lincoln, NE, USA [KEYNOTE LECTURE]
- 10:00 am L-110 **Capillary Electrophoresis and Density Functional Theory Applied to Characterization of Non-covalent Interactions of Hexaarylbenzene-based Receptor with Small Cations.** Vaclav Kasicka¹, Sille Ehala¹, Petr Toman², Rajendra Rathore³, Emanuel Makrlík⁴, ¹Institute of Organic Chemistry and Biochemistry Academy of Sciences of CR, Electromigration Methods, Prague, CZECH REPUBLIC; ²Institute of Macromolecular Chemistry Academy of Sciences of CR, Prague, CZECH REPUBLIC; ³Marquette University, Department of Chemistry, Milwaukee, WI, USA; ⁴Czech University of Life Sciences, Faculty of Environmental Sciences, Prague, CZECH REPUBLIC
- 10:25 am L-111 **Capillary-based Protein Analysis: CGE for Quantitation, ACE to Study Interactions.** Sabine Redweik¹, Claudia Cianciulli¹, Thomas Hahne¹, Xi Deng¹, Yuanhong Xu², Hermann Watzig¹, ¹Institute of Medicinal and Pharmaceutical Chemistry, TU Braunschweig, Braunschweig, GERMANY; ²Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Jilin, CHINA
- 10:50 am L-112 **CE-based Characterization and Receptor Affinity Determination of Nanobodies.** Rob Haselberg, Gerhardus J. de Jong, Govert W. Somsen, Utrecht University, Biomolecular Analysis, Utrecht, THE NETHERLANDS
- 11:15 am Pause

Monday Session 3C. Sample Preparation

Session Chairs: Frank-Michael Matysik, University of Regensburg, Regensburg, GERMANY, and Jicun Ren, Shanghai Jiaotong University, Shanghai, CHINA

Location: Composite Room (3rd Floor)

A separation problem is in the first place a sample preparation problem per excellence. This session and another session on sampling, preconcentration and sensitivity enhancement will provide the participants with the latest developments in facilitating sample preparation and preconcentration, and in turn contributing to solving the ensuing separation problem at hand

- 9:30 am L-113 **Size-selective Extraction of Biological Samples with Mesoporous Adsorbents for Protein and Peptides Analysis.** Hanfa Zou, Hongqiang Qin, Fangjun Wang, Ren'an Wu, Dalian Institute of Chemical Physics, Chinese Academic of Sciences, Dalian, PR CHINA [KEYNOTE LECTURE]
- 10:00 am L-114 **Selective Transport Across Supported Liquid Membranes Coupled to CE for Direct Analysis of Samples with Complex Matrices.** Pavel Kuban, Isaac K. Kiplagat, Andrea Slampova, Pavla Pantuckova, Petr Bocek, Institute of Analytical Chemistry of the AS CR v.v.i., Brno, CZECH REPUBLIC
- 10:25 am L-115 **No Drop Microextraction for Capillary Electrophoresis.** Hye Ryeo Lee, Young Jin Koh, Jihye Kim², Doo Soo Chung, Seoul National University, Seoul, KOREA
- 10:50 am L-116 **Electroextraction: A New Electromigration-driven Enrichment Technique for Peptidomics and Metabolomics.** Peter W. Lindenburt, Ubbo R. Tjaden, Jan van der Greef, Thomas Hankemeier, Leiden University, Division of Analytical Biosciences / Netherlands Metabolomics Centre, Leiden, NETHERLANDS
- 11:15 am Pause

Monday Session 4A. Bioanalysis – I

Session Chairs: Thomas Laurell, Lund University, Lund, SWEDEN, and David Hage, University of Nebraska, Lincoln, NE, USA

Location: Corinthian Room (2nd Floor)

Bioanalysis is a major theme of interest for many scientists working in the life sciences. This session on Bioanalysis – I as well as its sisters Bioanalysis – II and – III sessions are populated with timely problem-solving approaches and methodologies based on all kinds of electro- and liquid phase-separation techniques

- 11:20 am L-117 **A Recycling Immunoaffinity Microfluidic Device for Assessing Immune Function in Infants using Dried Blood Spots.** Terry M. Phillips, Edward Wellner, Heather Kalish, National Institutes of Health, Immunochemistry, Bethesda, MD, USA [KEYNOTE LECTURE]
- 11:50 am L-118 **Reagent-Release Capillary Array-Isoelectric Focusing Device for Simple and Highly-Sensitive Bioanalysis.** Hideaki Hisamoto, Osaka Prefecture University, Department of Applied Chemistry, Osaka, JAPAN
- 12:15 pm L-119 **High-throughput Screening of mAb Charge Variants Using Microchip-CZE.** Bahram Fathollah, Tobias Wheeler, Lucy Sun, Rajendra Singh, Caliper, a Perkin Elmer Company, Microfluidics R&D, Alameda, CA, USA
- 12:40 pm Pause – Lunch on own

Monday Session 4B. Metabolomics

Session Chairs: Marja-Liisa Riekkola, University of Helsinki, Helsinki, FINLAND, and Steven Cohen, Waters Corporation, Milford, MA, USA

Location: Doric Room (4th Floor)

Omics including metabolomics, foodomics, glycomics, proteomics, and genomics are currently important themes of research. Separation Sciences as applied to omics or Separomics play a pivotal role in the profiling and discovery of the major constituents of extracts of biological origins

- 11:20 am L-120 **Multiplatform Metabolomic Strategy to Study Leishmania Drug Resistance Mechanisms.** Gisele A. B. Canuto¹, David Rojo², Emerson A. Castilho-Martins³, Angeles Lopez-Gonzalvez², Luis Rivas⁴, Coral Barbas², ¹CEMBIO, Universidad CEU San Pablo and Institute of Chemistry University of Sao Paulo, Sao Paulo, BRAZIL; ²CEMBIO Universidad CEU San Pablo, Madrid, SPAIN; ³CEMBIO Universidad CEU San Pablo and Instituto de Biosciencias University of Sao Paulo, Sao Paulo, BRAZIL; ⁴Centro de Investigaciones Biologicas (CSIC), Madrid, SPAIN [KEYNOTE LECTURE]
- 11:50 am L-121 **Microfluidic Chip-Capillary Electrophoresis Devices for Metabolomics Applications.** Ying-Sing Fung, Hong Kong University, Chemistry Department, HONG KONG
- 12:15 pm L-122 **In Vivo Solid-phase Microextraction: New Tool in Metabolomics.** Dajana Vuckovic¹, Ines de Lannoy², Brad Gien², Robert Shirey³, Len Sidisky³, Janusz Pawliszyn⁴, ¹University of Waterloo/University of Toronto, Donnelly Centre of Cellular and Biomolecular Research, Toronto, CANADA; ²NoAB BioDiscoveries Inc., Mississauga, CANADA; ³Supelco, Bellefonte, PA, USA; ⁴University of Waterloo, Waterloo, CANADA
- 12:40 pm Pause – Lunch on own

Monday Session 4C. Omics

Session Chairs: Chris S. Ivanoff, DDS, University of Tennessee College of Dentistry, Memphis, TN, USA, and Michael J. Heller, University of California San Diego, La Jolla, CA, USA

Location: Composite Room (3rd Floor)

- 11:20 am L-123 **Effect of Dietary Polyphenols on K562 Leukemia Cells: A Foodomics Approach.** Alberto Valdes¹, Carolina Simo¹, Clara Ibanez¹, Lourdes Rocamora², Jose Antonio Ferragut², Virginia Garcia-Canas¹, Alejandro Cifuentes¹, ¹CSIC, Laboratory Foodomics, Madrid, SPAIN; ²UMH, Alicante, SPAIN [KEYNOTE LECTURE]
- 11:50 am L-124 **Analysis of Secretome and Plasma using Reversed Phase Liquid Chromatography in Mass Spectrometry-based Pipeline for Enhanced Biomarker Development.** Miroslava Stastna, Jennifer Van Eyk, Johns Hopkins University, School of Medicine, Baltimore, MD, USA
- 12:15 pm L-125 **Allergomic Study of Cypress Pollen via Combinatorial Peptide Ligand Libraries.** Elisa Fasoli¹, Alfonsina D'Amato¹, Pier Giorgio Righetti¹, Youcef Shahali², Jean-Pierre Sutra², Norihiro Futamura³, Egisto Boschetti⁴, Helene Senechal², Pascal Poncet², ¹Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Milano, ITALY; ²ESPCI ParisTech, Paris, FRANCE; ³Plant Molecular Biology Laboratory, Department of Molecular and Cell Biology, Ibaraki, JAPAN; ⁴Bio Rad Laboratories, Gif-sur-Yvette, FRANCE
- 12:40 pm Pause – Lunch on own

Monday Session 4D. Microfluidics and Nanofluidics – I

Session Chairs: Bingcheng Lin, Dalian Institute of Chemical Physics, Dalian, CHINA, and Victor Ugaz, Texas A&M University, College Station, TX, USA

Location: Tuscan Room (3rd Floor)

Microfluidics and nanofluidics devices are in a stage of continuous development and are revolutionizing the way science is done. The ITP 2012 scientific program is populated by many important talks by world experts in the field

- 11:20 am L-126 **Microfluidic Chemical Separation Devices with Integrated Nanoelectrospray Emitters.** Scott Mellors, Nick Batz, Will Black, J. Michael Ramsey, University of North Carolina-Chapel Hill, Chapel Hill, NC, USA [KEYNOTE LECTURE]
- 11:50 am L-127 **Unmanned Platform for Long-Range Remote Analysis of Volatile Compounds in Air Samples.** Eric Tavares da Costa¹, Carlos A. Neves¹, Guilherme Minoru Hotta¹, Denis Tadeu Rajh Vidal¹, Marcelo Fagundes Barros¹, Arturo A. Ayon², Carlos D. Garcia², Claudimir Lucio do Lago¹, ¹Universidade de Sao Paulo, Sao Paulo, BRAZIL; ²University of Texas San Antonio, San Antonio, TX, USA
- 12:15 pm L-128 **Microfluidic Liquid Chromatography Separations within the Column Dead-Volume: Conceptual Thoughts.** Iulia Lazar, Virginia Tech, Blacksburg, VA, USA
- 12:40 pm Pause – Lunch on own
- 12:45-1:45 pm **FREE VENDOR WORKSHOP SPONSORED BY BECKMAN COULTER on the "Latest Advances in CESI-MS"**
Location: Chapter Room (4th Floor) – *Complimentary light lunch will be provided*
MUST SIGN UP BY CONTACTING EDNA BETGOVARGEZ AT ebetgovargez@beckman.com
- 1:45-3:00 pm **POSTER SESSION PRESENTATIONS**
Location: Edinburgh Hall (5th Floor)
All posters will remain up for viewing all day Monday, Tuesday and Wednesday. All posters should be put up on Monday, October 1, between 7:30AM and 1:00PM. Do not remove your poster until after the meeting ends on Wednesday afternoon. See "Poster Guidelines"

Monday Session 5A. CE-MS – I

Session Chairs: Alejandro Cifuentes, CSIC, Madrid, SPAIN, and Herbert Lindner, Innsbruck Medical University, Innsbruck, AUSTRIA

Location: Corinthian Room (2nd Floor)

Mass spectrometry hyphenated with CE, CEC or HPLC is providing solutions to many detection and identification problems encountered with complex samples. There are important lectures in the program on this topic and they are a MUST to attend by interested participants

- 3:00 pm L-129 **Capillary Zone Electrophoresis Coupled with an Electrokinetically-pumped Electro spray Interface for Applications in Proteomics.** Norman Dovichi, University of Notre Dame, Notre Dame, IN, USA [KEYNOTE LECTURE]
- 3:30 pm L-130 **Capillary Electrophoresis Coupled to ESI Mass Spectrometry for the Study of Matrix Metalloproteinase.** Xu Wang, Erwin Adams, Ann Van Schepdael, KU Leuven, Pharmaceutical Analysis, Leuven, BELGIUM
- 3:55 pm L-131 Talk by Busnel replaced with the following talk on **Optimization of a Neutral CESI Injection Volume and Separation Power.** Anton Heemskerk, Biomolecular Mass Spectrometry Unit, Department of Parasitology, Leiden University Medical Center, Leiden, THE NETHERLANDS
- 4:15 pm Pause

Monday Session 5B. Fundamentals – I

Session Chairs: Prashanta Dutta, Washington State University, Pullman, WA, USA, and Gyula Vigh, Texas A&M University, College Station, TX, USA

Location: Doric Room (4th Floor)

The fundamentals of the electro- and liquid phase-separation techniques are very well represented in the scientific program of ITP 2012 by a group of world renowned scientists. The sessions on fundamentals are very inviting to attend

- 3:00 pm L-132 **Field-Flow Fractionation: Improving the Method by Changing the Fluid-analyte-walls Interactions.** Gary W. Slater, Tyler N. Shendruk, University of Ottawa, Physics Department, Ottawa, CANADA [KEYNOTE LECTURE]
- 3:30 pm L-133 **The Sequential Use of pH and Solvent Gradients can Double or Triple the Peak Capacity and the Resolving Power of High- or Ultra-Pressure Liquid Chromatography.** Joe Foley, Adam Socia, Drexel University, Department of Chemistry, Philadelphia, PA, USA
- 3:55 pm L-134 **Electromigration Dispersion due to an Interaction with a Neutral Selector.** Pavel Dubsy, Vlastimil Hruska, Martin Benes, Jana Svobodova, Bohuslav Gas, Charles University in Prague, Faculty of Science, Department of Physical and Macromolecular Chemistry, Prague, CZECH REPUBLIC
- 4:15 pm Pause

