

### Monday June 23, 2014

#### 09:00 Opening Ceremony

Marianne FILLET (UNIVERSITY OF LIÈGE, Liege, Belgium)  
Jacques CROMMEN (UNIVERSITY OF LIEGE, Liege, Belgium)

#### Session chairs:

Coral BARBAS (SAN PABLO - CEU UNIVERSITY, Madrid, Spain)  
Marianne FILLET (UNIVERSITY OF LIÈGE, Liege, Belgium)

#### 09:30 Building on Success - Metabolic Profiling for Patients and Populations

Ian D. WILSON  
(IMPERIAL COLLEGE LONDON, London, United Kingdom)

#### 10:10 Towards Personalised Medicine Based on Metabolomics with Mass Spectrometry

Guowang XU  
(DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE ACADEMY OF SCIENCES, Dalian, China)

#### 10:50 Coffee Break

### Session Session 1

#### Session chairs:

Robert KENNEDY (UNIVERSITY OF MICHIGAN, Michigan, United States)  
Guowang XU (DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE ACADEMY OF SCIENCES, Dalian, China)

#### 11:10 Nanoimmunoaffinity Extraction and Analysis of Biomarkers of Oxidative Stress

Michael LÄMMERHOFER  
(EBERHARD KARLS UNIVERSITY TÜBINGEN, Tübingen, Germany)

#### 11:40 Microflow LC-MS/MS of Human Osteopontin Using an Extended Peptide Internal Standard to Track Digestion and Immunocapture Variability

Thomas KARNES  
(VIRGINIA COMMONWEALTH UNIVERSITY, Richmond, Virginia, United States)

#### 12:00 Antibody-Free Bioanalysis of Proteins and Peptides in Complex Body Fluids at The PM Level By LC-MS/MS

Rainer BISCHOFF  
(UNIVERSITY OF GRONINGEN, Groningen, The Netherlands)

#### 12:20 Investigations of Metalloproteins and their Interactions by Affinity Capillary Electrophoresis (ACE)

Hermann WÄTZIG  
(TECHNICAL UNIVERSITY BRAUNSCHWEIG, Braunschweig, Germany)

### Session Session 2

#### Session chairs:

Eric FRANCOIS (NOVARTIS, Nuglar, Switzerland)  
David LLOYD (BRISTOL-MYERS SQUIBB, New Brunswick, United States)

#### 11:10 Is Modern SFC a Viable Alternative to RPLC in Pharmaceutical Analysis?

Davy GUILLARME  
(UNIVERSITY OF GENEVA, Geneva, Switzerland)

#### 11:40 Definition of a Generic Chiral Separation Strategy on Polysaccharide-Based Chiral Stationary Phases in Supercritical Fluid Chromatography

Debby MANGELINGS  
(VRIJE UNIVERSITEIT BRUSSEL, Brussels, Belgium)

#### 12:00 Determination of the Enantiomeric Ratio of Drugs Using New SFC-MS/MS Instruments

Maria Kristina PARR  
(FREE UNIVERSITY BERLIN, Berlin, Germany)

#### 12:20 Quantitative Performances of UHPSFC AND UHPLC: A Comparative Study

Amandine DISPAS  
(ULG, LIEGE, Belgium)

## Programme

- 12:40 Sandwich Lunch and Exhibition**
- 13:40 Waters Technical Seminar (30 min) & Poster Session 1**
- 14:25 Poster Session 1**
- 14:25 Tutorial: Separation of Enantiomers of Chiral Drugs by Liquid-Phase Techniques**  
Bezhan CHANKVETADZE  
(TBILISI STATE UNIVERSITY, Tbilisi, Georgia)
- 15:10 Coffee Break & Poster Session 1**

### Session chairs:

Rainer BISCHOFF (UNIVERSITY OF GRONINGEN, Groningen, The Netherlands)  
Roman KALISZAN (MEDICAL UNIVERSITY OF GDANSK, Gdansk, Poland)

- 15:30 Pharmacometabolomics: a Tool for Drug Discovery and Personalised Medicine**  
Coral BARBAS  
(SAN PABLO - CEU UNIVERSITY, Madrid, Spain)

### Session Session 3

#### Session chairs:

Rainer BISCHOFF (UNIVERSITY OF GRONINGEN, Groningen, The Netherlands)  
Roman KALISZAN (MEDICAL UNIVERSITY OF GDANSK, Gdansk, Poland)