Monday Session 5C. Microfluidics and Nanofluidics – II

Session Chairs: Karine Faure, Institut des Sciences Analytiques, Lyon, FRANCE, and Claudimir Lucio do Lago, Universidade de Sao Paulo, Sao Paulo, BRAZIL

Location: Composite Room (3rd Floor)

- 3:00 pm L-135 **Interfacing Microfluidics with Microelectronics via Droplet.** Bingcheng Lin, Dalian Institute of Chemical Physics, Dalian, CHINA [KEYNOTE LECTURE]
- 3:30 pm L-136 **Harnessing Enzymatic Machining at the Nano- and Micro-scales to Enable Enhanced Separations.** Victor Ugaz, Texas A&M University, Chemical Engineering Department, College Station, TX, USA
- 3:55 pm L-137 **A Microfluidic UPLC-MS System for Small and Large Molecule Analysis.** Steven Cohen, Giuseppe Astratita, Giorgis Isaac, Angela Doneanu, Jay Johnson, Jim Murphy, Waters Corporation, Milford, MA, USA
- 4:15 pm Pause

Monday Session 6A. Instrumentation and Detection

Session Chairs: Yoshinobu Baba, Nagoya University, Nagoya, JAPAN, and Pavel Kubáň, Institute of Analytical Chemistry of the AS CR, v.v.i., Brno, CZECH REPUBLIC

Location: Corinthian Room (2nd Floor)

This session complements other sessions by providing the participants with some novel detection approaches and instrumentation setups

- 4:20 pm L-138 **New Instrumental Developments for Fast CE-MS and Hyphenation of CE-MS with Electrochemistry.** Frank-Michael Matysik, Marco Grundmann, Peter Palatzky, Rebekka Scholz, Jonas Mark, Marija Cindric, University of Regensburg, Institute of Analytical Chemistry, Regensburg, GERMANY
- 4:45 pm L-139 **Study on Bioconjugation of Quantum Dots by Combining Capillary Electrophoresis with Fluorescence Correlation Spectroscopy.** Jicun Ren, Shanghai Jiaotong University, Department of Chemistry, Shanghai, CHINA
- 5:10 pm L-140 **Development of Capillary Electrophoretic Methods and Instrumentation for the Analysis of Explosives.** Cameron Johns, Joseph P. Hutchinson, Michael C. Breadmore, Emily F. Hilder, Rosanne M. Guijt, Pavel N. Nesterenko, Paul R. Haddad, Greg W. Dicinoski, ACROSS, University of Tasmania, Hobart, Tasmania, AUSTRALIA
- 5:35 pm L-141 **Versatile Capillary Electrophoresis and Capillary Liquid Chromatography for Nanodomain Interaction and Biosensor Development Studies.** Marja-Liisa Riekkola¹, Katriina Lipponen¹, Yueqi Liu¹, Geraldine Cilpa-Karhu¹, Katariina Öörni², Petri T. Kovanen², ¹University of Helsinki, Department of Chemistry, Laboratory of Analytical Chemistry, Helsinki, FINLAND; ²Wihuri Research Institute, Helsinki, FINLAND
- 6:00 pm Pause

Monday Session 6B. Biomedical Applications

Session Chairs: Terry M. Phillips, NIH, Bethesda, MD, USA, and Hideaki Hisamoto, Osaka Prefecture University, Osaka, JAPAN

Location: Doric Room (4th Floor)

This session adds extra characters to the scientific program by bringing together the world experts in nanotechnology, medical science, nanoengineering and pharmaceutical chemistry to deliver recent progress in the application of separation sciences to solving biomedical problems

- 4:20 pm L-142 **High Throughput Verification of Recombinant Protein Production using the ISET, a MALDI Target for Integrated and Automated Proteomic Sample Preparation.** Belinda Adler¹, Tove Boström², Simon Ekström¹, Sophia Hober², Thomas Laurell¹, ¹Lund University, Division of Nanobiotechnology, Lund, SWEDEN; ²KTH, Division of Proteomics, School of Biotechnology, Stockholm, SWEDEN
- 4:45 pm L-143 **Dielectrophoretic Drug Transport into Teeth.** Chris S. Ivanoff, DDS, Timothy L. Hottel, DDS, MS, MBA, Franklin Garcia-Godoy, DDS, MS, Ph.D., Ph.D., University of Tennessee, College of Dentistry, Memphis, TN, USA
- 5:10 pm L-144 **Dielectrophoretic/Electrophoretic Device for In-Situ Sample Preparation and PCR Detection of Disease Biomarkers.** Michael J. Heller¹, Avery Sonnenberg¹, Raj Krishnan², ¹University of California San Diego, Department of Nanoengineering, La Jolla, CA, USA; ²Biological Dynamics, La Jolla, CA, USA
- 5:35 pm TALK CANCELLED L-145 **Pharmaceutical Analysis by using Capacitively Coupled Contactless Conductivity Detection Coupled to Capillary Electrophoresis.** Mohamed N. El-Attug¹, Erwin Adams², Ann Van Schepdael², ¹Tripoli University, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Tripoli, LIBYA; ²KU Leuven, Laboratory for Pharmaceutical Analysis, Faculteit Farmaceutische Wetenschappen, Leuven, BELGIUM
- 6:00 pm Pause

Monday Session 6C. Young Scientists – I

Session Chair: Miroslava Stastna, Johns Hopkins University, Baltimore, MD, USA, and Stephanie Descroix, Institut Curie UMR168, Paris, FRANCE

Location: Composite Room (3rd Floor)

Young scientists are the scientists of the future. ITP 2012 participants are invited to attend the two sessions featuring young scientists to meet the new generation of separation scientists in general and analytical chemists in particular

- 4:20 pm L-146 **A Novel Synthetic Route of the Caspase 3 Sensor for Determination of Caspase 3 Based on Forster Resonance Energy Transfer.** Marcela Liskova¹, Karel Kleparnik¹, Pavel Pazdera², Frantisek Foret¹, ¹Institute of Analytical Chemistry of the ASCR v. v. i., Bioanalytical Instrumentation, Brno, CZECH REPUBLIC; ²Masaryk University, Faculty of Science, Centre for Syntheses at Sustainable Conditions and their Management, Brno, CZECH REPUBLIC
- 4:35 pm L-147 **Dielectrophoretic Protein Manipulation in a Microfluidic Device.** Asuka Nakano, Fernanda Camacho-Alanis, Tzu-Chiao Chao, Alexandra Ros, Arizona State University, Department of Chemistry and Biochemistry, Tempe, AZ, USA
- 4:50 pm L-148 **DNA Electrophoresis via Noise-Synchronized Entropic Trapping: A Versatile Tool for Enhanced Separations and Nanostructural Analysis.** Nan Shi, Victor M. Ugaz, Texas A&M University, Department of Chemical Engineering, College Station, TX, USA
- 5:05 pm L-149 **Determination of Nitrite in Saliva using Microfluidic Paper-based Analytical Devices.** Rubiane Borba¹, Samir Bhakta², Mario Junior³, Carlos D. Garcia², Emanuel Carrilho¹, ¹Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Paulo, BRAZIL; ²University of Texas San Antonio, Department of Chemistry, San Antonio, TX, USA; ³Faculdade de Odontologia de Ribeirao Preto, Sao Paulo, BRAZIL
- 5:20 pm L-150 **Microfabricated Sensors with Amalgam Working Electrodes.** Petra Juskova¹, Hana Cernocka², Veronika Ostatna², Emil Palecek², Frantisek Foret¹, ¹Institute of Analytical Chemistry ASCR v.v. i., Brno, CZECH REPUBLIC; ²Institute of Biophysics ASCR v. v. i., Brno, CZECH REPUBLIC
- 5:35 pm L-151 **Studies of Interaction of Ionic Liquids with DNA and Protein Based on Capillary Electrophoresis.** Xinying Zhao, Feng Qu, Fan Chen, Aiqin Luo, Beijing Institute of Technology, School of Life Science, Beijing, CHINA
- 5:50 pm TALK CANCELLED L-152 **Validation and Optimization of a Liquid-Phase Microextraction Method Based on the Solidification of Floating Organic Micro Drop for Trace Analysis of BTEX in the Water Samples.** Mohamadreza Tajbakhsh¹, Masoumeh Helalizadeh², Hakim Faraji³, ¹Iranian Research Institute of Plant Protection, Tehran, IRAN; ²Islamic Azad University, Young researchers Club, Varamin-Pishva Branch, Varamin, IRAN; ³Islamic Azad University, Varamin-Pishva Branch, Chemistry Department, Varamin, IRAN
- 6:05 pm Pause

Tuesday, October 2, 2012

7:15 am **SYMPOSIUM REGISTRATION OPEN**
Location: Corinthian Foyer (2nd Floor)

9:00am - 6:00 pm **EXHIBITION OPEN** (5th Floor)

Tuesday Session 7. Plenary Lectures- II

Session Chair: Paul Haddad, University of Tasmania, Hobart, AUSTRALIA

Location: Corinthian Room (2nd Floor)

This plenary lecture session will provide the participants with the background for a better understanding of extended-nanofluidic systems on chip as well as for the efficient utilization of isotachophoresis in the area of nucleic acids

8:00 am L-201 **Extended-Nano Fluidic Systems on Chip for Analysis.** Takehiko Kitamori, The University of Tokyo, Graduate School of Engineering, Tokyo, JAPAN [PLENARY LECTURE]

8:30 am L-202 **Isotachophoresis for Extraction and Rapid Hybridization of Nucleic Acids.** Crystal M. Han, Moran Bercovici, Lewis A. Marshall, Giancarlo Garcia-Schwarz, Alex Persat, Joe C. Liao, Juan G. Santiago, Stanford University, Mechanical Engineering Department, Stanford, CA, USA [PLENARY LECTURE]

9:00 am Coffee Break in Exhibit Hall (Edinburgh Room, 5th Floor)

Tuesday Session 8A. Microfluidics and Nanofluidics – III

Session Chairs: Takehiko Kitamori, The University of Tokyo, Tokyo, JAPAN, and Iulia Lazar, Virginia Tech, Blacksburg, VA, USA

Location: Corinthian Room (2nd Floor)

9:30 am L-203 **Advancements in Microfluidic Acoustophoretic Cell Separation Utilizing 2-Dimensional Ultrasonic Standing Wave Pre-focusing.** Thomas Laurell, Lund University, Division of Nanobiotechnology, Lund, SWEDEN [KEYNOTE LECTURE]

10:00 am L-204 **Thermally Responsive Phospholipid Preparations for Fluid Steering and Separation in Microfluidics.** Lisa Holland, Xingwei Wu, Ted Langan, Brandon Durney, West Virginia University, Chemistry Department, Morgantown, WV, USA

10:25 am L-205 **Microfluidic Separation Devices using Periodic Stationary Media.** German Drazer, Johns Hopkins University, Chemical and Biomolecular Engineering, Baltimore, MD, USA

10:50 am L-206 **Single-Stream Free-Flow Isoelectric Focusing with pH Gradients Induced by Water Splitting in Bipolar Membranes-Integrated Microfluidic Devices.** Li-Jing (Larry) Cheng, Hsueh-Chia Chang, University of Notre Dame, Notre Dame, IN, USA

11:15 am Pause

Tuesday Session 8B. Fundamentals – II

Session Chairs: Joe Foley, Drexel University, Philadelphia, PA, USA, and Michael Bowser, University of Minnesota, Minneapolis, MN, USA

Location: Doric Room (4th Floor)

- 9:30 am L-207 **Recent Developments in Capillary Isoelectric Focusing Separations.** Gyula Vigh¹, Nino Kokiashvili², Ming-chin Li¹, ¹Texas A&M University, Chemistry Department, College Station, TX, USA; ²Iv. Javakishvili Tbilisi State University, Tbilisi, GEORGIA [KEYNOTE LECTURE]
- 10:00 am L-208 **New Simulation Tools for Understanding and Predicting Separation in Electrophoresis.** Bohuslav Gas¹, Jana Svobodova¹, Vlastimil Hruska², Martina Riesova¹, Martin Benes¹, Iva Zuskova¹, ¹Charles University, Faculty of Science, Physical Chemistry Department, Prague, CZECH REPUBLIC; ²Agilent Technologies GmbH, Waldbronn, GERMANY
- 10:25 am L-209 **Modeling and Simulation of Particle Chaining using DC Dielectrophoresis.** Prashanta Dutta, Robiul Hossan, Washington State University, Mechanical and Materials Engineering Department, Pullman, WA, USA
- 10:50 am L-210 **Comparative Investigations on Two Isotachophoretic Methods based on Moving Boundary System (MBS) and Reaction Boundary (MRB).** Cheng-Xi Cao, Liu-Yin Fan, Shanghai Jiao Tong University, School of Life Science and Biotechnology, Shanghai, CHINA
- 11:15 am Pause

Tuesday Session 8C. Glycomics

Session Chairs: James P. Landers, University of Virginia Health Sciences Center, Charlottesville, VA, USA, and Fred Regnier, Purdue University, West Lafayette, IN, USA

Location: Composite Room (3rd Floor)

Glycomics is one of the branches of the omics area. This session has key lectures dealing with the applications of electro- and liquid phase-separation techniques to the analysis of carbohydrates and glyconjugates that have many significant biological roles

- 9:30 am L-211 **Development of Lectin Affinity Separation Technologies and their Applications to Bioscience/Bioindustry.** Jun Hirabayashi, National Institute of Advanced Industrial Science and Technology, Research Center for Stem Cell Engineering, Tsukuba, JAPAN [KEYNOTE LECTURE]
- 10:00 am L-212 **Assessing the Glycomic Changes of Breast Cancer Tissues by LC-MS.** Yehia Mechref, Yunli Hu, Janie DeSantos-Garcia, Shiyue Zhou, Texas Tech University, Department of Chemistry and Biochemistry, Lubbock, TX, USA
- 10:25 am L-213 **Novel Non-reductive Labeling Method for N-glycans Sheathless CE-MS Analysis.** Cai Tie, Xin-Xiang Zhang, Peking University, College of Chemistry, Beijing, CHINA
- 10:50 am L-214 **Capillary Electrophoresis Mass Spectrometry for Characterization of Complex Glycans and Glycoproteins.** Roxana G. Jayo¹, Jianjun Li², David D. Y. Chen¹, ¹University of British Columbia, Chemistry Department, Vancouver, CANADA; ²National Research Council Canada, Ottawa, CANADA
- 11:15 am Pause

Tuesday Session 9A. Detection – I

Session Chairs: Hirokawa Takeshi, Hiroshima University, Hiroshima, JAPAN, and Govert Somsen, Utrecht University, Utrecht, THE NETHERLANDS

Location: Corinthian Room (2nd Floor)

High efficiency separation methods are somewhat meaningless without powerful detection approaches to determine species that are at trace levels in most samples of biological origins. The detection sessions of the ITP 2012 scientific program are aimed at providing the latest technological developments for achieving sensitive detection

- 11:20 am L-215 **A New Type of Silicon NanoFET Detector with Single-nanoparticle Sensitivity.** Annelise E. Barron¹, Denitsa Milanova², Peter Griffin³, Matthew B. Kerby¹, R. Fabian Pease⁴,
¹Stanford University, Bioengineering Department, Stanford, CA, USA; ²Stanford University, Mechanical Engineering Department, ³Stanford University, Genome Technology Center, Stanford, CA, USA; ⁴Stanford University, Electrical Engineering Department, Stanford, CA, USA
[KEYNOTE LECTURE]
- 11:50 am L-216 **Mass Spectrometry and Surface-Enhanced Raman Spectrometry Detection in Capillaries and Microchannels.** Frantisek Foret, Institute of Analytical Chemistry ASCR v.v.i., Brno, CZECH REPUBLIC
- 12:15 pm L-217 **Strategies for Improving Detectability in Microscale Electrophoresis.** Saeko Kinami¹, Hiroshi Koino¹, Takayuki Kawai¹, Kenji Sueyoshi¹, Fumihiko Kitagawa², Koji Otsuka¹,
¹Kyoto University, Department of Material Chemistry, Graduate School of Engineering, Kyoto, JAPAN; ²Hirosaki University, Department of Frontier Materials Chemistry, Graduate School of Science and Technology, Aomori, JAPAN
- 12:40 pm Pause – Lunch on own

Tuesday Session 9B. Nucleic Acids – I: DNA Separation and Sequencing

Session Chair: Juan G. Santiago, Stanford University, Stanford, CA, USA, and John Thompson, Nabsys Inc., Providence, RI, USA

Location: Doric Room (4th Floor)

Besides that electoseparation techniques have contributed very effectively to the sequencing of the genome, we are witnessing now separation free approaches for achieving DNA sequencing. The nucleic acids sessions offers a variety of important lectures on novel methods for DNA separation and sequencing as well as the next generation sequencing methods (i.e., separation free methods)

- 11:20 am L-218 **The Role of Order in DNA Separations.** Kevin Dorfman, Daniel Olson, Scott King, University of Minnesota, Chemical Engineering and Materials Science, Minneapolis, MN, USA
[KEYNOTE LECTURE]
- 11:50 am L-219 **Capillary Electrophoresis Studies of Molecular Beacon-like DNA Hairpins.** Nancy Stellwagen, Chun Yaw (Joel) Chang, University of Iowa, Department of Biochemistry, Iowa City, IA, USA
- 12:15 pm L-220 **A Two-dimensional Microfluidic Platform for DNA Profiling by Fragment Length and Sequence.** Linda B. McGown, Xueru Zhang, Steven Cramer, Rensselaer Polytechnic Institute, Chemistry and Chemical Biology, Troy, NY, USA
- 12:40 pm Pause – Lunch on own

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Tuesday Session 9C. Young Scientists – II

Session Chairs: Julie Schappler, University of Geneva, Geneva, SWITZERLAND, and Lisa Holland, West Virginia University, Morgantown, WV, USA

Location: Composite Room (3rd Floor)

- 11:20 am L-221 **Investigations of MS Compatible Capillary Coatings for Intact Protein Analysis by CE-MS.** Isabelle Kohler¹, Julie Schappler¹, Marc Augsburg², Serge Rudaz¹, ¹University of Geneva, School of Pharmaceutical Sciences, Geneva, SWITZERLAND; ²University Center of Legal Medicine, Lausanne, SWITZERLAND
- 11:35 am L-222 **Experimental and Theoretical Study of DNA Origami Dielectrophoresis in a Microfluidic System.** Lin Gan¹, Baoquan Ding², Hao Yan², Alexandra Ros¹, ¹Arizona State University, Department of Chemistry and Biochemistry, Tempe, AZ, USA; ²Arizona State University, Biodesign Institute, Tempe, AZ, USA
- 11:50 am L-223 **Electrokinetic Motion of Particles in Ratchet Microchannels.** Saurin Patel, Xiangchun Xuan, Clemson University, Mechanical Engineering, Clemson, SC, USA
- 12:05 pm L-224 **Sensitive CE-LIF Determination of Ubiquitin in Biological Fluids using an On-line Derivatization Method.** Kiarach Mesbah¹, Farid Oukacine¹, Markus Otto², Myriam Taverna¹, ¹Universite Paris-Sud, CNRS, LPNSS Faculte de Pharmacie, Chatenay-Malabry, FRANCE; ²University of Ulm, Department of Neurology, Ulm, GERMANY
- 12:20 pm L-225 **Development of an In-situ Immobilized Enzyme Reactor for Peptide Mapping by Capillary Electrophoresis.** Golfam Ghafourifar, Antoine Fleitz, Karen Waldron, University of Montreal, Department of Chemistry, Montreal, CANADA
- 12:35 pm Pause – Lunch on own

Tuesday Session 9D. Bioanalysis – II

Session Chairs: Yehia Mechref, Texas Tech University, Lubbock, TX, USA, and Shaorong Liu, University of Oklahoma, Norman, OK, USA

Location: Tuscan Room (3rd Floor)

- 11:20 am L-226 **A Low-cost, Centrifugally-driven Polyester-toner (PeT) Microchip with Passive Valve Flow Control for Protein Quantitation.** Yiwen Ouyang, J Li, James P. Landers, University of Virginia Health Sciences Center, Department of Chemistry and Mechanical Engineering, Charlottesville, VA, USA [KEYNOTE LECTURE]
- 11:50 am L-227 **Metabolite Profiling in Urine of Cancer Patients by LC-TOF-MS and LC-MS/MS.** Michal J. Markuszewski¹, Wiktoria Struck¹, Małgorzata Waszczuk-Jankowska¹, Arlette Yumba Mpanga¹, Piotr Koslinski², Danuta Siluk¹, Marcin Markuszewski³, Roman Kaliszan¹, ¹Medical University of Gdansk, Department of Biopharmaceutics and Pharmacodynamics, Gdansk, POLAND; ²Nicolaus Copernicus University in Torun, Department of Toxicology Ludwik Rydygier Collegium Medicum in Bydgoszcz, Torun, POLAND; ³Medical University of Gdansk, Department of Urology, Gdansk, POLAND
- 12:15 pm L-228 **The Basis of Protein, Bacteria and Cell Aptamers Sieving Based on Capillary Electrophoresis.** Feng Qu, Xinying Zhao, Xiaomei Zhou, Zhaoyang Meng, Beilei Lou, Beijing Institute of Technology, School of Life Science, Beijing, CHINA
- 12:40 pm Pause – Lunch on own

12:45-1:45 pm **FREE VENDOR WORKSHOP SPONSORED BY AGILENT TECHNOLOGIES on the "Complete Integration of CE-MS"**

Location: Chapter Room (4th Floor) – *Complimentary light lunch will be provided*
MUST SIGN UP BY CONTACTING Inquiries@agilent.com

1:45-3:00 pm **POSTER SESSION PRESENTATIONS**

Location: Edinburgh Hall (5th Floor)

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Tuesday Session 10A. Enantioseparations

Session Chairs: Irving Wainer, NIH, Baltimore, MD, USA, and Martin G. Schmid, Karl-Franzens-University, Graz, AUSTRIA

Location: Corinthian Room (2nd Floor)

The ITP 2012 meeting is a completely new edition offering lectures in all disciplines including the separation and characterization of enantiomers, chiral purity determinations and profiling enantiomeric chiral pharmaceuticals

3:00 pm L-229 **Recent Studies on Separation Mechanism of Enantiomers in Capillary Electrophoresis.** Bezhn Chankvetadze, Tbilisi State University, Institute of Physical and Analytical Chemistry, Tbilisi, GEORGIA [KEYNOTE LECTURE]

3:30 pm L-230 **Nano-LC and CEC for Chiral Separations using Modified Polysaccharides Coated on Core-shell Silica Particles.** Salvatore Fanali¹, Zeineb Aturki¹, Giovanni D'Orazio¹, Anna Rocco¹, Bezhn Chankvetadze², ¹Institute of Chemical Methodologies, Italian National Council of Research, Monterotondo, ITALY; ²Tbilisi State University, Tbilisi, GEORGIA

3:55 pm L-231 **Comparative Enantioseparation of Chiral Drug Compounds with Different Cyclodextrins in Aqueous and Non-aqueous CE and Study of Related Selector-selectand Interactions by NMR Spectroscopy.** Anne-Catherine Servais¹, Marianne Fillet¹, Bezhn Chankvetadze², Jacques Crommen¹, ¹University of Liege, Laboratory of Pharmaceutical Analytical Chemistry, Department of Pharmaceutical Sciences, Liege, BELGIUM; ²Tbilisi State University, Tbilisi, GEORGIA

4:15 pm Pause

Tuesday Session 10B. Applications and Methodologies – I

Session Chairs: Michal J. Markuszewski, Medical University of Gdansk, Gdansk, POLAND, and Nancy Stellwagen, University of Iowa, Iowa City, IA, USA

Location: Doric Room (4th Floor)

The applications and methods development sessions make up an essential part of the ITP 2012 meeting featuring interesting lectures on many aspects of the life sciences

3:00 pm L-232 **Applications of Micro Free Flow Electrophoresis.** Michael Bowser, Meng Jing, Nicholas Frost, University of Minnesota, Department of Chemistry, Minneapolis, MN, USA [KEYNOTE LECTURE]

3:30 pm L-233 **Three Dimensional Selection of Leptin Aptamers using Capillary Electrophoresis and Implications for Clone Validation.** Jon Ashley, Sam Li, National University of Singapore, Department of Chemistry, Singapore, SINGAPORE

3:55 pm L-234 **Herbal Fingerprints: Extraction of Information, Focussing on Similarity Analyses.** Yvan Vander Heyden, Goedele Alaerts, Melanie Dumarey, Mohammad Goodarzi, Christophe Tistaert, Bieke Dejaegher, Vrije Universiteit Brussel - VUB-FABI, Brussels, BELGIUM

4:15 pm Pause

Tuesday Session 10C. Dielectrophoresis – II

Session Chairs: Rafael Davalos, Virginia Tech, Blacksburg, VA, USA, and Cullen Buie, Massachusetts Institute of Technology, Cambridge, MA, USA

Location: Composite Room (3rd Floor)

- 3:00 pm L-235 **Dielectrophoretic Manipulation of Particles: Mathematical Modeling and Experimental Results.** Blanca Lapizco-Encinas, Rochester Institute of Technology, Rochester, NY, USA [KEYNOTE LECTURE]
- 3:30 pm L-236 **Constriction-based Dielectrophoresis in Nanofluidic Devices for Protein Pre-concentration.** Nathan Swami¹, Mikiyas Tsegaye¹, Kuo-Tang Liao¹, Chia-Fu Chou², ¹University of Virginia, Electrical and Computer Engineering Department, Charlottesville, VA, USA; ²Academia Sinica, Taipei, TAIWAN
- 3:55 pm L-237 **Reservoir-based Dielectrophoresis (rDEP) for Microfluidic Particle Separation.** Xiangchun Xuan, Clemson University, Department of Mechanical Engineering, Clemson, SC, USA
- 4:15 pm Pause

Tuesday Session 10D. Nucleic Acids – II

Session Chairs: Linda B. McGown, Rensselaer Polytechnic Institute, Troy, NY, USA, and Annelise E. Barron, Stanford University, Stanford, CA, USA

Location: Tuscan Room (3rd Floor)