- 16:10 Utility of CE-MS and HILIC-MS for Untargeted Analysis of the Anionic Urinary Metabolome**  
Govert SOMSEN  
(VU UNIVERSITY AMSTERDAM, Amsterdam, The Netherlands)
- 16:40 Sheathless Capillary Electrophoresis-Mass Spectrometry: An Enabling Technology for Small-Volume Metabolomics Studies**  
Rawi RAMAUTAR  
(LEIDEN UNIVERSITY, Leiden, The Netherlands)
- 17:00 NMR in the Pharmaceutical and Biomedical Areas for Identification and Quantification of Drugs and Metabolomic Applications**  
Pascal DE TULLIO  
(ULG, Liege, Belgium)
- 17:20 In-Vitro Phenotyping for Toxicological Purposes: New Insights with the Cocktail Approach**  
Serge RUDAZ  
(UNIVERSITY OF GENEVA, Geneva, Switzerland)

### Session Session 4

#### Session chairs:

Ulrike HOLZGRABE  
(UNIVERSITY OF WUERZBURG, Wuerzburg, Germany)

- 16:10 Analytical Needs within Innovative Manufacturing of Future Pharmaceuticals**  
Jukka RANTANEN  
(UNIVERSITY OF COPENHAGEN, Kobenhavn, Denmark)
- 16:40 Development of a Multiplexed Surface-Enhanced Raman Scattering Quantitative Approach for Bisphenol Detection**  
Charlotte DE BLEYE  
(ULG, Liege, Belgium)

# Drug Analysis 2014

## Programme

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**17:00 In-Line Mammalian Cells Culture Monitoring: Comparison of Predictive Performances Offered by NIR and Raman Spectroscopies**

David DIDION  
(UMONS, Mons, Belgium)

**17:20 Cell Culture Monitoring by Near Infrared Spectroscopy**

Matthieu CLAVAUD  
(?F. HOFFMANN - LA ROCHE LTD, ?Kaiseraugst, Switzerland)

**18:30 Welcome drink**

**Tuesday June 24, 2014**

**Session chairs:**

Thomas KARNES (VIRGINIA COMMONWEALTH UNIVERSITY, Richmond, Virginia, United States)  
Jean-Luc VEUTHEY (UNIVERSITY OF GENEVA, Geneva, Switzerland)

**09:00 The Nanoliter Lab: Using Droplet Microfluidics to Screen Enzymes and Protein-Protein Interactions**

Robert KENNEDY  
(UNIVERSITY OF MICHIGAN, Michigan, United States)

**09:40 Break**

**Session Session 5**

**Session chairs:**

Thomas KARNES (VIRGINIA COMMONWEALTH UNIVERSITY, Richmond, Virginia, United States)  
Jean-Luc VEUTHEY (UNIVERSITY OF GENEVA, Geneva, Switzerland)

**09:45 Development of Selective Extraction Sorbents from the Macro- to the Microscale for the Trace Analysis in Complex Media**

Valerie PICHON  
(ESPCI, Paris, France)

**10:15 Coffee Break**

**10:40 In Vivo Monitoring of Neuropeptides In the Rat Hippocampus Using Nano UPLC-ESI-MS/MS**

Katrien MAES  
(VRIJE UNIVERSITEIT BRUSSEL, Jette, Belgium)

**11:00 Gas Pressure Assisted Micro-Liquid-Liquid-Extraction-nanoESI-DI-MS: A New Fully-Automated Platform for Bionalysis**

Robert-Jan RATERINK  
(LEIDEN UNIVERSITY, Leiden, The Netherlands)

**11:20 Quantitation of Hecpudin in Dried Blood Spots by Microfluidic LC-CHIP/MS-MS**

Virginie HOUBART  
(ULG, Liège, Belgium)

**11:40 Functionalized Polymeric Monolithic Columns in Micro-Hplc for Pharmaceutical Analysis**

Zhengjin JIANG  
(JINAN UNIVERSITY, Guangzhou, China)

**Session Session 6**

**Session chairs:**

Vincenza ANDRISANO (UNIVERSITÀ DI BOLOGNA, Rimini, Italy)  
Uwe KARST (UNIVERSITY OF MUENSTER, Muenster, Germany)

**09:45 Analytical Armamentarium for the Structural Characterization of Neo-Glycoproteins**

Gabriella MASSOLINI  
(UNIVERSITY OF PAVIA, Pavia, Italy)

**10:15 Coffee Break**

**10:40 Determination of Drug-Albumin Binding Modes by Induced CD Spectroscopy and TD-DFT Calculations**

Carlo BERTUCCI  
(UNIVERSITY OF BOLOGNA, Bologna, Italy)

**11:00 Why Capillary Electrophoresis is an Ideal Tool for Drug Screening**

Myriam TAVERNA  
(UNIVERSITE PARIS SUD, Chatenay Malabry, France)

**11:20 Immunoaffinity + LC-MS/MS: An Alternative Approach for Antibody Selectivity Evaluation?**

Trine G. HALVORSEN  
(UNIVERSITY OF OSLO, Oslo, Norway)

## Programme

**11:40 Hyphenated Techniques for the Bioanalytical Study of Enzymes**

Ann VAN SCHEPDAEL  
(KULEUVEN, Leuven, Belgium)