- 3:00 pm L-238 **High-sensitive Analysis of DNA Fragments by EKS-CGE and Possible Damage of the Fragments in Water by Applying High Potential Gradients.** Takeshi Hirokawa¹, Satomi Mori¹, Xiaoxue Ye¹, Mihoro Yamada¹, Jyun Inoue², Zhongqi Xu³, ¹Hiroshima University, Graduate School of Engineering, Higashi-hiroshima, JAPAN; ²AIST, Tokyo, JAPAN; ³Donghua University, Shanghai, PR CHINA [KEYNOTE LECTURE]
- 3:30 pm L-239 **Monovalent Cations Control DNA Bending.** Earle Stellwagen, Qian Dong, Nancy Stellwagen, University of Iowa, Department of Biochemistry, Iowa City, IA, USA
- 3:55 pm L-240 **Entropophoresis: A Novel Nanofluidic Transport Method for DNA Analysis.** Samuel M. Stavis², Jon Geist², Michael Gaitan², Laurie E. Locascio¹, Elizabeth A. Strychalski¹, ¹Material Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD, USA; ²Physical Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD, USA
- 4:15 pm Pause

Tuesday Session 11A. CE-MS – II

Session Chairs: Christian Klampfl, Johannes Kepler University, Linz, AUSTRIA, and Xin-Xiang Zhang, Peking University, Beijing, CHINA

Location: Corinthian Room (2nd Floor)

- 4:20 pm L-241 **CESI-MS, a Promising Tool for the Analysis of Peptides and their Post-translationally Modified Forms in Proteomic Studies.** Herbert Lindner, Innsbruck Medical University, Division of Clinical Biochemistry Biocenter, Innsbruck, AUSTRIA [KEYNOTE LECTURE]
- 4:50 pm L-242 **Enhanced Coverage of the Anionic Urine Metabolome by CE-TOF-MS.** Govert Somsen, Miranda Kok, Gerhardus de Jong, Utrecht University, Biomolecular Analysis, Utrecht, THE NETHERLANDS
- 5:15 pm L-243 **CE-ESI-MS Interfaces: Effect on Protein Ionization Profiles.** Grégoire Bonvin, Serge Rudaz, Julie Schappler, University of Geneva, School of Pharmaceutical Sciences, Geneva, SWITZERLAND

5:40 pm L-244 **Easy Peak Tracking in CE-UV-ESI-MS by Incorporating the Drift in Current in the Mobility Calculations.** Nickolaj J. Petersen, Steen Honore Hansen, University of Copenhagen, Copenhagen, DENMARK

6:05 pm Pause

Tuesday Session 11B. Miniaturization - I

Session Chairs: Frantisek Foret, Institute of Analytical Chemistry ASCR, v.v.i., Brno, CZECH REPUBLIC, and German Drazer, Johns Hopkins University, Baltimore, MD, USA
Location: Doric Room (4th Floor)

This session on miniaturization-I and its companion miniaturization-II bring together world experts to discuss major breakthroughs in the area of miniaturized systems for a variety of chemical analyses including proteins, extraterrestrial samples, single molecules CEC, biomimetic approaches for organ on chips and molecular sensing

4:20 pm L-245 **Magnetophoretic Separation and Detection in Microchannels.** Je-Kyun Park, Korea Advanced Institute of Science and Technology (KAIST), Department of Bio and Brain Engineering, Daejeon, REPUBLIC OF KOREA [KEYNOTE LECTURE]

4:50 pm L-246 **Microchip Capillary Electrophoresis for Extraterrestrial In situ Chemical Analyses Part I: Expanding the Range of Targets and Dealing with Complex Samples.** Maria F. Mora, Amanda M. Stockton, Morgan L. Cable, Peter A. Willis, California Institute of Technology, Jet Propulsion Laboratory, Pasadena, CA, USA

5:15 pm L-247 **Microchip Capillary Electrophoresis for Extraterrestrial In situ Chemical Analyses Part II: Making it Work on Another Planet.** Peter A. Willis, Amanda Stockton, Fernanda Mora, Morgan Cable, California Institute of Technology, Jet Propulsion Laboratory, Pasadena, CA, USA

5:40 pm L-248 **Miniaturizing Western Blot through Protein Capture in Hydrogel.** Anais Ali-Cherif, Marine Verhusel, Laurent Malaquin, Jean-Louis Viovy, Stephanie Descroix, Institut Curie, Paris, FRANCE

6:05 pm Pause

Tuesday Session 11C. Proteomics / Biomarkers

Session Chairs: Jonas Bergquist, Uppsala University, Uppsala, SWEDEN, and Hanfa Zou, Chinese Academy of Sciences, Dalian, CHINA
Location: Composite Room (3rd Floor)

4:20 pm L-249 **Comparative Proteomic Profiling of Human Breast Cell Lines Exposed to the Phytoestrogen Genistein.** Tim Veenstra, Frederick National Laboratory for Cancer Research, Laboratory of Proteomics and Analytical Technologies, Frederick, MD, USA [KEYNOTE LECTURE]

4:50 pm L-250 **Concentration of Low-abundance Proteins from Serum using Microchip Isotachopheresis.** Cornelius Ivory, Danny Bottenus, Washington State University, Voiland School of Chemical Engineering and Bioengineering, Pullman, WA, USA

5:15 pm L-251 **Profiling of Comprehensive Proteomics in Inflammatory Diseases by Immunoaffinity Capillary Electrophoresis.** Norberto Guzman, Princeton Biochemicals Inc., Bioanalysis, Biomarkers, Princeton, NJ, USA

5:40 pm L-252 **Gold Nanoparticle (AuNP)-based Immuno Probes for Targeting Proteomics.** Shu-Hui Chen, National Cheng Kung University, Taiwan, RO CHINA

6:05 pm Pause

Tuesday Session 11D. Forensic and Biomedical

Session Chairs: Salvatore Fanali, Institute of Chemical Methodologies - C. N. R., Monterotondo, ITALY, and Craig Lunte, University of Kansas, Lawrence, KS, USA

Location: Tuscan Room (3rd Floor)

This session adds to the biomedical applications session the flavor of forensic determinations using CE and selective detection

- 4:20 pm L-253 **Improved Analytical Methods for the Determination of Carbohydrate Deficient Transferrin (CDT), the Most Reliable Biochemical Marker of Chronic Abuse of Alcohol.** Jennifer Pascali, Daniela Sorio, Federica Bortolotti, Franco Tagliaro, University of Verona, Public Health and Community Medicine, Verona, ITALY [KEYNOTE LECTURE]
- 4:50 pm L-254 **A Microchip-Capillary Hybrid Device for 2D Protein Separations.** Joann J. Lu, Shili Wang, Guanbin Li, Wei Wang, Shaorong Liu, University of Oklahoma, Chemistry and Biochemistry, Norman, OK, USA
- 5:15 pm L-255 **A Decade-long Advances in Electrodeless Dielectrophoresis (eDEP) and its Future Bioanalytical and Biomedical Applications.** Chia-Fu Chou, Academia Sinica, Institute of Physics, Taipei, TAIWAN
- 5:40 pm L-256 **Microfluidic Devices for Comparative Profiling of Serum N-Glycans** Indranil Mitra, William Alley, John Goetz, Jackie Vasseur, Milos Novotny, Stephen Jacobson, Indiana University, Department of Chemistry, Jacobson Lab, Bloomington, IN, USA
- 6:05 pm Pause
- 7:30 pm **Conference Banquet Dinner – Ticket required** (Oriental Room, 4th Floor)

Wednesday, October 3, 2012

7:30 am **SYMPOSIUM REGISTRATION OPEN**
Location: Corinthian Foyer (2nd Floor)

8:50am - 3:00 pm **EXHIBITION OPEN** (5th Floor)

Wednesday Session 12. Plenary Lectures - III

Session Chair: Pier Giorgio Righetti, Politecnico di Milano, Milano, ITALY

Location: Corinthian Room (2nd Floor)

This plenary lecture session is a must to hear to discover the benefits of immobilized enzyme reactors in proteomics and the latest developments in enrichment and separation by HPLC

- 8:00 am L-301 **Immobilized Enzyme Reactor (IMER) Enhanced Proteomics.** Fred Regnier, JinHee Kim, Purdue University, Department of Chemistry, West Lafayette, IN, USA [PLENARY LECTURE]
- 8:25 am L-302 **New Advancements in Chromatographic Techniques for the Enrichment and Separation of Biomolecules.** Guenther Bonn, University of Innsbruck, Institute of Analytical Chemistry and Radiochemistry, Innsbruck, AUSTRIA [PLENARY LECTURE]
- 8:50 am Coffee Break in Exhibit Hall (Edinburgh Room, 5th Floor)

Wednesday Session 13A. Detection – II

Session Chairs: Michael Breadmore, University of Tasmania, Hobart, AUSTRALIA, and Craig Aspinwall, University of Arizona, Tucson, AZ, USA

Location: Corinthian Room (2nd Floor)

- 9:15 am L-303 **Direct-EI LC-MS Interface: Can Liquid Chromatography and Electron Ionization Mass Spectrometry Work Together Again?** Achille Cappiello, University of Urbino, Urbino, ITALY [KEYNOTE LECTURE]
- 9:40 am L-304 **Surface-Enhanced Raman Scattering Detection in Microfluidic Devices.** Dosil Pereira de Jesus¹, Grazielle Oliveira Setti², Angelo Gobbi³, Ronei Jesus Poppi¹, Ednan Joanni², ¹State University of Campinas, Institute of Chemistry, Analytical Chemistry Department, Campinas, BRAZIL; ²Center for Information Technology Renato Archer, Campinas, BRAZIL; ³Laboratory of Microfabrication, Brazilian Synchrotron Light Laboratory, Campinas, BRAZIL [KEYNOTE LECTURE]
- 10:05 am L-305 **Determination of Polyamines in Arabidopsis by Capillary Electrophoresis using Salicylaldehyde-5-sulfonate as a Derivatizing Reagent.** Takashi Kaneta¹, Genki Inoue¹, Toshio Takayanagi², Junichi Kakehi¹, Hiroyasu Motose¹, Taku Takahashi¹, ¹Okayama University, Department of Chemistry, Okayama, JAPAN; ²Tokushima University, Tokushima, JAPAN
- 10:25 am L-306 **Formation and Properties of Monoalkyl Carbonates: CE-C4D Beyond Analytical Chemistry.** Claudimir do Lago, Universidade de Sao Paulo, Instituto de Quimica, Department Quimica Fundamental, Sao Paulo, BRAZIL
- 10:45 am L-307 **Capillary Zone Electrophoresis in Narrow Capillaries with Auxiliary Hydrodynamic Pumping.** Thanh Duc Mai, Peter C. Hauser, University of Basel, Department of Chemistry, Basel, SWITZERLAND
- 11:05 am Pause

Wednesday Session 13B. Miniaturization – II

Session Chairs: Peter Willis, JPL/Caltech, Pasadena, CA, USA, and Jongman Park, Konkuk University, Seoul, KOREA

Location: Doric Room (4th Floor)

- 9:15 am L-308 **Building Nanochannels in Thermoplastics: An Approach for Single-Molecule Electrochromatography.** Steven Soper¹, Jiahao Wu², Nyote Oliver², Park Sunggook², Dorel Moldovan², Brian Novak², Heungjoo Shin³, Yoonkyoung Cho³, Dimitris Nikitopoulos², DongKyu Park³, Franklin Uba¹, ¹University of North Carolina, Biomedical Engineering and Chemistry, Chapel Hill, NC, USA; ²Louisiana State University, Baton Rouge, LA, USA; ³UNIST, Ulsan, SOUTH KOREA [KEYNOTE LECTURE]
- 9:40 am L-309 **Biomimetic Approaches for Organ on Chips: Neuron and Kidney Chip for Tissue Engineering and Drug Screening.** Kyung-Jin Jang¹, Kahp-Yang Suh², ¹Wyss Institute at Harvard, Boston, MA, USA; ²Seoul National University, Seoul, KOREA [KEYNOTE LECTURE]
- 10:05 am L-310 **Dispersed Microgradient-based Separations.** Mark Hayes, Arizona State University, Chemistry Department, Tempe, AZ, USA
- 10:25 am L-311 **Electrochromatography on Acrylate-based Monolith in Cyclic Olefin Copolymer Microchip: A Robust and Easy-to-use Technology.** Yoann Ladner, Gerard Cretier, Karine Faure, Universite de Lyon, Institut des Sciences Analytiques, Lyon, FRANCE
- 10:45 am L-312 **A Nanoporous Membrane Electrokinetic Molecular Sensing Platform.** Senapati Satyajyoti¹, Zdenek Slouka², Sunny Shah¹, Li-Jing Cheng¹, Hsueh-Chia Chang¹, ¹University of Notre Dame, Chemical and Biomolecular Engineering Department, Notre Dame, IN, USA; ²Prague Institute of Chemical Technology, Prague, CZECH REPUBLIC
- 11:05 am Pause

Wednesday Session 13C. Applications and Methodologies – II

Session Chairs: Norberto Guzman, Princeton Biochemicals, Inc., Princeton, NJ, USA, and Bohuslav Gas, Charles University, Prague, CZECH REPUBLIC

Location: Composite Room (3rd Floor)

- 9:15 am L-313 **Analysis of Potentially Immunogenic Carbohydrate Residues in Biologics.** Andras Guttman, Zoltan Szabo, Jonathan Bones, Barry L. Karger, Northeastern University, Barnett Institute, Boston, MA, USA [KEYNOTE LECTURE]
- 9:40 am L-314 **Urinary Evaluation of Amino Acids and Peptides of Children Affected by Vesicoureteral Reflux.** Aline Vitor¹, Edgar Moraes², Marcelo Tavares³, João Farah¹, Marina Tavares¹, ¹University of Sao Paulo, Institute of Chemistry, Sao Paulo, BRAZIL; ²Federal University of Rio Grande do Norte, Natal, BRAZIL; ³Federal University of Minas Gerais, Belo Horizonte, BRAZIL [KEYNOTE LECTURE]
- 10:05 am L-315 **A CE Method for the Separation of Paspalic Acid, Lysergic Acid and Iso-Lysergic Acid.** Christian Klampfl, Markus Himmelsbach, Wolfgang Buchberger, Martin Stiftinger, Johannes Kepler University, Linz, AUSTRIA
- 10:25 am L-316 **Fractionation of Carbon-based Nanomaterials by Liquid Chromatography and Capillary Electrophoresis.** Luis A. Colon, John C. Vinci, Ivonne M. Ferrer, Zuqin Xue, Allen Bourdon, University at Buffalo, Department of Chemistry, Buffalo, NY, USA
- 10:45 am L-317 **Rapid Free Solution Electrophoretic Separation of Long DNA.** Angela Jones, James Schneider, Max Fahrenkopf, Carnegie Mellon University, Pittsburgh, PA, USA
- 11:05 am Pause

Wednesday Session 14A. Bioanalysis – III

Session Chairs: Jacques Crommen, University of Liege, Liege, BELGIUM, and Bezhana Chankvetadze, Tbilisi State University, Tbilisi, GEORGIA

Location: Corinthian Room (2nd Floor)

- 11:10 am L-318 **Enantioselective Retention on Cellular Membrane Affinity Chromatography Columns: Using Chirality to Probe Small Molecule-protein Interactions.** Ruin Moaddel, Prateek Bhatia, Chester Frazier, Sarangan Ravichandran, Sylvestre Dossou, Irving Wainer, National Institutes of Health, Baltimore, MD, USA [KEYNOTE LECTURE]
- 11:35 am L-319 **Enantioseparation of Cathinone Derivatives used as Recreational Drugs by Capillary Electrophoresis.** Martin G. Schmid, Karl-Franzens-University, Department of Pharm. Chemistry, Graz, AUSTRIA
- 11:55 AM L-320 **Rapid CE Separations with Ultra Fast Time-of Flight Mass Spectrometry Detection and their Applications in Metabolomics.** Roza Wojcik¹, Matthew Giardina¹, Norman Dovichi², ¹LECO Corp, St Joseph, MI, USA; ²University of Notre Dame, Notre Dame, IN, USA
- 12:15 pm L-321 **Investigation of Bio-SPME Technology for the Enrichment of Illicit Phenethylamine and Cathinone Compounds from Biological Samples.** David Bell¹, Craig Aurand¹, Robert Shirey¹, Janusz Pawliszyn², Leonard Sidisky², ¹Sigma-Aldrich/Supelco, Bellefonte, PA, USA; ²University of Waterloo, Waterloo, Ontario, CANADA
- 12:35 pm Pause – Lunch on own

Wednesday Session 14B. Omics/Biomarkers

Session Chairs: Cornelius Ivory, Washington State University, Pullman, Washington, USA, and Milton Hearn, Monash University, Clayton, AUSTRALIA

Location: Doric Room (4th Floor)

- 11:10 am L-322 **Plasmon-Controlled Fluorescence: Applications to Biophysics and Biotechnology.** Joseph Lakowicz, University of Maryland, School of Medicine, Department of Biochemistry and Molecular Biology, Baltimore, MD, USA [KEYNOTE LECTURE]
- 11:35 am L-323 **Neurochemical Patterns in CNS Disorders – A Molecular Diagnostic Tool.** Jonas Bergquist, Uppsala University, Uppsala, SWEDEN
- 11:55 am L-324 **Monitoring Oxidative Stress using Capillary Electrophoresis with Electrochemical and Fluorescence Detection.** Craig Lunte, University of Kansas, Department of Chemistry, R.N. Adams Institute for Bioanalytical Chemistry, Lawrence, KS, USA
- 12:15 pm L-325 **Mass Spectrometry Analysis of Extra-virgin Olive Oil.** Alfonsina D'Amato¹, Clara Esteve², M. L. Marina², M. C. Garcia², Pier Giorgio Righetti¹, ¹Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Politecnico di Milano, Milano, ITALY; ²Department of Analytical Chemistry, Faculty of Chemistry, University of Alcalá, Ctra. Madrid-Barcelona, Alcalá de Henares, Madrid, SPAIN
- 12:35 pm Pause – Lunch on own

Wednesday Session 14C. Nucleic Acids – III: Next Generation Sequencing

Session Chairs: Dmitri Vezenov, Lehigh University, Bethlehem, PA, USA, and Kevin Dorfman, University of Minnesota, Minneapolis, MN, USA

Location: Composite Room (3rd Floor)

This special session will discuss the technological advances that have broadened our understanding of genomes

- 11:10 am L-326 **Genomic Claustrophobia via Nanoconfinement Systems.** David Schwartz, University of Wisconsin-Madison, Laboratory for Molecular and Computational Genomics, Department of Chemistry, Laboratory of Genetics, Madison, WI, USA [KEYNOTE LECTURE]
- 11:35 am L-327 **Nanopore Graphene-based Electronic Devices.** Marija Drndic, University of Pennsylvania, David Rittenhouse Laboratory, Philadelphia, PA, USA
- 11:55 am L-328 **Southern Nanopore Sequencing: Building a "Nanoporase" for Diffusion Reduction and Kinetic Proofreading.** Xinsheng Ling, Brown University, Physics Department, Providence, RI, USA
- 12:15 pm L-329 **Positional Sequencing: Single-molecule, Electronic, Solid-State Sequencing of Long DNA Molecules.** John Thompson, Nabsys Inc., Biochemistry, Providence, RI, USA
- 12:35 pm Pause – Lunch on own
- 1:45-3:00 pm **POSTER SESSION PRESENTATIONS**

Location: Edinburgh Hall (5th Floor)

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Wednesday Session 15A. Dielectrophoresis – III

Session Chairs: Mark Hayes, Arizona State University, Tempe, AZ, USA, and Dosil Pereira de Jesus, State University of Campinas, Campinas, SP, BRAZIL

Location: Corinthian Room (2nd Floor)

- 3:00 pm L-330 **Isolation of Cancer Stem Cells (CSCs) Based on their Dielectrophoretic Signature.** Alireza Salmazadeh¹, Lina Romero², Scott Cramer², Rafael Davalos¹, ¹Virginia Tech - Wake Forest University, Biomedical Engineering, Blacksburg, VA, USA; ²University of Colorado, Denver, CO, USA [KEYNOTE LECTURE]
- 3:30 pm L-331 **Linear Sweep Dielectrophoresis for Cell Surface Characterization.** Cullen Buie, Massachusetts Institute of Technology, Mechanical Engineering, Cambridge, MA, USA
- 3:55 pm L-332 **Dielectrophoretic Tweezers as a Platform for Molecular Force Spectroscopy in a Highly Parallel Format.** Dmitri Vezenov, Peng Cheng, Michael Barrett, Piercen Oliver, Lehigh University, Department of Chemistry, Bethlehem, PA, USA
- 4:20 pm L-333 **Electrode-less Dielectrophoresis for Biomolecular and Nanostructure Separations.** Yi-Hsuan Su, Walter Varhue, Nathan Swami, Electrical Engineering, University of Virginia, Charlottesville, VA, USA
- 4:45 pm Pause

Wednesday Session 15B. Applications and Methodologies – III

Session Chairs: Vaclav Kasicka, Academy of Sciences of CR, Prague, CZECH REPUBLIC, and Bettina Sarg, Innsbruck Medical University, Innsbruck, AUSTRIA

Location: Doric Room (4th Floor)

- 3:00 pm L-334 **Application of Biomimetic Molecularly Imprinted Polymer Thin Films in the Electro- and Liquid Phase-Separation of Biomolecules.** Reinhard Boysen, Shuyang Li, Jamil Chowdhury, Lachlan Schwarz, Milton Hearn, Monash University, Centre for Green Chemistry, Clayton, AUSTRALIA [KEYNOTE LECTURE]
- 3:30 pm L-335 **CE-UV Characterization of New Polydopamine- and Polypyrrole-coated Magnetic Nanoparticles for Selective Extraction of Aromatic Contaminants and Pharmaceuticals in Water Treatment.** Edward P.C. Lai, Zafar Iqbal, Musharraf Miah, Banu Ormeci, Carleton University, Ottawa, Ontario, CANADA
- 3:55 pm L-336 **Use of Capillary Electrophoresis to Assess the Purity and Potency of Genuine and Knockoff Dietary Supplements Containing Anatabine.** Robert Weinberger¹, Curtis Wright IV², ¹CE Technologies Inc., Chappaqua, NY, USA; ²Rock Creek Pharmaceuticals, Gloucester, MA, USA
- 4:20 pm L-337 **Implementation of Carbon-based Nanomaterials in Capillary Electrochromatography as an Immunosupport.** German Alejandro Messina, Lorena Lujan Sombra, Walter Pedro Stege, Julio Raba, Roberto Antonio Olsina, Patricia Wanda Stege, National University of San Luis, INQUISAL, Department of Chemistry, CONICET, San Luis, ARGENTINA
- 4:45 pm Pause

Wednesday Session 15C. Sampling, Preconcentration, and Sensitivity Enhancement

Session Chairs: Marina Tavares, University of Sao Paulo, Sao Paulo, BRAZIL, and Jeon Kyun Park, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, REPUBLIC OF KOREA

Location: Composite Room (3rd Floor)

- 3:00 pm L-338 **Design and Applications of Sequential Injection – Capillary Electrophoresis Systems.** Adam Gaudry¹, Daniel Gstoettenmayr¹, Philip Zakaria¹, Sui Ching Phung¹, Rosanne Guijt¹, Cari Sanger – van de Griend², Joselito Quirino¹, Mirek Macka¹, Greg Dicoski¹, Paul Haddad¹, Michael Breadmore¹, ¹University of Tasmania, Hobart, AUSTRALIA; ²3 Kantisto Separation Sciences, Baarn, THE NETHERLANDS [KEYNOTE LECTURE]
- 3:30 pm L-339 **On-column Preconcentration using Alkylthiol Self-assembly on Gold-deposited Monodisperse Colloidal Silica Packing for Electrochromatographic Analysis with a Fully Packed Microchip.** Jongman Park, Shinseon Kim, Department of Chemistry, Microanalytical System Laboratory, Konkuk University, Seoul, KOREA
- 3:55 PM L-340 **Single Capillary Multiplexed Electrophoresis for High Sensitivity Analysis of Cell Signaling Components.** Craig Aspinwall¹, Elyssia Gallagher¹, James Hackett¹, Troy Comi¹, Kevin Braun², ¹University of Arizona, Department of Chemistry and Biochemistry, Tucson, AZ, USA; ²Beloit College, Beloit, WI, USA
- 4:20 pm L-341 **Application of Battery-operated Continuous Flow Electro Membrane Extraction on Biological Anions with Ion Chromatography.** Basheer Chanbasha¹, Tsze Yin Tan², Nguyen Thi Le Hang², Hian Kee Lee², ¹King Fahd University of Petroleum and Minerals, Department of Chemistry, Dhahran, SAUDI ARABIA; ²National University of Singapore, Singapore, SINGAPORE
- 4:45 pm Pause

Wednesday Session 16. Closing Plenary Lecture

Session Chair: Günther Bonn, University of Innsbruck, Innsbruck, AUSTRIA

Location: Corinthian Room (2nd Floor)

This closing plenary lecture is something scientifically exciting to look for to learn its many facets as portrayed by a detective story

- 4:55 pm L-342 **The Silk Road, Marco Polo, a Bible and Its Proteome: A Detective Story.** Pier Giorgio Righetti¹, Lucia Toniolo¹, Alfonsina D'Amato¹, Riccardo Saccenti², Davide Gullotta¹, ¹Politecnico di Milano, Proteomics, Milano, ITALY; ²Fondazione per le Scienze Religiose, Bologna, ITALY [PLENARY LECTURE]

Wednesday Closing Remarks

Location: Corinthian Room (2nd Floor)

- 5:25 pm **Invitation by the Chair of ITP 2013.**
- 5:35 pm **Closing Remarks by the Chair of ITP 2012 and Presentation of Poster Awards sponsored by Picometrics and Wiley-VCH.** Ziad El Rassi, Oklahoma State University, Department of Chemistry, Stillwater, OK, USA
- 5:50 pm Adjourn

Monday Poster Presentations

Monday, October 1, 2012 (1:45-3:00 pm) - [POSTER GUIDELINES \(click here\)](#)