**12:00 Sandwich Lunch and Exhibition**

**13:00 Thermo Scientific Technical Seminar (30 min)  
& Poster Session 2**

**13:45 Poster Session 2**

**13:45 Tutorial: An Analysis of the New USP Validation Guidelines**

Bruno BOULANGER  
(ULG, Liege, Belgium)

**14:30 Coffee Break & Poster Session 2**

**Session chairs:**

Carlo BERTUCCI (UNIVERSITY OF BOLOGNA, Bologna, Italy)  
Gerhardus J. DE JONG (UTRECHT UNIVERSITY, Utrecht, The Netherlands)

**14:50 Spatially-Resolved Analysis of Metallopharmaceuticals by Elemental Bioimaging**

Uwe KARST  
(UNIVERSITY OF MUENSTER, Muenster, Germany)

**Session Session 7**

**Session chairs:**

Carlo BERTUCCI (UNIVERSITY OF BOLOGNA, Bologna, Italy)  
Gerhardus J. DE JONG (UTRECHT UNIVERSITY, Utrecht, The Netherlands)

**15:30 New Analytical Strategies for Drug Metabolism Studies**

Filip CUYCKENS  
(JOHNSON & JOHNSON PHARMACEUTICAL, Beerse, Belgium)

**16:00 Mass Spectrometric Approach for the Characterization of Inhibitors of Amyloid Aggregation Process**

Jessica FIORI  
(UNIVERSITY OF BOLOGNA, Bologna, Italy)

**16:20 Development of Highly Selective LC/MS Assay for Vitamin D Metabolites**

Gwenael SCOLAN (SIGMA-ALDRICH, Poole, United Kingdom)  
Anders FRIDSTROM (SIGMA-ALDRICH, Buchs, Switzerland)

**16:40 The Medium-Throughput Determination of Hydrophobicity and Dissociation Constant by LC-MS**

Lukasz KUBIK  
(MEDICAL UNIVERSITY OF GDANSK, Gdansk, Poland)

**Session Session 8**

**Session chairs:**

Bezhan CHANKVETADZE (TBILISI STATE UNIVERSITY, Tbilisi, Georgia)  
Ann VAN SCHEPDAEL (KULEUVEN, Leuven, Belgium)

**15:30 Analysis of Large Biomolecules: New Strategies**

Jean-Luc VEUTHEY  
(UNIVERSITY OF GENEVA, Geneva, Switzerland)

**16:00 Full Evaporation Headspace Gas Chromatography for Analysis of High Boiling Organic Compounds**

Erwin ADAMS  
(KULEUVEN, Leuven, Belgium)

# Drug Analysis 2014

## Programme

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**16:20 Highly Enantioselective Mip-Based Porous Ultra-Thin Film in The Fabrication of an Electrochemical Sensor for the Chiral Analysis of beta-Blockers**

Ede BODOKI

("IULIU HATIEGANU" UNIVERSITY OF MEDICINE AND PHARMACY, Cluj-Napoca, Romania)

**16:40 HPLC Chiral Separation of N-Fluorenylmetoxycarbonyl Alpha-Amino Acids Using Polysaccharide Based Chiral Stationary Phase**

Marc JACOB

(PHENOMENEX, Torrance, United States)

**17:00 Waters Technical Seminar**

**19:30 Banquet**

### Wednesday June 25, 2014

#### Session chairs:

Gabriella MASSOLINI (UNIVERSITY OF PAVIA, Pavia, Italy)  
Govert SOMSEN (VU UNIVERSITY AMSTERDAM, Amsterdam, The Netherlands)

#### 09:00 Proteomics, Bioinformatics and Biopharmaceuticals

Alain VAN DORSSELAER  
(UNIVERSITY OF STRASBOURG, Strasbourg, France)

#### 09:40 Break

### Session Session 9

#### Session chairs:

Gabriella MASSOLINI (UNIVERSITY OF PAVIA, Pavia, Italy)  
Govert SOMSEN (VU UNIVERSITY AMSTERDAM, Amsterdam, The Netherlands)

#### 09:45 State of the Art Mass Spectrometry Methods for Antibodies, Biosimilars, Bispecifics and ADCs Characterization

Alain BECK  
(PIERRE FABRE, St Julien-en-Genevois, France)

#### 10:15 Coffee Break

#### 10:40 Capillary Electrophoresis - Mass Spectrometry for Characterization of Protein Drugs and Determination of Protein-Protein Interactions

Gerhardus J. DE JONG  
(UTRECHT UNIVERSITY, Utrecht, The Netherlands)

#### 11:00 In-Depth Glycan Analysis of the Biotherapeutic Enbrel (Etanercept) Using HILIC UPLC/FLR and Mass Spectrometry

Mark HILLIARD  
(NATIONAL INSTITUTE FOR BIOPROCESSING RESEARCH & TRAINING, Blackrock, Ireland)