Monday Poster Session 1. Sample Preparation, Concentration and Detection

- P-101 **The Use of a Multi-channel Capillary for CE Separation in Combination with Contactless Conductivity and UV Detection.** Petr Tuma¹, Frantisek Opekar², Eva Samcova¹, ¹Charles University in Prague, Third Faculty of Medicine, Institution of Biochemistry, Cell and Molecular Biology, Prague, CZECH REPUBLIC; ²Charles University in Prague, Faculty of Science, Prague, CZECH REPUBLIC
- P-102 **The Use of Large Volume Sample Stacking for the Determination of Sub-micromolar Levels of Neurotransmitters in Microdialyate of Periaqueductal Gray Matter by CE with Contactless Conductivity Detection.** Eva Samcova, Petr Tuma, Klara Malkova, Vaclav Pavlicek, Charles University in Prague, Third Faculty of Medicine, Institution of Biochemistry, Cell and Molecular Biology, Prague, CZECH REPUBLIC
- P-103 **Simultaneous Analysis of Acetylcholinesterase Inhibitors with Antipsychotic Drugs by Capillary Electrophoresis with on Column Field-amplified Sample Injection and its Application in the Clinic.** Yi-Rou Wang, Su-Hwei Chen, Kaohsiung Medical University, School of Pharmacy, Kaohsiung City, TAIWAN
- P-104 **Simultaneous Analysis of Epirubicin and Doxorubicin by Capillary Electrophoresis with on Column Field-amplified Sample Injection and their Applications.** Ping-Chih Lin, Su-Hwei Chen, Kaohsiung Medical University, School of Pharmacy, Kaohsiung City, TAIWAN
- P-105 **Two Detector Method for Determination of Accurate Effective Mobilities in Interacting BGE.** Ludmila Muellerova, Pavel Dubsy, Jana Svobodova, Bohuslav Gas, Charles University in Prague, Faculty of Science, Department of Physical and Macromolecular Chemistry, Prague, CZECH REPUBLIC
- P-106 **A Novel Strategy for Phosphopeptide and Phosphoprotein Enrichment using Lanthanide Phosphate Co-precipitation.** Matthias Rainer, Yuksel Guzel, Munazza Raza, Guenther Bonn, University of Innsbruck, Institute of Analytical Chemistry and Radiochemistry, Innsbruck, AUSTRIA
- P-107 **Selective Extraction of Cocaine and its Metabolite Benzoyllecgonine from Aqueous Samples by Use of Newly Synthetized Molecularly Imprinted Polymers (MIP's).** Renata Bujak¹, Renata Gadzala-Kopciuch², Joanna Raczak-Gutknecht³, Alicja Nowaczyk⁴, Boguslaw Buszewski², Michal J. Markuszewski³, ¹Department of Toxicology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Bydgoszcz, POLAND; ²Department of Environmental Chemistry & Bioanalytics, Faculty of Chemistry, Nicolaus Copernicus University, Torun, POLAND; ³Department of Biopharmacy and Pharmacodynamics, Medical University of Gdansk, Gdansk, POLAND; ⁴Department of Organic Chemistry, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Bydgoszcz, POLAND
- P-108 **Obtaining Molecular Polymers Printing by Sol-Gel Process for the Determination of Cannabinoids in Treatment Plants by GC/MS Ion Trap.** Elizabete Campos de Lima¹, Ana Luiza Soares¹, Luciana Fernandes¹, Kathia Honorio², Paula Homem de Mello¹, ¹UFABC-CCNH, SAo Paulo, BRAZIL; ²USP-EACH, Sao Paulo, BRAZIL
- P-109 **Enrichment by Fraction Collection Developed for CE/MALDI-MS to Analyze Proteins by Top Down Strategy.** Michael Biacchi, Ricky Bhajun, Yannis-Nicolas Francois, Emmanuelle Leize-Wagner, Laboratoire de Dynamique et Structure Moléculaire par Spectrométrie de Masse (LDSM2), CNRS – UMR7177, University of Strasbourg, Strasbourg, FRANCE
- P-110 **Pulsed Versus Continuous Lasers in CE/LIF Studies: Role of Photodegradation.** Audrey Boutonnet¹, Arnaud Morin¹, Patricia Vicendo², Florence Benoit-Marquier², Jacques Fabre¹, Verena Poinso², Francois Couderc², ¹Picometrics, Toulouse, FRANCE; ²IMRCP Université de Toulouse, Toulouse, FRANCE

- P-111 **Optimizing Conditions to Generate Frits in Capillary Microcolumns.** Sonia Keunchkarian, Cecilia B. Castells, Leonardo G. Gagliardi, Division Química Analítica, Universidad Nacional de La Plata, La Plata, Buenos Aires, ARGENTINA; Division Química Analítica, UNLP y Centro de Investigación y Desarrollo en Tecnología de Pinturas (CIDEPINT-CIC-CONICET), La Plata, Buenos Aires, ARGENTINA
- P-112 **Chemometric-assisted Microextraction Based on an Ionic Liquid as Ion-pairing Agent for the Determination of Chromium Species in Environmental Samples.** Paula Berton^{1,2}, Luciana Vera-Candioti^{2,3}, Hector Goicoechea^{2,3}, Rodolfo Wuilloud^{1,2}, ¹Laboratory of Analytical Chemistry for Research and Development (QUIANID), Instituto de Ciencias Básicas, Universidad Nacional de Cuyo, Mendoza, ARGENTINA; ²Consejo Nacional de Investigaciones Científicas y Técnicas, Mendoza, ARGENTINA; ³Laboratory of Analytical Development and Chemometrics (LADAQ), Faculty of Biochemistry and Biological Sciences, National University of the Litoral, Santa Fe, ARGENTINA

Monday Poster Session 2. Enantioseparations

- P-201 **Chiral Analysis of Aspartate and Glutamate in Biological Samples by Capillary Electrophoresis with Laser-induced Fluorescence (LIF) Detection and Application in Investigating the Relationship with Alzheimer's Disease.** Yi-Rou Wang¹, Ya-Hui Hsieh², Su-Hwei Chen¹, ¹Kaohsiung Medical University, School of Pharmacy, College of Pharmacy, Kaohsiung, TAIWAN; ²Kaohsiung Medical University, Kaohsiung, TAIWAN
- P-202 **Chiral Capillary Electrophoresis in the Investigation of a New Circulene-like Species.** Lukas Severa¹, Milan Oncak², Dusan Koval¹, Radek Pohl¹, David Saman¹, Ivana Cisarova³, Paul E. Reyes-Gutierrez¹, Petra Sazelova¹, Vaclav Kasicka¹, Filip Tepy¹, Petr Slavicek², ¹Institute of Organic Chemistry and Biochemistry Academy of Sciences of the Czech Republic v. v. i., Prague, CZECH REPUBLIC; ²Institute of Chemical Technology, Department of Physical Chemistry, Prague, CZECH REPUBLIC; ³Charles University, Department of Inorganic Chemistry, Prague, CZECH REPUBLIC
- P-203 **Comparative Enantioseparation of Talinolol in Aqueous and Non-aqueous Capillary Electrophoresis and Study of Related Selector-selectand Interactions by Nuclear Magnetic Resonance Spectroscopy.** Lali Chankvetadze¹, Anne-Catherine Servais², Marianne Fillet², Antonio Salgado³, Jacques Crommen², Bezhan Chankvetadze¹, ¹Tbilisi State University, Institute of Physical and Analytical Chemistry, School of Exact and Natural Sciences, Tbilisi, GEORGIA; ²University of Liege, Laboratory of Analytical Pharmaceutical Chemistry, Department of Pharmaceutical Sciences, CIRM, Liege, BELGIUM; ³Centro Nacional de Investigaciones Oncológicas (CNIO), Department of Medicinal Chemistry, Madrid, SPAIN
- P-204 **Use of Chiral Amino Acid Ester-Based Ionic Liquids as Chiral Selectors in Capillary Electrophoresis.** Ioannis Stavrou, Constantina Kapnissi-Christodoulou, University of Cyprus, Nicosia, CYPRUS
- P-205 **L-histidine Functionalized Polymer Nanoparticles for Amino Acid Enantioseparation by Ligand Exchange CE.** Cemil Aydogan, Veyis Karakoç, Adil Denizli, Hacettepe University, Department of Chemistry Biochemistry Division, Ankara, TURKEY

Monday Poster Session 3. Forensic, (Bio)Pharmaceuticals and Clinical Analysis

- P-301 **Capillary Electrochromatographic Separation of Sulfonamide Antibiotics using Hydrophilic Monolithic Column.** Cemil Aydogan¹, Fatma Mutlu², Adil Denizli¹, ¹Hacettepe University, Department of Chemistry, Biochemistry Division, Ankara, TURKEY; ²Abant Izzet Baysal University, Vocational School of Gerede, Bolu, TURKEY
- P-302 **Using Off-line Orthogonal Selectivity CE-UV – LC-MS/MS to Confirm Cocaine Presence in Banknotes.** Melina Heller, Luciano Vitali, Gustavo Micke, UFSC Federal University of Santa Catarina, Department of Chemistry, Santa Catarina, BRAZIL
- P-303 **Optimization of Microemulsion Electrokinetic Chromatography for the Separation of Charged Pharmaceutical Enantiomers.** Erin Ennis, Joe Foley, Drexel University, Chemistry Department, Philadelphia, PA, USA

- P-304 **Determination of Active Ingredients in Advil® Cold & Sinus Liqui-Gels® Utilizing Dual-Opposite Injection Capillary Zone Electrophoresis.** Donna Blackney Beckett, Joe Foley, Drexel University, Department of Chemistry, Philadelphia, PA, USA
- P-305 **Simultaneous Analysis of Cocaine and Adulterants in Street Samples Seized by Police in Sao Paulo State by HPLC-DAD and Ultra-fast HPLC-DAD.** Elizabete Campos de Lima, Viviane Bianchi, Universidade Federal do ABC, Sao Paulo, BRAZIL
- P-306 **Determination of Citrus Flavonoids, Troxerutin and Ascorbic Acid in Pharmaceuticals and Food Supplements by Capillary Electrophoresis.** Jitka Siroka¹, Andrea Martincova², Klara Petru¹, Marie Pospisilova¹, Miroslav Polasek¹, ¹Charles University in Prague, Faculty of Pharmacy, Department of Analytical Chemistry, Hradec Kralove, CZECH REPUBLIC; ²Charles University in Prague, Faculty of Pharmacy, Hradec Kralove, CZECH REPUBLIC
- P-307 **Determination of Impurities in Newly Synthesized Quaternary Ammonium Compounds by Capillary Zone Electrophoresis.** Klara Petru¹, Pavla Prskavcova¹, Jan Marek², Miroslav Polasek¹, ¹Charles University in Prague, Faculty of Pharmacy, Hradec Kralove, CZECH REPUBLIC; ²University of Defense, Faculty of Military Health Sciences, Hradec Kralove, CZECH REPUBLIC
- P-308 **Urinary 1-hydroxypyrene as a Biomarker to Carcinogenic PAH Exposure.** Clinton Ifegwu, Chimezie Anyakora, University of Lagos, Pharmaceutical Chemistry, Lagos, NIGERIA
- P-309 **Neutral Coated Capillary Strength and Performances in CE-UV and CE-MS Applications.** Anna X. Lou, Ingrid D. Cruzado-Park, Jean-Marc M. Busnel, Beckman Coulter, Inc., Brea, CA, USA
- P-310 **Salivary Nitrite and Nitrate in Fibromyalgia Patients.** Hugo Barrague¹, Nathalie Cantagrel⁵, Anne Marie Grimound², Robert Salvayre³, Francois Couderc⁴, Elisabeth Cause³, ¹CHU Rangueil/Universite de Toulouse, Toulouse, FRANCE; ²Odontology Department, CHU Rangueil Universite de Toulouse, Toulouse, FRANCE; ³Biochimie, CHU RANgueil, Universite de Toulouse, Toulouse, FRANCE; ⁴IMRCP, Universite de Toulouse, Toulouse, FRANCE; ⁵Pain Assessment and Treatment Center, CHU Rangueil Universite de Toulouse, Toulouse, FRANCE
- P-311 **CE-LEDIF and CE-LIF (UV) Technologies for Characterization of Both Neutral and Sialylated N-linked Oligosaccharides Labeled with 2-ANSA.** Audrey Rodat Boutonnet¹, Richard -A Gardner², Francois Couderc³, Pierre Naccache¹, Daniel IR Spencer², Jacques Fabre¹, Arnaud Morin¹, ¹Picometrics, Toulouse, FRANCE; ²Ludger Ltd, Culham Science Centre, Abingdon, UK; ³IMRCP, Universite de Toulouse, Toulouse, FRANCE
- P-312 **Development and Validation of a Stability-Indicating High Performance Liquid Chromatographic Method for the Determination of an Antipsychotic Drug.** Victor Pontes¹, Maria Veronica Carranza-Oropeza², Helena Yano¹, Reinaldo Giudici², Marina Tavares³, Maria Segunda Aurora-Prado¹, ¹University of Sao Paulo, Faculty of Pharmaceutical Sciences, Pharmacy/Physical and Chemical Quality Control of Medicines and Cosmetics, Sao Paulo, BRAZIL; ²University of Sao Paulo, School of Chemical Engineering, Sao Paulo, BRAZIL; ³University of Sao Paulo, Institute of Chemistry, Sao Paulo, BRAZIL

Tuesday Poster Presentations

Tuesday, October 2, 2012 (1:45-3:00 pm) - [POSTER GUIDELINES \(click here\)](#)

Tuesday Poster Session 4. Fundamentals and Methodologies

- P-401 **Determination of Dissociation Constants of Glutathione and its Novel Analogues by Capillary Electrophoresis.** Jana Kazarjan¹, Merike Vaher², Riina Mahlapuu³, Mats Hansen⁴, Ursel Soomets⁵, Mihkel Kaljurand⁶, ¹Tallinn University of Technology, Department of Chemistry, Tallinn, ESTONIA; ²Tallinn University of Technology, Department of Chemistry, Tallinn, ESTONIA; ³University of Tartu, Department of Biochemistry, Tartu, ESTONIA; ⁴University of Tartu, Department of Biochemistry, Tartu, ESTONIA; ⁵University of Tartu, Department of Biochemistry, Tartu, ESTONIA; ⁶Tallinn University of Technology, Department of Chemistry, Tallinn, ESTONIA
- P-402 **Chitosan Coating Capillaries for the Separation of Inorganic Anions and Basic Proteins.** Sesil Uzasci, Filiz Tezcan, F.Bedia Erim, ITU, Department of Chemistry, Istanbul, TURKEY

- P-403 **Determination of Acid-base Dissociation Constant of Azahelicenes by Non-aqueous Capillary Electrophoresis.** Milan Elias, Angelina Andronova, Andrej Jancarik, Jiri Klivar, Michal Samal, Jaroslav Zadny, Irena G. Stara, Ivo Stary, Vaclav Kasicka, Institute of Organic Chemistry and Biochemistry AS CR v.v.i., Prague, CZECH REPUBLIC
- P-404 **Study of Biomolecular Interactions by Partial-filling Affinity Capillary Electrophoresis.** Martin Ruzicka, Karolina Strohalmova, Michael Jirasek, Martina Cizkova, Michaela Rumlova, Filip Tepy, Vaclav Kasicka, Institute of Organic Chemistry and Biochemistry v.v.i., Academy of Sciences of the Czech Republic, Electromigration Methods, Prague, CZECH REPUBLIC
- P-405 **Development of Liquid Chromatography Method using Multiple Injection for Increasing the Instrumental Throughput.** Jacqueline Pereira Vistuba, Luciano Vitali, Melina Heller, Ana Carolina de Oliveira Costa, Gustavo Micke, Federal University of Santa Catarina, Chemistry Department, Florianopolis, BRAZIL
- P-406 **The Use of Self-assembled Multi-walled Carbon Nanotubes/Chitosan Composites as a New Stationary Phase in Capillary Electrophoresis.** Yang Hua¹, Ding Yao¹, Gao Wen¹, Cao Jun², Li Ping¹, ¹China Pharmaceutical University, State Key Laboratory of Natural Medicines, Nanjing, CHINA; ²Hangzhou Normal University, College of Material Chemistry and Chemical Engineering, Hangzhou, CHINA
- P-407 **A Parametric Optimization Approach Based on D-optimal Mixture Design for Water-in-oil Microemulsion Electrokinetic Chromatographic Determination of Five Anthraquinones in Rheum Palmatum L.** Yang Hua¹, Ding Yao¹, Gao Wen¹, Cao Jun², Li Ping¹, ¹China Pharmaceutical University, State Key Laboratory of Natural Medicines, Nanjing, CHINA; ²Hangzhou Normal University, College of Material Chemistry and Chemical Engineering, Hangzhou, CHINA
- P-408 **Functionalized Graphene as Separation Carrier in Capillary Electrophoresis.** Yu Fu¹, Hua Yang¹, Yao Ding¹, Jun Cao², Ping Li¹, ¹China Pharmaceutical University, State Key Laboratory of Natural Medicines, Nanjing, CHINA; ²Hangzhou Normal University, College of Material Chemistry and Chemical Engineering, Hangzhou, CHINA
- P-409 **FSCE Methods Development using Peakmaster Software and Ionic Mobility Calculation through Molecular Descriptors and Neural Networks.** Marcone Oliveira, Universidade Federal de Juiz de Fora, Department of Chemistry, Florianopolis, BRAZIL
- P-410 **Characterization of Binding to Cannabinoid Receptors CB1 and CB2 using Open Tubular Column.** Sylvestre Dossou, Ruin Moaddel, Irving Wainer, National Institutes of Health, Baltimore, MD, USA
- P-411 **Use of Water Rich Mobile Phases in Reversed Phase Liquid Chromatographic Separations.** Undugodage Perera, Barry Lavine, Oklahoma State University, Chemistry Department, Stillwater, OK, USA
- P-412 **Determination of Polyimide Composition using CE-MS.** Tim Causon, Markus Himmelsbach, Wolfgang Buchberger, Christian Klampfl, Johannes Kepler University, Linz, AUSTRIA
- P-413 **Neutral Nonpolar Monolithic Capillary Columns with C8-, C12- and C16- alkyl Moieties for Proteins and Peptides Separation in Capillary Electrochromatography.** Chanida Puangpila¹, Thumnoon Nhujak², Ziad El Rassi¹, ¹Oklahoma State University, Chemistry Department, Stillwater, OK, USA; ²Chulalongkorn University, Bangkok, THAILAND
- P-414 **Maximizing cIEF Resolution and Loading Capacity in a 100 cm Long Neutral-Coated Capillary.** Ingrid D. Cruzado-Park, Anna X. Lou, Jean-Marc Busnel, Beckman Coulter, Brea, CA, USA
- P-415 **Polar Monoliths for Hydrophilic Interaction Capillary Electrochromatography.** Dilani Gunasena, Ziad El Rassi, Oklahoma State University, Chemistry Department, Stillwater, OK, USA
- P-416 **An Immobilized Graphene Oxide Stationary Phase for Open-Tubular Capillary Electrochromatography.** Chun Wang^{1,2}, Sergio de Rooy¹, Cheng-Fei Lu¹, Vivian Fernand¹, Leonard Moore Jr.¹, Isiah M. Warner¹, ¹Department of Chemistry, Louisiana State University, Baton Rouge, LA, USA; ²College of Science, Agricultural University of Hebei, Hebei, CHINA (presented by Paula Berton)

- P-417 **Potential of CE/MS for Small Carboxylic Acids analysis as Alternative to GC/MS Reference Analytical Methods.** Johann Far^{1,2}, Jean-Bernard Falmagne², François de l'Escaille², Edwin De Pauw¹, ¹Analisis R&D, Suarlee, BELGIUM; ²Laboratory of Mass Spectrometry, Liege, BELGIUM
- P-418 **Separation of Harmala Alkaloids by CZE: Optimization, Calculation of Analytical Figures and Method Transfer between Different CE Instruments.** Marcos Tascon¹, Nora Vizioli², Fernando J. Benavente Moreno³, Leonardo G. Gagliardi⁴, ¹División Química Analítica, Universidad Nacional de La Plata, La Plata, Buenos Aires, ARGENTINA; ²Instituto de Química y Físicoquímica Biológica (IQUIFIB-CONICET), Universidad de Buenos Aires, Ciudad Autónoma de Buenos Aires, Ciudad Autónoma de Buenos Aires, ARGENTINA; ³Departament de Química Analítica, Facultat de Química, Barcelona, Barcelona, SPAIN; ⁴División Química Analítica, Universidad Nacional de La Plata y CIDEPIINT, La Plata, Buenos Aires, ARGENTINA
- P-419 **Comparison of Oil-in-water and Water-in-oil Microemulsion in Microemulsion Electrokinetic Chromatography for the Analysis of Water-Soluble Vitamins.** Gabriel Roth¹, Claudinei Silva², Marina Tavares², Kevin Altria³, Erika Kedor¹, Maria Ines Santoro¹, Maria Aurora-Prado¹, ¹University of Sao Paulo, Faculty of Pharmaceutical Sciences, Pharmacy/Physical and Chemical Quality Control of Medicines and Cosmetics, Sao Paulo, BRAZIL; ²University of Sao Paulo, Institute of Chemistry, Sao Paulo, BRAZIL; ³GlaxoSmithKline, Harlow, UK
- P-420 **Micellar electrokinetic Chromatography (MEKC) Systems for the Separation of Mixtures of Charged and Uncharged Compounds.** Caroline Lamalle, Anne-Catherine Servais, Ines Fradi, Jacques Crommen, Marianne Fillet, Laboratory of Analytical Pharmaceutical Chemistry, University of Liege, Liege, BELGIUM

Tuesday Poster Session 5. Miniaturization and Microfluidics

- P-501 **Development and Validation of a LC-Chip/MS Method for the Quantification of Fluoxetine and Norfluoxetine in Rat Serum.** Virginie Houbart, Anne-Catherine Servais, Jacques Crommen, Marianne Fillet, Laboratory of Analytical Pharmaceutical Chemistry, University of Liege, Liege, BELGIUM
- P-502 **Protein Analysis Based on Microfabricated Sensors with Amalgam Working Electrodes.** Petra Juskova¹, Hana Cernocka², Veronika Ostatna², Emil Palecek², Frantisek Foret¹, ¹Institute of Analytical Chemistry ASCR v. v. i., Brno, CZECH REPUBLIC; ²Institute of Biophysics ASCR v. v. i., Brno, CZECH REPUBLIC
- P-503 **A Novel Phase Separation Detection of Emulsion using a Parallel, Continuous, and Real-time Electrical Impedance Sensing Chip.** Yung-Sheng Lin¹, Wei-Lung Chou², Chih-Hui Yang³, Chih-Yu Wang⁴, Keng-Shiang Huang⁵, ¹HungKuang University, Department of Applied Cosmetology and Master Program of Cosmetic Science, Taichung, TAIWAN; ²HungKuang University, Department of Safety Health and Environmental Engineering, Taichung, TAIWAN; ³I-Shou University, Department of Biological Science and Technology, Kaohsiung, TAIWAN; ⁴I-Shou University, Department of Biomedical Engineering, Kaohsiung, TAIWAN; ⁵I-Shou University, The School of Chinese Medicine for Post-Baccalaureate, Kaohsiung, TAIWAN
- P-504 **Development of Biomolecules Patterning Method in Extended Nanochannel Utilizing Low-temperature Bonding Toward Single Cell Analysis.** Kentaro Shirai¹, Kazuma Mawatari², Takehiko Kitamori², ¹The University of Tokyo, Department of Bioengineering, Kitamori Laboratory, Tokyo, JAPAN; ²The University of Tokyo, CREST, Tokyo, JAPAN
- L-505 **Dielectrophoretic Field-flow Microchamber for Fractionation of Electroporated Cells.** Jaka Cemazar, Tadej Kotnik, University of Ljubljana, Faculty of Electrical Engineering, Laboratory of Biocybernetics, Ljubljana, SLOVENIA
- P-506 **Major Milk Protein Separation by Microchip Electrophoresis.** Fabiano Freire Costa¹, Maria Aparecida Vasconcelos Paiva e Brito¹, Marco Antonio Moreira Furtado², Marcone Augusto Leal de Oliveira², Marta Fonseca Martins¹, Isabella Silvestre Barreto Pinto², ¹Embrapa Cow Milk Research Institute, Juiz de Fora, BRAZIL; ²Federal University of Juiz de Fora, Juiz de Fora, BRAZIL

- P-507 **Sensitive Detection of Nonfluorescent Molecules using Differential Interference Contrast Thermal Lens Microscope for More Efficient Separation using Extended-nano Chromatography.** Hisashi Shimizu, Kazuma Mawatari, Takehiko Kitamori, The University of Tokyo, School of Engineering, Department of Applied Chemistry, Tokyo, JAPAN
- P-508 **Continuous Microfluidic Separation of Live and Dead Yeast Cells Using Reservoir-Based Dielectrophoresis (rDEP).** Saurin Patel, Xiangchun Xuan, Department of Mechanical Engineering, Clemson University, Clemson, SC, USA
- P-509 **CNT-Enhanced Electrochemical Detection in Capillary Electrophoresis and Microchip - Capillary Electrophoresis.** Fabiane Galdino¹, Carlos Garcia², ¹Institute of Chemistry and Biotechnology, Federal University of Alagoas, Alagoas, BRAZIL, ²Department of Chemistry, The University of Texas at San Antonio, San Antonio, TX, USA
- P-510 **Sheathless Capillary Electrophoresis: A Novel Infusion Platform for NanoESI Study from Intact Proteins to High Molecular Mass Noncovalent Complexes.** Rabah Gahoual¹, Jean-Marc Busnel², Yannis-Nicolas Francois¹, Emmanuelle Leize-Wagner¹, ¹Laboratoire de Dynamique et Structure Moleculaire par Spectrometrie de Masse (LDSM2), CNRS – UMR7177, University of Strasbourg, Strasbourg, FRANCE; ²Beckman Coulter Inc., Brea, CA, USA
- P-511 **ESI Interface-integrated Microdevice for an Application of LVSEP to Microchip Electrophoresis–Mass Spectrometry.** Mami Oketani¹, Takayuki Kawai², Kenji Sueyoshi¹, Takuya Kubo¹, Fumihiko Kitagawa³, Koji Otsuka¹, ¹Kyoto University, Kyoto, JAPAN; ²National Institute of Advanced Industrial Science and Technology, Osaka, JAPAN; ³Hirosaki University, Aomori, JAPAN
- P-512 **Improving the Analytical Performance of Toner-based Electrophoresis Microchips by using Colored Toner.** Ellen Flavia Moreira Gabriel¹, Emanuel Carrilho², Claudimir L. do Lago³, Wendell Karlos T. Coltro¹, ¹Universidade Federal de Goias, Instituto de Quimica, Grupo de Metodos Eletroforeticos, Goiania, BRAZIL; ²Universidade de Sao Paulo, Instituto de Quimica de Sao Carlos, Sao Paulo, BRAZIL; ³Universidade de Sao Paulo, Instituto de Quimica, Sao Paulo, BRAZIL

Wednesday Poster Presentations

Wednesday, October 3, 2012 (1:45-3:00 pm) - [POSTER GUIDELINES \(click here\)](#)