#### 11:20 Study of Virus-Like Particles of Human Papillomavirus (HPV-VLP) by Capillary Electrophoresis

Anne-Catherine SERVAIS  
(UNIVERSITY OF LIÈGE, Liege, Belgium)

#### 11:40 Expanding the Role of Capillary Electrophoresis with Mass Spectrometry Detection (CESI-MS) for the Development, Characterization & Control of Biologics

Stephen LOCK  
(AB SCIEX, Warrington, United Kingdom)

### Session Session 10

#### Session chairs:

Philippe HUBERT (UNIVERSITY OF LIÈGE, Liege, Belgium)  
Serge RUDAZ (UNIVERSITY OF GENEVA, Geneva, Switzerland)

#### 09:45 Analytical Quality by Design

David LLOYD  
(BRISTOL-MYERS SQUIBB, New Brunswick, United States)

#### 10:15 Coffee Break

#### 10:40 Possibilities of Retention Modeling for HILIC and SFC Separations

Eva TYTECA  
(VRIJE UNIVERSITEIT BRUSSEL, Elsene, Belgium)

#### 11:00 Development of Analytical Methodology to Support a QBD Approach to Formulation Design: A Case Study

Emma QUIRK  
(BRISTOL-MYERS SQUIBB, Wirral, United Kingdom)

#### 11:20 Surface Acoustic Wave Biosensor as an Analytical Tool in Pharmaceuticals: A Quality by Design Approach

## Programme

Nathalie BRACKE  
(GHENT UNIVERSITY, Ghent, Belgium)

**11:40 Supporting Analytical Quality by Design with Informatics - A Silent Enabler**

Dan CHAPMAN  
(WATERS CORPORATION, Elstree, Herts, United Kingdom)

**12:00 Sandwich Lunch and Exhibition**

**13:00 AB Sciex Technical Seminar (30 min)**

### Session Session 11

#### Session chairs:

Janusz PAWLISZYN (UNIVERSITY OF WATERLOO, Waterloo Ontario, Canada)  
Quezia CASS (FEDERAL UNIVERSITY OF SÃO CARLOS, São Carlos, Brazil)

**13:45 Analytical Microextraction Across Supported Liquid Membranes - Principles, Applications and Recent Developments**

Stig PEDERSEN BJERGAARD  
(UNIVERSITY OF OSLO, Oslo, Norway)

**14:15 Preparation of Molecularly Imprinted Polymers for Hydrophilic Compounds by Modified Precipitation Polymerization**

Jun HAGINAKA  
(MUKOGAWA WOMEN'S UNIVERSITY, Hyogo, Japan)

**14:35 Validation of the Analytical Procedure for the Determination of the Underivatized Neurotoxin Beta-N-Methylamino-L-Alanine by LC/MS-MS in Environmental Samples and in Human Brain**

Audrey COMBES  
(ESPCI, Paris, France)

**14:55 Parallel Artificial Liquid Membrane Extraction (Palme) – An Innovative Implementation of Supported Liquid Membrane Extractions into a Multiwell Plate**

Astrid GJELSTAD  
(UNIVERSITY OF OSLO, Oslo, Norway)

### Session Session 12

#### Session chairs:

Joëlle QUETIN-LECLERCQ (UNIVERSITÉ CATHOLIQUE DE LOUVAIN (UCL), Brussels, Belgium)  
Rawi RAMAUTAR (LEIDEN UNIVERSITY, Leiden, The Netherlands)

**13:45 Quality Control of Chinese Herbal Medicines**

Rudolf BAUER  
(UNIVERSITY OF GRAZ, Graz, Austria)

**14:15 Residual Solvents: A Potential Threat Present In Counterfeit Medicines**

Eric DECONINCK  
(WIV-ISP, Brussel, Belgium)

**14:35 LC-SPE-NMR Identification and NMR Quantification of Salvia Fruticosa Phytochemicals with Antifungal Activity**

Vasiliki EXARCHOU  
(UNIVERSITY OF ANTWERP, Antwerp, Belgium)

**14:55 Synthesis and Degradation Impurities in Peptide Drugs**

Matthias D'HONDT  
(UGENT, Gent, Belgium)

**15:15 Break**

#### Session chair:

Stig PEDERSEN BJERGAARD  
(UNIVERSITY OF OSLO, Oslo, Norway)



# Drug Analysis 2014

## Programme

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- 15:20**    **SPME-LC-MS for Drug Bioanalysis, a New Tool for *in vivo* Sampling and High Throughput Determinations**  
Janusz PAWLISZYN  
(UNIVERSITY OF WATERLOO, Waterloo Ontario, Canada)
- 16:00**    **Closing remarks**