Wednesday Poster Session 6. Food and Beverage

- P-601 **CE-LIF Analysis of Riboflavin (Vitamin B2) in Popular Beverages: Black, Green, Sage and Rosemary Teas.** Filiz Tezcan, F.Bedia Erim, Istanbul Technical University, Department of Chemistry, Istanbul, TURKEY
- P-602 **Determination of Diterpenoids of Salvia Species by MEKC.** Nevin Oztekin¹, S. Evrim Kepekci², Gulacti Topcu², F. Bedia Erim¹, Selda Baskan Kahraman¹, ¹Istanbul Technical University, Department of Chemistry, Istanbul, TURKEY; ²Bezmialem University, TURKEY
- P-603 **UHPLC-(+)ESI-MS/MS Monitoring of Melatonin and its Isomers from Grape to Wines.** Federico Jose Vicente Gomez¹, Ismael Gatica Hernandez¹, Julio Raba², Soledad Cerutti², Maria Fernanda Silva¹, ¹IBAM, Universidad Nacional de Cuyo, CONICET, Quimica Analitica, Lujan de Cuyo, ARGENTINA; ²INQUISAL Universidad Nacional de San Luis CONICET, San Luis, ARGENTINA
- P-604 **High-throughput Determination of Phenolic Compounds in Extra Virgin Olive Oil using Dispersive Liquid-liquid Microextraction-CZE.** Romina Paula Monasterio, Maria de los Angeles Fernandez, Veronica Carolina Soto-Vargas, Maria Fernanda Silva, Universidad Nacional de Cuyo, Instituto de Biologia Agricola de Mendoza (IBAM-CONICET), Facultad de Ciencias Agrarias, ARGENTINA
- P-605 **Simultaneous Analysis of Main Fatty Acids of CLA Precursors in Forage by Capillary Zone Electrophoresis.** Renata de Jesus Coelho Castro¹, Fausto de Souza Sobrinho², Marco Antonio Sundfeld Gama², Patricia Mendonca de Castro Barra¹, Rosemar Antoniassi³, Marcone Augusto Leal de Oliveira¹, ¹Federal University of Juiz de Fora, Juiz de Fora, BRAZIL; ²Embrapa Dairy Cattle, Juiz de Fora, BRAZIL; ³Embrapa Agribusiness and Food, Rio de Janeiro, BRAZIL

- P-606 **Simultaneous Determination of Seven Hydrophilic Bioactive Compounds in Polygoni Multiflori Radix by Short End Injection Micellar Electrokinetic Chromatography.** Kameng Lao, Xiao-jia Chen, Jing Zhao, Shao-ping Li, State Key Laboratory of Quality Research in Chinese Medicine, and Institute of Chinese Medical Sciences, University of Macau, MACAU
- P-607 **Study of the Orthogonal Chromatographic Systems Applied to the Flavonoid Glycosides Analysis.** Alessandra V. Jager¹, Monica R. Mazalli¹, Marina F. M. Tavares², Fernando G. Tonin¹, ¹University of Sao Paulo, Faculty of Animal Science and Food Engineering, Sao Paulo, BRAZIL; ²University of Sao Paulo, Institute of Chemistry, Sao Paulo, BRAZIL
- P-608 **Separation and Analysis of Free Amino Acids in CE/LIF or CE/LEDIF of Lyophilized Milk for Two Species of African Gourd Seeds: Cucumeropsis Mannii and Citrullus Lanatus.** Josiane Makaya¹, Varravaddheay Ong-Meang², Audrey Boutonnet³, Francois Couderc², Michel Mvoula Tsieri¹, Jalloul Bouajila², ¹Equipe Pluridisciplinaire de Recherche en Alimentation et Nutrition, Institut de Developpement Rural, Universite Marien Ngouabi, Brazzaville, CONGO; ²IMRCP, Universite Paul Sabatier, Universite de Toulouse, Toulouse, FRANCE; ³Picometrics, Toulouse, FRANCE

Wednesday Poster Session 7. Bioanalysis

- P-701 **Interest of LED for Analysis of Polysaccharides Labeled with APTS using CE/fluorescence.** Bernard Feurer¹, Audrey Rodat Boutonnet¹, Pierre Naccache¹, Jacques Fabre¹, Francois Couderc², ¹Picometrics, Toulouse, FRANCE; ²IMRCP Universite de Toulouse, Toulouse, FRANCE
- P-702 **Analysis of Alkaloids in Peganum Harmala L by Capillary Electrophoresis-UV/VIS.** Ghada Bouajila, Varravaddheay Ong-Meang, Naziha Chabir, Francois Couderc, Mehrez Romdhane, Jalloul Bouajila, UMR IMRCP, Universite de Toulouse, Toulouse, FRANCE
- P-703 **Glutathione Modified CdTe Quantum Dots as a Label for Study of DNA Interactions with Platinum Cytostatic Drugs.** Marketa Ryvolova¹, Kristyna Smerkova¹, Jana Chomoucka², Vojtech Adam¹, Jaromir Hubalek², Rene Kizek¹, ¹University in Brno, Department of Chemistry and Biochemistry, Faculty of Agronomy Mendel, Brno, CZECH REPUBLIC; ²Brno University of Technology, Central European Institute of Technology, Brno, CZECH REPUBLIC
- P-704 **Glycosylation Marker Based Evaluation of Autoimmune Disease Treatment using Capillary Electrophoresis.** Csaba Varadi¹, Bertalan Mesko², Andras Guttman¹, ¹University of Debrecen Medical and Health Sciences Center Research Centre for Molecular Medicine, Horvath Laboratory of Bioseparation Sciences, Debrecen, HUNGARY; ²University of Debrecen, Debrecen, HUNGARY
- P-705 **Detection of Poliovirus by Fluorescent Labeled Nanobodies – Initial Approach for the Development of a Biosensor.** Hadewych Halewyck¹, Iulia Oita², Lise Schotte¹, Ellen Merckx¹, Ann Massie¹, Bert Thys¹, Yvan Vander Heyden², Bart Rombaut¹, ¹Vrije Universiteit Brussel, Department of Pharmaceutical Biotechnology and Molecular Biology, Brussels, BELGIUM; ²Vrije Universiteit Brussel, Department of Analytical Chemistry and Pharmaceutical Technology, Brussels, BELGIUM
- P-706 **High-Sensitive Analysis of DNA Fragments by Electrokinetic Supercharging-Capillary Gel Electrophoresis: Impact of Buffer Viscosity, Electrode Configuration, and Electrolyte Carry-over.** Xiaoxue Ye¹, Junji Inoue¹, Zhongqi Xu², Mihoro Yamada¹, Satomi Mori¹, Takeshi Hirokawa¹, ¹Hiroshima University, School of Engineering, Hiroshima, JAPAN; ²Donghua University, College of Chemistry Chemical Engineering and Biotechnology, Shanghai, CHINA
- P-707 **Tandem Lectin Affinity Chromatography Monolithic Columns with Surface Immobilized Concanavalin A, Wheat Germ Agglutinin And Ricinus Communis Agglutinin-I for Capturing Sub-glycoproteomics from Breast Cancer and Disease Free Human Sera.** Subhashini Selvaraju, Ziad El Rassi, Oklahoma State University, Department of Chemistry, Stillwater, OK, USA
- P-708 **Application of CESI-MS for the Detection and Identification of Modified Peptides in a Complex Mixture.** Bettina Sarg¹, Klaus Faserl¹, Marcia R Santos², Herbert Lindner¹, ¹Innsbruck Medical University, Biocenter, Division Clinical Biochemistry, Innsbruck, AUSTRIA; ²Beckman Coulter Inc., Brea, CA, USA

- P-709 **Process of Analyte Elimination by Chitosan-coated Magnetic Nanoparticles for CE-UV Analysis of Unknown Biochemical Samples.** Meissam Noroozifar¹, Zafar Iqbal², Edward P.C. Lai², ¹University of Sistan & Baluchestan, Zahedan, IRAN; ²Carleton University, Ottawa, Ontario, CANADA
- P-710 **On-line Sample Preconcentration Prior to CE-ESI-MS/MS: Quantitation of Drugs of Abuse in Bioanalysis.** Isabelle Kohler¹, Julie Schappler¹, Martin Greiner², Serge Rudaz¹, ¹University of Geneva, Geneva, SWITZERLAND; ²Agilent Technologies, Waldbronn, GERMANY
- P-711 **Sequence-Based Separation of Single-Stranded DNA by Capillary Electrophoresis.** Xueru Zhang, Linda McGown, Resselaer Polytechnic Institute, Troy, NY, USA
- P-712 **Enhanced Performance of Entropic Trap Arrays using End-Attached Micelles.** Max Fahrenkopf, Erik Ydstie, Jim Schneider, Carnegie Mellon University, Pittsburgh, PA, USA
- P-713 **High Throughput, Mutlplexed Detection of microRNA Analogs using Micellar Electrokinetic Chromatography.** Johnathan Goldman, James Schneider, Bruce Armitage, Carnegie Mellon University, Pittsburgh, PA, USA
- P-714 **Glycation of Albumin.** Ivan Miksik, Stasis Pataridis, Zdenka Stastna, Pavla Sedlakova, Katerina Lacinova, Institute of Physiology, ASCR, Prague, CZECH REPUBLIC
- P-715 **Development and Validation of Capillary Zone Electrophoresis-laser Induced Fluorescence (CE-LIF) Method for Measurement of D-Serine Levels in Cell Lines, Plasma, Brain and Peripheral Tissues.** Nagendra Singh, Ruin Moaddel, Irving Wainer, National Institutes of Health, Laboratory of Clinical Investigation, Baltimore, MD, USA
- P-716 **Synthesis and Characterization of a Nuclear Membrane Affinity Chromatography Column for the Study of Human Breast Cancer Resistant Protein (BCRP) using Nuclear Membranes Obtained from the LN-229 Cells.** Kaia-Liisa Habicht, Chester Frazier, Irving Wainer, Ruin Moaddel, National Institutes of Health, Baltimore, MD, USA

Tremont Grand Floor Plan of Meeting Space and Directions from the Tremont Hotel to the Tremont Grand

CORINTHIAN ROOM, 2nd FLOOR

Take Hotel Elevator to the Fifth Floor

Walk down Hallway (Skywalk) **You are now on the 2nd floor of the Tremont Grand**

Walk through the Roman Strada Room

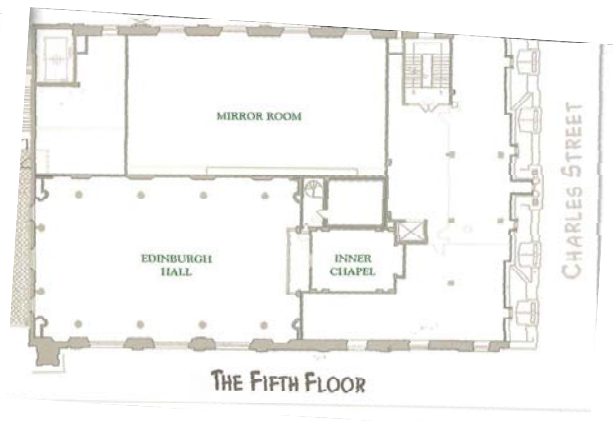
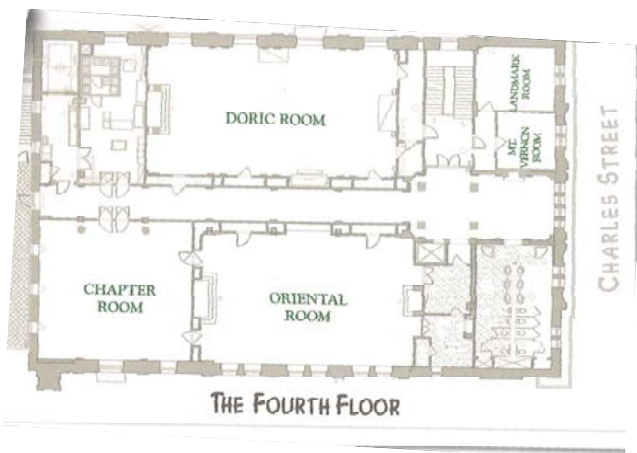
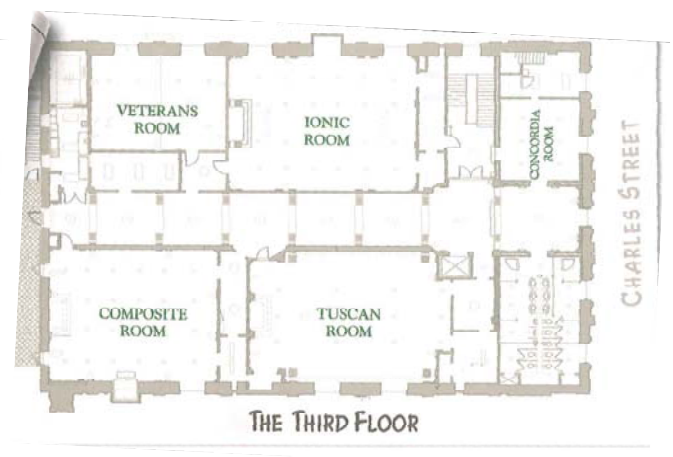
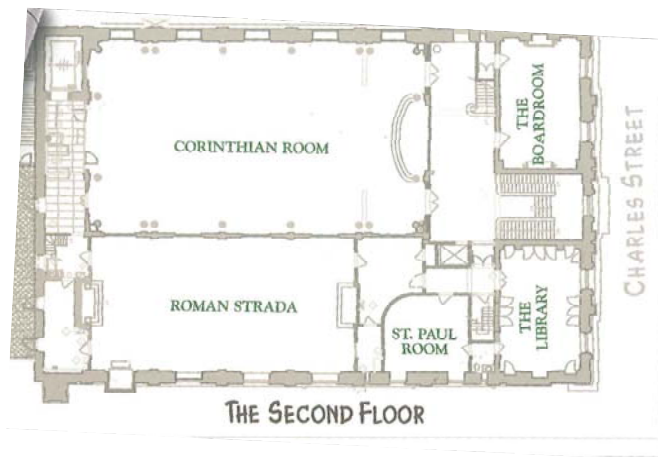
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